EUROPEAN REALITIES – SUSTAINABILITY

Conference Proceedings

6th International Scientific Conference

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Biblioteka Ars Academica – Symposia

Publisher
Academy of Arts and Culture in Osijek, Josip Juraj Strossmayer University of Osijek

Co – Publisher
Croatian Academy of Science and Arts, Center for Scientific Work in Vinkovci, Croatia

For publisher
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For Co – Publisher
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EUROPEAN REALITIES – SUSTAINABILITY

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6th International Scientific Conference

AKADEMIJA ZA UMJETNOST I KULTURU U OSIJEKU
THE ACADEMY OF ARTS AND CULTURE IN OSIJEK

Osijek, 2025.

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FOREWORD

The international scientific conference European realities – SUSTAINBAILTY held on April 11th and 12th, 2024, is the sixth continuation of the scientific meeting.

The conference focuses on key sustainability challenges in contemporary society, exploring how culture, education, art, science and media can contribute to sustainable development. The focus is on innovative approaches that foster environmental, social and economic sustainability through interdisciplinary cooperation and dialogue. As a platform for the exchange of ideas and connecting experts from different fields, the conference seeks to stimulate concrete changes, empower participants to act and develop strategies that will contribute to sustainable development in the long term at the local, national and international levels.

The main theme of the conference is SUSTAINABILITY in the multidimensional sense of the term. The concept of sustainability has evolved over time. For a long period of time, the term has been understood only in its ecological sense and has been a synonym for the sustainability of the environment. This conference, therefore, questions and empowers the synergy between cultural, economic, scientific policies and public communications in the context of sustainability.

The development strategy of the Academy of Arts and Culture in Osijek defined the institution's intention to implement teaching and other educational processes and continuous development of artistic and scientific projects in the field of sustainability in art and culture, as well as its coherence and effectiveness, to which this conference also contributed.

The review of papers consisted of three thematic units: Cultural sustainability, Economic (Ecological) Sustainability and Media and the promotion of sustainability agenda.

The conference gathered more than 140 participants from eight countries (Bosnia and Hercegovina, Croatia, Germany, Litva, Portugal, Serbia, Slovakia and Spain) and a total of forty-nine papers were accepted for publication. The interest of participants from other countries points to the importance of the overarching theme of the conference and the encouragement

of further research with the aim of strengthening the synergy between the activities of culture, economy and public communications.

At this point, it should be noted that a collection of papers written in Croatian language – Sustainability 2024 – has also been published, which also discloses the papers of the participants of the International Scientific Meeting European Realities – Sustainability. These collective editions, we dare to say, complement each other excellently and make a valuable contribution to scientific reflection on the extremely dynamic changes in the fields of culture, media and management that we witness every day.

Once again, we would like to thank the members of the Organizational, Scientific and Program Committee, the editors and reviewers, and all the authors and collaborators who contributed to the creation of this Proceedings and the successful conference.

Associate Professor Iva Buljubašić, PhD,
President of Scientific and Program Committee

Assistant Professor Luka Alebić, PhD,
President of Organizing Committee

I. Cultural Sustainability

Borko Baraban[1]
Dejan Varga[2]

ON THE CROATIAN BORDER – CHARACTER REPRESENTATION THROUGH LINGUISTIC AND CULTURAL IDENTITY IN THE NOVEL *CIGANIN, ALI NAJLJEPŠI*

Original Paper
https://doi.org/1059014/QSJT9245

Abstract

With his novel Ciganin, ali najljepši [Gypsy, But the Fairest of Them All], whose first edition was published in 2016, Kristian Novak added his voice to the debate about the contemporary situation in the society haunted by transitions, migration, corruption, intolerance, and identity questioning. Assuming that various identity categories, such as culture, heritage, language, religion and so on, are the building blocks of cultural identity, the question is to what extent cultural identity has the ability of self- determination and existence, and to what extent it is dominated by other identities. The topic of this research paper is centred around the literary presentation of Sandi, a fictional character, through the prism of linguistic and cultural identity. Even though he was, tentatively speaking, presented as a typical Roma man from a rural community in Međimurje, a representation of a new and different identity, shaped in deviation of the established ethnic boundaries, resides deep within him.

Keywords: character, culture, identity, Kristian Novak, langugae

Introduction

Contemporary Croatian novelist Kristian Novak is the author of several novels (*Obješeni* [The Hanged], 2005, Črna *mati zemla* [Dark Mother Earth], 2013, *Ciganin, ali najljepši*, 2016, *Slučaj vlastite pogibelji* [The Case of My Own Downfall], 2023) among which *Ciganin, ali najljepši*

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holds a prominent place in the literary landscape as a point of reference for Croatian prose in the early 21st century. With his choice of topics, unique characteristics of his style, his in-depth character psychology, and the complexity of his narration, this author has become "an important poetic turning point after 2010" (Pogačnik, 2023, 55), painting a "broad and layered" picture of the world around him that has both an external and an internal (focus on the subconsciousness and emotions) dimension, giving rise to notable elements of the author's authentic poetics (Kos-Lajtman, 2017, 130). Novak's narrative strategies equally masterfully and discerningly penetrate the deepest corners of the human psyche, offering the readers a glimpse of how it works and how it affects the characters' actions, while also critically examining the social context and the circumstances his characters are exposed to.

The very title of the novel *Ciganin, ali najljepši* places the central focus on an identity category that is, alongside many others, mostly represented on the cultural, national and language level in the novel, focusing on the relationship between an individual and the *other* as a pivotal element in the process of (self) identification. The word "Gypsy" in the title refers to Sandokan Ignac Sandi, a member of the Roma community from Bukov Dol, who is the main protagonist of the novel. Even though the four distinct lines of narration in the novel indicate that other characters too hold central positions in the novel's plot, which is not to be disputed, there are two reasons why Sandi was deliberately singled out as the main protagonist: 1) in spite of the complexity of the plot, which is dominated by a number of characters, metaphorically speaking, the "spiderweb" (a motive that often appears in the novel), or the plot lines, unravel around the character of Sandi; 2) of all his characters, Novak arguably paints the most precise and most complex picture of Sandi in his narrative processes, accentuating his thoughts and character traits through "the subjective thought flow in a posttraumatic delirium" (Detoni- Dujmić, 2024, 8).

The topic of this research paper is centred around the literary presentation of Sandi, a fictional character, whose identity is inseparable from the Roma community, an ethnic group residing in the Međimurje area. When Milena, one of the main protagonists and narrators, recalls the sad moment when she heard the song *Ciganin sam, al najlepši* [I'm a gypsy, but I'm the fairest of them all], whose title served as the inspiration for the title of the novel, she emphasises that she was "not stung by the word 'Gypsy'

or the word 'fairest'", but "the word in between, the accursed 'but'. It's an intrusive word, an evil word. It doesn't belong in sentences about people. If you find yourself on the wrong side of this word, it forever separates you from the good images, you see" (Novak, 2016, 69). This indicatively suggests that, in such a linguistic construction, identity makes the difference between the personal pronouns "I/we" and "they", suggestively drawing the line between "I/we" and "other", with "I" building its identity by differentiating itself from the "other" while depending on it at the same time, because the "other" becomes (and remains) the mechanism for its determination and validation. Language undeniably offers a number of opportunities to shape identity, since it plays the crucial role in how individuals and communities express, build, and maintain their identity. As the mainstay of culture, language is often the key to preserving cultural customs, traditions and values. Language is used to pass down stories, customs and beliefs that define the cultural identity of a community. As a result, languages often have the key role in building and preserving the national identity. Many countries have official languages symbolising national unity and identity. The connection between a language and a nation can be so strong that the loss of language is equated with the loss of a part of national identity. Therefore, "some see language (...) as the reflection of a nation's identity; others see it as the reflection of the people's spirit, which consequently helps shape its worldview and define its borders, but this definition is greatly susceptible to ideological variations; yet others see it all as fiction, maintaining that language is a collateral phenomenon in shaping an ethic community, with which it has no organic connection" (Kuna, 2003, 279).

In keeping with theoretical assumptions about literary characters (Chatman, 1978, Rimmon-Kenan, 2005, Eagleton, 2013, Frow, 2016, Moi, Felski, Anderson, 2019), with a view to the category of identity (Hall, 1990, 1996, Derrida, 1999, Castels, 2002, Clake, 2008), the question is to what extent Sandi was portrayed, tentatively speaking, as a typical Roma man from a rural community in Međimurje, and to what extent his character exhibits features suggestive of the representation of a new and different identity. Culturological and political portrayal of an ethnic group does not lie within the scope of this paper, but let it still be noted that the Roma have been present in the world of Croatian literature for centuries. Older examples include authors like Mikša Pelegrinović (*Jeđupka*), Marin Držić

(*Tripče de Utolče*), and Josip Kozarac (*Tena*), whose depictions of Roma characters were rather stereotypical and discriminatory, presenting them as homeless, uneducated, fraudsters, persons with an uncertain future, and the like. Novak's portrayal of the Roma moves away from such conceptions, becoming a positive example of the representation of an ethnic group.

The objective of this paper is to identify the extent to which language and cultural identities are a part of the conceptual and thematic world of the novel, and the extent to which they reflect the author's intent to use fiction as a metaphor to draw attention to the problems that, even though they are presented within a small community on the Croatian border, in fact reflect the image of the contemporary Croatian society. Assuming that various identity categories, such as culture, heritage, language, religion and so on, are the building blocks of cultural identity, the question is to what extent cultural identity has the ability of self- determination and existence, and to what extent it is dominated by other identities. Novak uses the character of Sandi (and others) to question language and cultural identity. This paper therefore aims to analyse how they are shaped and negated, while reflecting on the occurrence of minority languages and local idioms, and their function on the narrative level.

On characters and identity

A number of studies analysing the status of characters in a text/story, among other elements of prose texts, have been written within the field of narratology. For example, in his study about the status of main and supporting characters, Woloch argues that "for a long time now, characterization has been the bête noire of narratology, provoking either cursory dismissal, lingering uncertainty, or vociferous argument" (Woloch, 2003, 14). The importance (relevance) of characters in a story, and the question whether their role is purely functional, or they can be interpreted and analysed as separate text instances, was the principal point of disagreement. The formalist and structuralist understanding of characters' status[3]

3 Due to the limited scope of this paper, we will not discuss all existing views about the status of characters in modern theory in detail here, but it is important to note the contributions of Vladimir Propp and A. J. Greimas to the discussion of this "problem". Propp considered characters to be

interprets them as "products of the plot", whose status is "functional", and insists that narratology should avoid their psychological aspect (Chatman, 1978, 111). Accordingly, the characters in a story should only be construed as the elements whose actions cause the course of the plot to unfold as per the author's ideas, and any attempt to identify the traits of these characters and try to analyse them as "persons" is irrelevant. In S. Chatman's view, "the question of 'priority' or 'dominance' is not meaningful. Stories only exist where both events and existents occur. There cannot be events without existents" (Chatman, 1978, 113). This view is aligned with the modernist narrative, in which the focus is not necessarily on the plot, and more attention is paid to the characters. At one point, even Roland Barthes himself revised his views about the status of characters, and stopped arguing in favour of the characters being subordinate to the plot/twist. Rather, he started viewing them as components of the narrative that have their own "semic code". In his book *S/Z*, Barthes offers the following definition: "The character is a product of combinations: the combination is relatively stable (denoted by the recurrence of the semes) and more or less complex (involving more or less congruent, more or less contradictory figures); this complexity determines the character's 'personality'" (Barthes, 1990, 67). In other words, by endowing characters with the feature of "personality", the opportunity opens up to subject them to a more complex analysis, one that will not be reduced solely to their function in the text.

Discussion of someone's personality suggests that this is an actual/living person, with different ethical, psychological, social, physical and other characteristics we can observe. The question is, can we do the same with fictional characters? Are characters nothing but language constructs (words) appearing on the pages of a work of fiction, whose "fate" is merely a concept that the author is offering to his readers, or can they be viewed outside of the boundaries of the text they appear in, giving them a wider space for action, so to speak, in which reality and fiction are intertwined as a result of ontological characteristics? Naturally, a fictional character

subordinate to the story/text, but he categorized them into seven roles based on their performance: "the villain, the donor, the helper, the sought-for-person and her father, the dispatcher, the hero and the false hero", allowing for the possibility of one character playing multiple roles, and the same role being played by more than one character. Greimas maintained that characters are unquestionably subordinate to text. He referred to them as "actants and acteurs", which include "characters, inanimate objects and abstract concepts". For more information see: Rimmon-Kenan, S., *Narrative Fiction*, p. 36.

is clearly not a real person, which will be obvious to any reader, but this does not exclude the possibility of character analysis on a mimetic level. S. Chatman finds such a thesis justified in his comments about the analysis of Shakespeare's character Hamlet, arguing that Hamlet's actions, although he is not a real person, are not confined to the text alone. On the contrary, we should not be "any less inclined to search through and beyond the words of Shakespeare for insights into the construct 'Hamlet'" (Chatman, 1978, 117-118). T. Eagleton makes a similar point, underlining that it is justified to speak about the literary nature of a piece of writing if its characters are treated "as though they were actual people. In one sense, to be sure, this is almost impossible to avoid" (Eagleton, 2013, 45). He thus suggests that characters, albeit fictional, can be constructed in such a way so as to suggestively encourage the reader to equate those characters with actual persons. As we have mentioned in the introduction, Novak's Sandi is a fictional character, a member of the Roma community in rural Međimurje. However, his efforts to move away from the tradition that has been forced on him and from the existing stereotypes as he builds his life (and even his identity) raises the issue of the representation of the Roma as an ethnic group in the literary and in the real world. Rimmon-Kenan reflects on the discrepancy between "mimetic theories" equating characters with actual persons, and "semiotic theories" seeing characters only as parts of textuality, and proposes a reconciliation of the two opposing views, stating that, "although these constructs are by no means human beings in the literal sense of the word, they are partly modelled on the reader's conception of people and in this they are person-like" (Rimmon-Kenan, 2002, 35). From the modern point of view, fictional characters have expanded their "existence" into the real world through the awareness of the readers, who often use them as models against which they compare actual persons, consider their own actions, seek inspiration in them, or emulate them.[4] John Frow published a comprehensive study on this subject titled *Character and Person*, in which he sought to explain the "tension" between thinking about characters as "pieces of writings and imaging" and "person-like entities". Aware that such an interpretation of characters

4 Rita Felski also discusses the beliefs and habits that encourage readers to identify themselves with a character, the impact of the text on the fact that readers seek like minds among the characters, the reasons why readers even think about fictional characters, and other points in her paper Identifying with Characters, in: *Character – Three Inquiries in Literary Studies*, 2019, pp. 77–126.

is difficult to explain logically, he points out, "yet we do so in our every encounter with fictional character", and, as a result, "the problem is to find a language in which to convey this ontological hybridity" (Frow, 2014, 25). On the one hand, the latter syntagm indicates that literary character theory offers no universal solution for approaching its analysis (*hybridity*), and on the other, it suggests that characters are indeed identifiable with actual persons (*ontological*), however, we should not neglect the fact that characters indeed *are* and *remain* purely fictional. Frow himself acknowledges that the connection is difficult to explain logically, but he nevertheless insists on the following: "try to complicate and mutually to implicate both of its poles, the textual and the person-like" (Frow, 2014, 25). Still, discussions about this concept of characters can be useful when considering characters as a complex narratological instance that is more than a mere language sign, while bearing in mind that the readers recognise characters in the text as fictional instances that they can talk about as if they were actual persons, but this will not have the cognitive effect of trying to perceive them as "alive". T. Moi makes a rather clear point in this regard.

> "We can't libel them. They can't sue us. We can neither murder nor marry them. (So there is no point in warning us against doing any of this.) We can imagine that we talk to them. But they can't talk back. Yet they can place claims on us, claims we may feel compelled to respond to. We can love them, hate them, acknowledge them, imitate them, be inspired by them, carry them in our hearts and minds, think about them when we want to understand our own lives. We can also invent further adventures for them, and we can imagine what they would be like if they lived in our place and time. To understand all this is to understand what fiction is" (Moi, 2019, 27).

The quote above is the opening paragraph of the essay *Rethinking Character*, in which Moi discusses the taboo against treating characters as if they were real, and equally criticises the *formalist* and the *modernist* ideas about the meaning of characters in texts. Avoiding to offer a new form of character analysis theory, Moi underlines that there is no single correct way to "read" and analyse characters, stating that she does not believe "in laying down requirements for what good character analysis must look like in advance of any specific practice" (Moi, 2019, 66). What is more, she suggests the development of "nonformalist analyses of form", which

will avoid modernist conceptions of what forms are supposed to be like, taking into consideration that the literary text is inseparable from the language that is used to convey special meanings, topics and contents, and which do not view the text just as form, "but also expressions, actions, and interventions"(Moi, 2019, 67). In other words, Moi advocates a heterogeneous approach to the literary text (and its characters), and rejects the insistence on singular methodological and theoretical assumptions as the key to its analysis. Of course, existing theories create a good path toward an analytic approach, but text offers much more, and it is up to researchers to find the most suitable way of considering its possible meanings.

An analysis of a character in a novel raises a number of questions about the character's origins, traits, relationships with other characters, the motives for the character's actions in the text, deliberations, dilemmas, and decisions that make this character a relevant subject of the story. This introduces into the debate the category of identity as a mandatory element in the discussion of what makes a character (subject) exactly who he is, that is, who the author portrayed him as. Eagleton refers to them as "literary figures" who "have no pre-history" and "do not have futures" (Eagleton, 2013, 46-47), suggesting that the entire process of construction and/or deconstruction of identity only proceeds to the extent and at the intensity that the author intended to present. Characters are considered one of "the key elements of a story, and the fundamental way of representing the complexity of subjects and their identities in a work of literature" (Peternai Andrić, 2019, 211). In this limited literary space, a character goes through various forms of identity strategies and changes affecting the construction and deconstruction of his identity, thus becoming directly associated with the social context as an inescapable aspect of his own existence, which puts him in a relationship with the *other*.

Every character thus seemingly becomes a part of a certain culture, and his potential awareness of his membership in a certain group will affect how his cultural and language identity is shaped. According to Hall, any cultural identity has its past, and for this reason, "like everything which is historical, they undergo constant transformation" (Hall, 1990, 225). Subject to social norms and certain historical, political, geographical, religious and other characteristics, an individual develops his identity, which he can accept, reject, or change within a culture. The feeling and the impression of an individual's cultural and language identity will largely depend on

the society that the individual belongs to, which opens up the possibility of freedom of identification, because "if culture is the projection of the identity of a group, it is subject to change, and can be 'shaped' according to the subject's wishes" (Varga, 2018, 32). In Sandi's case, for instance, he is obviously aware of his Roma identity on the cultural and language level, but he also constantly faces internal conflicts seeking to reshape this identity. Such an identity is unstable and incomplete, fragmented, divided, built on the basis of an "antagonist relationship", whose stabilisation is based on "an exclusion process" (Peternai Andrić, 2019). The subject is exposed to two simultaneous processes: on the one hand, he shapes his cultural identity in relation to another cultural identity, strengthens and represents it as unique and different; and on the other, he faces the formation of an individual identity within his own culture. Hall points out that the development of identity is possible "only *because* of their capacity to exclude, to leave out, to render 'outside', abjected" (Hall, 1996, 5). He underlines that identity is formed with respect to the difference between oneself and *others*, through the things that it lacks, that make its *constitutive outside*.[5] It follows that identity becomes a part of an uncompleted process, in which it on the one hand strives to maintain its integrity through differentiation from *others*, and on the other is constantly impacted by *others* that provide it with opportunities to shape itself.

Culture as such forms an integral aspect of identity formation, in which the pursuit of stabilisation and sustainability is intertwined with the pursuit of change and resistance. The subject stabilises its identity and maintains it through continual identification processes, which it is exposed to only when it acknowledges the *other* as the prerequisite for its formation and existence. Jacques Derrida believes that identity, just like word meanings, is inconstant and has multiple meanings, its connection with the *other* allowing it to take on different meanings in different contexts. To put it simply, identity is the product of a differentiation system. In his view, "a relationship with oneself, an identification with one self, cannot exist without culture" (Derrida, 1999, 48), which indicates that it is not possible to view identity outside of its context. On the contrary, its existence is

5 In Hall's interpretation, the concept of the *constitutive outside*, borrowed from Jacques Derrida, refers to "continuous possibility of undermining the temporary stabilisation of one of the identity categories, as a result of which no identity can occur as 'pure presentness' or 'objectivity'; on the contrary, it is always contingent and unstable" (Peternai Andrić, 2019: 101).

only ensured in relation to the *other*. In this process, the *other* generates a sense of uncertainty due to its potential impact on the integrity of one's own identity, but this does not necessarily have to be negative, because various shaping strategies are available to the subject.

Jacques Derrida's concept of "différance", which allows an identity to identify itself with or distinguish itself from *others*, raises the question of the role of language in this process. Ferdinand de Saussure's arguments that language is a system of differences, based on establishing the identity of a language element according to the features differentiating it from other language elements (Ferdinand de Saussaure, 2011), became a model for the discussion about the formation of identity among theoreticians. It is the fundamental medium in which the subject generates his identity through acts of speech, thus obtaining the "performative discursive character" that many theoreticians and philosophers have studied (J. L. Austin, J. Derrida, M. Foucault, J. Butler). Language generates a meaning that is conveyed through communication, and is the instrument by which the subject shapes its understanding of itself and others. "Language also allows a certain perception of the world, while restricting this perception at the same time" (Peternai Andrić, 2019, 95). In other words, if language shapes the world in which the subject exists, identity too can be viewed as its effect. In Hall's opinion, changes and transformations represent the essence of forming an identity that becomes fragmented and disunited, in which language plays a vital role. He maintains:

> "Identities are about questions of using the resources of history, language and culture in the process of becoming rather than being: not 'who we are' or 'where we came from', so much as what we might become, how we have been represented and how that bears on how we might represent ourselves. Identities are therefore constituted within, not outside representation" (Hall, 1996, 4).

In this sense, language, as a cultural determinant, becomes a material and functional component in the sense of understanding reality, and its impact on the formation of identity becomes inseparable from the context it functions in. Language shapes and reflects identity on multiple levels: language is used to pass on cultural values, traditions and customs, thus generating a sense of belonging; language implies membership in a certain language community, which is how social interactions happen; language reflects

personal identity through self-presentation, and, as history has taught us, is often used as a political ideological tool: "Language plays a special role in politics: its potential opens up opportunities for manipulation of the language for ideological purposes. Language indeed has the power to hide and mask the truth, and to mislead the listeners and readers. Language can be used to restrict the understanding of reality, that is, to wrap people up in a false reality" (Rebernik, 2022, 20).

Who is Sandi?

We will begin by analysing Sandi's name here as the starting point for our discussion about the representation of this character's identity in Novak's novel. Even though he is referred by his nickname Sandi through most of the novel, his full (official) name is Sandokan Ignac, of Bukov Dol (Đinjc). This name only appears in a police report about a crime he was the victim of. When introducing himself, he uses the name Ignac Sandi. Regardless of the various versions of his name and their use in the novel, the name is the first level of identification of a character.

As Frow puts it, it becomes "a kind of hook on which properties are hung and it is one basis for an imputation of identity" (Frow, 2014, 187). It is a language construct, "a textual attribute" (Garvey, 1978), which positions the character in a social context, and differentiates it from other characters. The name is associated with a body, becoming its label, and functioning as the node of what Barthes describes as the shaping of semantic content through the existence of the character in time and space, with all its biographical features. Naming a character creates an object that has a destiny (Barthes, 1990). In this case, it becomes an instance that appropriates all other segments of identity, such as culturological, ethical, political, and other characteristics. It functions as an instance that the subject populates with an indeterminate number of traits (Chatman, 1978).

The name Sandokan brings to mind its namesake, the fictional character in Emilio Salgari's adventure novels, in which Sandokan is a pirate and a noble hero who fights injustice and the colonial rule. He is dedicated to his cause, and loyal to his friends. In the culturological sense, he often

symbolises resistance against oppression, and the fight for freedom.[6] This name is suggestive of the social context that the characters appear in, and is indicative for the plot of the novel *Ciganin, ali najljepši*. While Salgari's Sandokan fights European colonists in Asia, Novak's Sandi is a member of the Roma community that is, figuratively speaking, colonising Croatia's territory. Conflict between the Roma and the "white" Croats are common on the local level, with individuals exhibiting a marked intolerance. Against such a backdrop, Sandi is looking for a way to create the conditions for a harmonious coexistence with the Croats while facing his difficult personal situation that forces him to turn to crime:

> "You know how easy it is to become a thief? All you have to do is clench your teeth a little bit for the first two or three times so that your heart doesn't jump to your throat. Before that, you need a sick mother who has no health insurance, and a pair of dark eyes telling you that she won't get any better. A medicine you have to pay for, and hunger that is a day away at best. (...) And you need someone to tell you that stealing is not a terrible thing, because you are taking from someone who has taken something from you. Or one of his people has taken something from one of your people. Someone to tell you that no one will ever find out, and that you'd be a fool not to do it. This someone will also show you how" (Novak, 2016, 222).

The motives behind his actions reflect the human survival instinct, and have no basis in nobility or integrity. If Sandi possesses a certain courage that allowed him to commit his crimes (robbery, trafficking), it stems from his need to ensure that his sick mother gets the help she needs, and to show Milena that a Gypsy is capable of taking care of his family. In Novak's novel, the symbol of resistance and the fight for freedom becomes a symbol of the fight to survive. This results in a contrasting perception of the meaning of his name, creating the prerequisites for something that may be indicative of "changes of approach, ways of thinking and acting, and opinions about the bearer of the name" (Peternai Andrić, 2019, 126). This is reflected in the resignation Sandi feels about the arrest of his friends and partners in crime, Mirza and Tompa. Both served years in

6 See more: *The meaning and history of the name Sandokan*, https://venere.it/en/the-meaning-and-history-of-the- name-sandokan/ (28 July 2024)

prison, but they protected Sandi's identity, and never confessed that he was a member of their gang:

> "The two of them left sometime in spring 2012, leaving me in debt to everyone. Things were looking very bad for me. All of Đinjc was against me, and I didn't have a friend in sight. As I walked around the village, I tried to make myself as small as I could, and to not hear what they were saying" (Novak, 2016, 271).

In such a situation, Salgari's Sandokan would have shown prudence and loyalty to his close friends, with whom he shared common interests and goals. Their guilt would be his guilt as well, because he believed that integrity and fairness to others are values worth fighting for, even at the cost of sacrificing his own existence. There is a paradox at work in Sandi's case, the noble name having been given to a frightened young man who is not at all determined, loyal, or prepared to accept responsibility at the moment when his friends most expect it. Letting them bear the punishment for what he too had done was a big burden that Sandi faced daily on a personal level (internal conflicts) as well as on a social level (facing unacceptance within the Roma community). Sandi suffered disintegration of identity, thus starting the quest for its stabilisation. Even though a name in itself does not define a person's identity, having a name is essential for a subject wishing to position itself within a social community. The possible meanings attributed to Sandi's name are a contrast to the referential point (Salgari's Sandokan), but this did not undermine the productivity in identity shaping through naming as one of the possible mechanisms making his representation in the novel possible.

A much more complex presentation of the formation of Sandi's identity takes place through the prism of his cultural identity as a member of the Roma (Gypsy) community. The question of their name and determination is outlined at the beginning of the novel:

> "The first Gypsies moved here in the mid-1970s. Roma. Gypsies. When I say 'Roma', I see a written word. When I say 'Gypsy', I see a person. I mean, at the time, Gypsies had not even known that they were actually Roma (…). Now everyone keeps repeating what a terribly offensive term it is, as if all anger will go away when we all agree nicely that these people should be referred to as the Roma" (Novak, 2016, 16-17).

At another point in the novel, Sandi continues: "In the end, everyone in Đinjc was angry. Arguing if we should be using the term Roma or Gypsy, and which one was right. There is twenty million Roma, they said, an entire people. As Gypsies, we are alone, every village left to fend for itself. But if we are Roma, there is more of us than Croats" (Novak, 2016, 262). Such a conception results in a difference between the majority population ("white" Croats) and the minority living in their immediate vicinity (Roma/Gypsies). The language intervention in the name of the ethnic group was designed to maintain the ostensible domination over the minority. Being a Gypsy implies being in the position of a marginalised, alienated, foreign, unaccepted, nonconforming subject, and has the features of a pejorative name in the public discourse. Being a Roma expands the meaning of this identity to a level beyond the minority group, and is a potential threat to maintaining the other group's domination in their own space. Aware of this fear, Sandi says: "You know, people from poor Croatian families hated us Gypsies the most. They were afraid that I would skip ahead of the Gypsies by the main road one day and move right into their back yard, and then skip ahead of them too. It's obvious when you fight them" (Novak, 2016, 220).

In her discussion of political correctness, Nives Opačić makes a special note of the example of the Roma/Gypsies:

> "They moved to the Croatian territories in the second half of the 14th century (Dubrovnik, Zagreb), where they settled in small groups, working as traders and craftsmen (butchers, blacksmiths, furriers, tinkers). The word 'Ciganin' (Gypsy) originates from Old Slavic 'athinganinъ', which transformed to 'acinganinъ / acinganъka', and then to 'Ciganin/Ciganka'. This people is known under this name in most of Europe: Tzigane (French), Zigeuner (German), Zingari (Italian), Ţigani (Romanian), Cigan (Albanian), Cikáni (Czech), Cygane (Russian), Cigáni (Hungarian), Cyganie (Polish), Gitano (Spanish), Cigano (Portuguese), etc. The word 'Gypsy', which means 'a cunning man' in addition to 'Roma', is used only in English (…). The historical name of this people therefore originates from a common root, and this name is 'Cigan(i)'. (…) The concentration of the Roma in Croatia is the highest in the Međimurje County, but coexistence with the Roma is not without its problems even in this otherwise peaceful county (Croatian

parents have recently rebelled against Roma children attending classes with their children), even though the Gypsies are not newcomers in Međimurje (the first mention of Gypsies in this region dates back to the late 17th century). They started arriving in Međimurje in large numbers in the second half of the 19th century, when the slavery of the Roma was ended in Romania, and a mass migration started toward Hungary. (…) The use of the name 'Roma' (which means 'man, husband, member of a lower caste who sings and plays an instrument for living'; 'Gypsy') became more frequent at the time of the disintegration of Yugoslavia in an effort to soften the negative views about the Roma community (because the word 'Cigani' was yelled as an insult, for instance, at stadiums). Today, the name Roma is considered to be politically correct, and even the historians who discuss 'the Gypsy issue' write about the Roma all the time when the term is not encased in quotation marks, even though nobody outside of their community referred to them by this name at the time they are writing about" (Opačić, 2010, 244–248).

The perception of the Roma as wanderers (nomads), criminals, kidnappers, beggars, uneducated and lazy, which has persisted for centuries, has made Sandi a member of an unwanted minority. On the collective level, Sandi, like the rest of the Roma community, faces stereotypes and prejudice about the Roma. He is viewed as a thief, criminal and rapist, and perceived as illiterate, uneducated, bad-mannered. This is the result of the general perception of an ethic minority that promotes its own lifestyle and manifests a different (and even undesirable) identity while coexisting with the Croats: "People started comparing Gypsies to rats. They multiply quickly, eat everything, spread diseases, and don't ask if they're allowed to come in. They attack without delay. There's no negotiating with them" (Novak, 2016: 98); "Somehow, it all came down to them being rude, lazy and ungrateful, to them stealing, paying no taxes, and not being subject to the same rules; to the government and the police protecting them while they harass Croats" (Novak, 2016, 54).

On the other hand, intolerance towards Croats was also promoted among the Gypsies:

"Don't talk to anyone. You don't understand how they think. Croats are swindlers, who have deceived us a hundred times. The white

> people are dangerous. They're looking to screw you over, and they'll never help you if there's nothing in it for them. Everyone knows this. The kinder a white man's words, the more evil his thoughts. Every child in Đinjc learns this. They instil fear into them until it gets into their bones. Do you know that they won't let their children be vaccinated, because they think they're being poisoned? And the white people think we're afraid of needles. (…) Everyone knows that white people killed Gypsies in concertation camps, took their children away, sent the police to raid their villages, beat people up with batons, and take them away. You wouldn't help someone who'd beat up your brother or son, or kill your mother. Working for a Croat? Treason of the worst kind. You know, then, how they feel about me" (Novak, 2016, 170).

Positioning of the Roma in the narrative discourse calls to mind Stuart Hall's thoughts about identity, stating that any identity is characterised by instability, inconstance, incompleteness; that any identity is "increasingly fragmented and fractured; never singular but multiply constructed across defferent, often intersecting and antagonistic, discourses, practices and positions" (Hall, 1996, 4). Such positioning of identity within the discourse consequently leads to the relationship with the *other*, which, in Hall's view, constitutes the knowledge that identity is constructed through its relationship with the other, identifying what it is not, or what it lacks (*constitutive outside*). Lacan presented a similar argument, arguing that *others* encourage the subject to question its own existence, thus expanding the space for the interpretation of identity from the psychoanalytical to the culturological.

Such and similar statements about the Roma are indicative of the hegemony of the other identity, and the collision of two cultural identities, permeated with the ambition to preserve their own, and accept the others'. Each of them manifests its power through different discourses, and maintains it on the basis of the historical and political context. Drawing on such and similar materials, intermixed and in immediate contact with one another, cultural identities drift closer or farther away from one another (Hall, 1996). Creating the impression of intolerance and discord, the effect of the distribution of power that the Croats hold over the Roma evidently transcends the deeply rooted convictions about "white people" as bad people. Even though the Croatian legal system guarantees the fundamental

human rights of minorities, the community in Međimurje still promotes a perception of them as those who have "occupied" their space and "illegally settled" in it, as those who contribute nothing to the development of the society.[7] By virtue of the law of majority, the Croats regulate the social relations and rules, expecting the Roma to accept them and abide by them.

This threatens the viability of their cultural (and language) identity. Defined as "fluid and contingent in relation to historical and cultural circumstances" (Clarke, 2008, 527), it is socially conditioned, and dependent on the context in which its construction occurs. As such, it assumes historical, geographical, political, religious, moral and other traits, basing its construction on the position of belonging to those who are the same or similar, and resisting others and differentiating itself from them (Hall, 1996). The social context implies the questioning of power relations, and, as Foucault would put it, this power is not necessarily repressive, but is also productive in terms of shaping the subject. Its action allows the emergence of what Castells describes as "resistance identity" (Castells, 2002), which allows the subject to reverse its own marginalisation and stigmatisation into an act of rebellion against social practices.

Novak's Sandi is a character saddled with a tragic destiny and faced with his own moral dilemmas, whose identity vibrates between the traits assigned to him by birth and membership in a marginalised group, and his ambition to make his life normal and ordinary so that he can fit in among "white people" more easily. Two conceptions of Sandi's identity are represented: his teenage deviance, based on the theft and crime he committed and his lack of morals, and his youthful resolve to create legally and socially accepted prerequisites that will allow him a harmonious (co) existence. The constant search for identity that recurs throughout the novel and results in Sandi's downfall, which can equally be blamed on the individual and the society, arises from this position. If identity is conditional on social norms regulating its emergence and survival, this position was rather difficult for Sandi as a Gypsy. On the one hand, he was supposed to model his identity on the culturological patterns of the Roma community to remain within the established order of his community (start a family, observe Roma customs, choose an appropriate job etc), and on the other

7 Intolerance towards the Roma is apparent in several examples in the novel, such as the virtual group "We must not let the Gypsies of Međimurje drag us down to the bottom", or the skinheads in Čakovec attacking the Roma who come there to beg (Novak, 2016: 158).

he exhibits an obvious individual resistance to the existing prejudice and stereotypes about the Roma/Gypsies. At the same time, he lives as *other* in relation to "white people" (a difference based on ethnic and culturological characteristics) and becomes *other* in relation to the ethnic group he was born into (he has a business cooperation with Croats, and a love affair with Milena, a Croatian woman). The double position of Sandi's identity confirms the theses that identity is built on the difference from and the relationship with *other*, with exclusion as the only way to stabilise it. Torn between two diametrically opposite starting points in the identification process, Sandi assumes the characteristics of a modern subject who does not deny his ethnicity, culture, and identity as member of a minority, but strives for assimilation and acceptance of the social norms upheld by the majority population. This is also proven by the fact that he finds mechanisms to ensure that he is well received by the Croats, and to elevate his identity to an acceptable level. He is thus often spoken about positively: "But he is a good boy, not like those other Gypsies" (Novak, 2016, 31); "He's a Gypsy, but he was normal" (Novak, 2016, 156).

On a personal level, Sandi is on the one hand represented as insecure, reckless, misunderstood and frightened, and on the other as a persistent, self-sacrificing, and caring young man. These traits are obvious from his actions and relationships with others (especially his relationship with Milena and his monologue addressed at Japica, in which he presents his family history and the culturological traits of the Roma community, and looks back on everything that led to his present situation). The traits could be said to represent what Chatman calls "the paradigm of traits", which he understands "metaphorically, as a vertical assemblage intersecting the syntagmatic chain of events that comprise the plot" (Chatman, 1978, 127). They are a constituent part of his identity and the product of the social practices he has been exposed to, and their manifestation affects a number of events in the novel. Even though Sandi participates in a number of criminal activities and breaks the society's laws, Novak does not paint him as a villain. On the contrary, he clearly positions him as a victim of unfortunate circumstances, bad decisions and unfulfilled ideals. First of all, this refers to Sandi's origins and his social position within the Roma community. Sandi is rather well aware that the position of a Gypsy in Croatia is not the only aspect by which his cultural identity is reduced to the domain of *other*. He clearly presents the class division in their own

community (Đinjc/by the road – Nazmes – Globoko), reflected in people's material possessions and the parts of Đinjc they live in. The wealthiest inhabitants of the village live right next to the road, and as you move away from the main road, the living conditions and the material situation of the Gypsies living there get worse and more tragical:

> "You know, Đinjc is three villages rather than one. The row right next to the road is visible to everyone. That's where the best among us live, those whose homes have facades. Further behind it live the people who would like to move closer to the road. This part is called Nazmes. And the deepest part is... well, the deepest. And that's what we call it, *Globoko*. That's where I come from. For a long time, I thought that the wealthiest people live along the main roads everywhere, and the farther you go from the main road, the people are poorer and poorer, they drink more, and they fight more, because this is how it is in Đinjc. If you want to make something of your life, I thought, you have to live by the main road" (Novak, 2016, 171).

Sandi's position in the society is determined by his membership in the poorest group of Đinjc residents. Globoko is the neighbourhood "populated by those who have nothing", those who are "in debt to everyone", who live in houses made of mud, and sleep on the floor, and it leaves the impression of a sad place (Novak, 2016, 184-185). Such an environment had a rather adverse effect on Sandi's identity, because he realised at a very early age that he is living in a place that offers few opportunities in life apart from pure survival: "I never belonged there, you know. Half of the reason is because they didn't want me there, and the other half is because I didn't want to be there" (Novak, 2016, 185). "I was just a child, Japica, but I already knew that I didn't belong in Đinjc" (Novak, 2016, 205). Poverty, a fatherless childhood, a mentally disabled mother, unknown lineage, and unacceptance by the other Gypsies are some of the key determinants that drove Sandi to question his personal goals in life and possible mechanisms to achieve the things that could give them an at least seemingly normal life, far away from Đinjc. Aware of the reality that they were not liked in Đinjc, and that they did not belong anywhere, and could only have ended up in Globoko, Sandi fell victim to his own existential crisis and the set of life circumstances that forced him to turn to crime.

His stepfather Đani was the point of reference in Sandi's life as a mark of temporary stabilisation of his identity. Even though Sandi never met his real father, Đani made up for the lack of his identity "on record" as a father figure. Their relationship was built on the patriarchal model that is proven typical of the Roma community, but in Sandi's case it was the only possibility, because his mother Albina was incapable of caring for him. Novak completely neglects the motherhood discourse and focuses on the fatherhood discourse, materialised by mixing the traditional (breadwinner) and new (caring father) forms of fatherhood (Wall, Aboim, Marinho, 2007). Thus he presents fatherhood in the modern discourse as a culturological identity blurring the lines between the mother's and the father's duties. Albina's mental illness and her socially disadvantaged position made Đani the central parental figure in Sandi's life. Đani taught Sandi the basic ethical and social values, acted as his protector and nurturer, developed his sense of self-confidence, and embodied the figure of a father who is equally committed to maintaining the patriarchal family values, and caring for the children. He became Sandi's role model due to multiple reasons, as the representation of a father who is motivated to provide his family with a better life in the Roma community ("Rather than brag, Đani moved Albina and I from Globoko to Nazmes. You have no idea what a miracle it is when someone moves closer to the road" (Novak, 2016, 198)), who teaches him positive moral values, and acknowledges his success ("Đani was the reason why I was not allowed to fight. And I did all right in school. I boasted to him about being good at one thing or another, and he was over the moon" (Novak, 2016, 203)), who told him that their social marginalisation does not imply inability to seek and realise the same opportunities as others:

> "They live a better life, Đani – I made my last point, ready for him to smack me on the head. – You're right about that – he said, softly after all – but you can do it too. You'll have a harder time of it than one of their own, but you can do it. You have to be a good boy, you hear me, listen to your elders, go to school and read fast, for starters. And forget about these fools from the village, don't follow them. If I hear you stole something, I'll throw you right into the Mura, you hear me? I'll kill you. If you need something, I'm here to provide it. I better not hear it. Thieves build their fortune on another's misfortune, and it's a rotten foundation. It won't do to be

> a scrap collector either. You start from the bottom, and never dig your way out. And those on the top, they build on everyone else. That's not right either. You go and find yourself a clean place, make it your own, and build there. And remember, things can always be different, it's just hard" (Novak, 2016, 205).

In such a relatively positive family environment, Sandi relies on the figure of his protective and patient stepfather in his formative years. Đani's actions manifest as what is known as father's involvement in modern discourse, with positive outcomes in children's development including the father's role in shaping the child's personality, encouragement of the child's language and cognitive development, support to the child's social, developmental, and psychological aspect, and empowerment of the child in learning skills and earning academic achievements (Nanxun, 2022). The above and a number of other situations in the novel suggest that he was a devoted father to Sandi. It is therefore unsurprising that Đani's sudden disappearance, the uncertainty of his fate, and Sandi's return to Globoko with Albina had a powerful impact on Sandi's confidence. He faced a seeming return to the beginning of his own life story, having once again lost his father, and found himself in the hands of a mother who was incapable of caring for him, and abandoned to his personal decisions that could either destroy him, or save him from ruin. In the circumstances he grew up in, it seems that the care and upbringing Sandi received from Đani affected him after all:

> "And she looks in wonder as you bravely go out into the street, because you know that no one has any reason to mess with you or rib you, because you pay for your own, and you walk where people walk, and you drive where people drive, and you say hello or good day to everyone, because you know that at least a hundred people no longer see you as Sandokan Sandi Ignac, a Gypsy. Not just any Gypsy, but a Gypsy from Đinjc. And not even from Đinjc, but the worst kind of Gypsy from Globoko" (Novak, 2016, 335).

Even though Sandi, as a character, falls victim to his own ideals, and the means he chose to achieve his goal often go against Đani's positive advice, Sandi remains a subject characterised by a fragmented and split identity. His formation was motivated by several ambitions that threatened the survival of his personal and cultural identity: life outside of Globoko and

outside of Đinjc, among Croats who will accept him, with a Croatian woman he loves, and opportunities among "white people" that will give him a normal life.

Conclusion

Discussion of characters in modern literature transcends the formalist approach viewing characters as one of the narrative instances, whose sole function is to serve the development of the story. Characters have much more complex traits (personalities/character, identity, culture, origin, and so on), which deserve special attention in narratological analyses. This approach was used in this paper to depict the representation of the character of Sandi in Novak's novel *Ciganin, ali najljepši*. Using the so-called "non-formalist method", the authors attempted to illustrate that the text and its characters are not just mere signifiers whose meaning needs to be defined, but form a separate world full of complexity (Moi, 2019). As one of the novel's four main protagonists, Sandi is characterised by a layered structure and presentation through various aspects of identity, among which his language and cultural identity hold an important place. Our analysis shows that Sandi's identity as a Roma/Gypsy man in Croatia is based on the difference from and on relationship with the *other*, in which his position is twofold: he lives as *other* in relation to "white people", and he becomes *other* in the ethnic group he was born into. The stabilisation of his identity was only made possible by excluding the *other* and assuming the position of "resistance identity", by which he will turn his marginalisation into an act of personal development. Sandi assumes the characteristics of a modern subject who does not deny his ethnicity, culture, and identity as a member of a (language) minority, but strives for assimilation and acceptance of the social norms upheld by the majority population. This includes adaptation on language level, as he only uses the Roma language when communicating with Albina and some Roma, but does not neglect the use of the Kaikavian dialect and the Croatian language in general as an essential requirement for being accepted in the local community. In this way, Novak does not remain within the confines of the stereotypical representation of Roma (in spite of the abundance of culturological material), but delves into the essence of the problem of their minority position "on the Croatian border", manifested through intolerance, unacceptance, and

crime. The symbolic value of the literary portrayal of the "fairest Gypsy" Sandi lies in his refusal to let his life be ruled by the fact that being Roma always means being marginalised and rejected, and his ambition to seek his chance at happiness outside of the boundaries defined by his ethnicity.

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NA GRANICI HRVATSKE – REPREZENTACIJA LIKA KROZ JEZIČNI I KULTURNI IDENTITET U ROMANU *CIGANIN, ALI NAJLJEPŠI*

Sažetak

Kristian Novak prvo je izdanje romana Ciganin, ali najljepši objavio 2016. godine čijim je tekstom doprinio raspravi o aktualnom stanju u društvu obilježenom tranzicijama, migracijama, korupcijom, isključivosti i problematiziranjem identiteta. Ako se krene od pretpostavke da je kulturni identitet sazdan od različitih identitetskih kategorija poput kulture, nasljeđa, jezika, religije i sl., pitanje je koliko mu je omogućeno samoodređenje i postojanje, a koliko je izložen tzv. hegemoniji drugih identiteta. Tematska okosnica ovoga rada analiza je literarnog prikaza Sandija, fiktivnoga lika, kroz prizmu jezičnog i kulturnog identiteta čime se pokazalo da, iako prikazan kao, uvjetno rečeno, tipični Rom međimurske ruralne sredine, u sebi krije reprezentaciju novog i drukčijeg identiteta oblikovanog u otklonu od postavljenih granica etičke pripadnosti.

Ključne riječi: identitet, jezik, Kristian Novak, kultura, lik

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PLAYS FOR TEACHING SUSTAINABILITY IN CROATIAN LANGUAGE TEXTBOOKS

Original paper
https://doi.org/1059014/YBIA4281

Abstract

This paper explores the role of children's playlets in Croatian language textbooks for young learners as a means of promoting sustainability in the school context. Special attention is given to the analysis of dramatic situations, character roles, and thematic motifs, as well as their contribution to shaping students' ecological, social, and ethical awareness. The study is based on a combination of literary-theoretical and methodological approaches, considering the children's playlet both as a literary form and as a teaching tool. Through a detailed analysis of selected playlets, the paper examines the methodological possibilities for their application in Croatian language instruction, including the development of competencies necessary for responsible and sustainable action, such as empathy, critical thinking, the ability to anticipate consequences, and social sensitivity. The paper connects theoretical approaches from ecocriticism, drama pedagogy, and contemporary Croatian language methodology, emphasizing the importance of experiential and participatory learning, student collaboration, and creative expression in early school years. The analysis demonstrates that children's playlets, due to their interactive and dialogical nature, not only facilitate a better understanding of literary and dramatic principles but also actively promote the development of competencies required for sustainable thinking and behavior. The study contributes to both theoretical and practical understanding of the function of children's playlets in education for sustainable development and highlights their potential role in shaping the values, attitudes, and behaviors of young students in accordance with international guidelines for education for sustainable development.

Keywords: *textbooks, children's literature, children's playlets, methodology, sustainability*

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Introduction

Sustainability has in recent decades become a key paradigm in global educational policy, with its significance extending beyond purely ecological dimensions to encompass social justice, cultural identity, economic development, and the competencies required for responsible and critical participation in the community. In the broader educational context, the concept of sustainability includes the individual's ability to perceive cause-and-effect relationships, act in accordance with moral and ethical principles, and contribute to the sustainable development of both the community and the environment. In the school setting, particularly in the lower grades of primary education, the formation of values, attitudes, and patterns of behaviour begins at an early age, thereby establishing the foundation for later civic, ecological, and social responsibility, while simultaneously fostering the development of pupils' emotional and social literacy.

Children's literary texts have traditionally served as a means of developing moral, social, and cognitive competences, and their selection and use in the teaching process play a key role in shaping young readers' worldviews and internal value systems. Within the subject of the Croatian language, readers provide a structured, curriculum-defined framework through which pupils encounter literature, and the selection and organisation of texts shape their attitudes, moral orientation, and critical-thinking abilities. Among various literary forms, children's playlets occupy a special place due to their dialogic and performative characteristics, which enable active, experiential, and participatory learning. Through children's playlets, pupils gain direct experience in role-taking, dialogue, cooperation, problem-solving, and improvisation—elements central to the development of competences necessary for thoughtful and sustainable action in real life.

This paper analyses the ways in which children's playlets included in Croatian language readers for early primary education can contribute to the understanding and adoption of the concept of sustainability. Special attention is devoted to examining dramatic situations, character roles, thematic motifs, and the methodological possibilities of using children's playlets in teaching. The aim is to explore how dramatic texts foster pupils' ecological, social, and ethical sensitivity and what values and attitudes related to sustainability they convey through their literary and performative dimensions. The study is guided by the following questions: In what ways do

children's playlets in readers shape pupils' ecological and social awareness? What values and attitudes regarding sustainability do literary texts communicate, and how can they be integrated into the teaching process with the goal of developing competences necessary for sustainable action?

The paper adopts an interdisciplinary approach that connects ecocriticism, drama pedagogy, and Croatian language teaching methodology, emphasising the importance of active, experiential, and collaborative learning in early schooling. By analysing children's playlets, the paper contributes to the theoretical understanding of the role of dramatic texts in education for sustainable development and identifies methodological guidelines for their more effective application in the school context.

Theoretical Framework

Children's Playlets and Dramatic Elements

A children's playlet may be defined as the performance of a simple text, that is, a short theatrical piece intended for staging, most often adapted for children and for educational contexts (Anić, 1991). As a particular form of drama, the children's playlet retains the fundamental dramatic elements but is characterised by a simplified structure, shorter duration, and a smaller number of characters, which makes it accessible and performable for younger primary-school pupils. Drama, in the narrower sense, denotes a literary work written in dialogic form and intended for theatrical performance, distinguished by the seriousness of its plot and the complexity of its emotional experience (Anić, 1991; Solar, 2001). Etymologically derived from the Greek word drâma (action), drama encompasses all literary texts of a specific type intended—directly or indirectly—for stage interpretation.

Dragutin Rosandić (1988) states that the definition of drama includes three fundamental aspects:

a) a literary genre in dialogic form intended for stage performance,

b) a specific type of literary text intended directly or indirectly for performance on stage,

c) a poetic-stage (or poetic-performative) complex consisting of three essential components: the text, the actor, and the audience (Rosandić, 1988, 577).

These criteria can also be applied when defining the children's playlet, taking into account its specific characteristics: it is designed for stage performance, clearly distinguishes text, actors, and audience, and simultaneously enables pupils' active participation in the processes of dramatization and interpretation. Compared to classical drama, the children's playlet represents a simplified form of dramatic structure which, through dialogue and monologue, enables children to understand basic narrative and social relationships and to develop the ability to adopt different characters' perspectives.

In dramatic texts, dialogue serves as the primary communicative instrument, allowing characters to directly express different viewpoints, attitudes, and intentions. Monologue, on the other hand, is used to portray a character's inner states, emotions, plans, and reflections. By combining dialogue and monologue, dramatic texts achieve diversity in character speech, dynamic plot development, and the stimulation of pupils' interpretative skills (Solar, 2001).

From an educational perspective, the children's playlet within Croatian language teaching enables pupils to develop linguistic, social, and emotional competences through dramatization, improvisation, and performance. Active participation in children's playlets promotes empathy, critical thinking, and responsible behaviour, making them an effective method in education for sustainability. Furthermore, the interactive nature of children's playlets creates a safe, experiential environment in which pupils can explore moral dilemmas, social relationships, and ecological challenges, thereby achieving an integration of literary and practical learning.

Methodology and Dramatic Approaches

In the teaching of the Croatian language, dramatic texts, including children's playlets, may be approached through two principal methodological frameworks, which complement one another and together support the holistic development of pupils' linguistic, social, and emotional competences.

The first is the literary approach, in which the dramatic text is viewed primarily as a literary object. The emphasis is on interpretative reading, analysis of dialogue, characterisation, understanding of plot structure, and the identification of thematic motifs. The teacher guides pupils through the text, encouraging reflection, discussion, and critical engagement with the content. This approach enables pupils to develop literary competences, understand literary language and structures, and recognise moral, ethical, and social values embedded in the narrative (Rosandić, 1988).

The second is the theatrical (performative) approach, which uses the dramatic text as a basis for stage performance. In this approach, pupils actively participate in shaping the performance, including acting, character interpretation, scenography, costume design, and directing. Such a participatory method fosters creativity, independent thinking, improvisation skills, and group collaboration. Beyond developing social skills, the theatrical approach allows pupils to experience the situations presented in the text, recognise the consequences of their actions, and feel the emotional impact of dramatic conflict—elements that directly contribute to developing competences for sustainable behaviour.

The combination of these two approaches provides a comprehensive educational framework, as it simultaneously develops cognitive, affective, and practical dimensions of learning. The literary approach offers an analytical perspective on the text and fosters critical thinking, while the theatrical approach provides an experiential and practical context, enhancing creativity, empathy, and collaborative abilities. This integration of methods is particularly relevant in the context of education for sustainability, as pupils engage with dramatic activities that encourage the recognition of ecological, social, and ethical values, the development of a sense of responsibility, and active participation in group projects or symbolic situations that promote awareness of sustainable behaviour.

This combined approach also offers teachers flexibility in choosing didactic strategies. For example, simple children's playlets can be used in the first grade as a means of developing basic social and linguistic skills through group activities, whereas more complex dramatic texts in higher grades can serve to explore ecological dilemmas, moral conflicts, and issues of civic responsibility. Integrating literary and performative methods thus enables the systematic and progressive development of pupils' competences

in accordance with the goals of education for sustainability, establishing foundations for critical thinking and responsible action later in life.

Children's Playlets and Child Development

The children's playlet represents a specific dramatic form intrinsically connected to children's play and to learning through experience. Through play, children actively use speech, acting, and symbolic interaction, which supports the development of imagination, creativity, social skills, and emotional and cognitive literacy (Ladika, 1970). The children's playlet is therefore not only a literary or performative text, but also a medium of socialisation and experiential learning that simulates both real and imaginary worlds.

Written children's playlets may differ according to typology and purpose, with the following types most commonly identified: puppet plays, fairy-tale plays, action plays, fantastic plays, and humorous plays (Skok, 1985). Each type contributes in distinct ways to children's development:

- Puppet plays use puppets as their central stage element. Through manipulating puppets, pupils develop acting skills, creativity in visual presentation, expressive movement and speech, and the ability to coordinate group performance (Šimunov, 2007; Coffou, 2004). Puppet-based children's playlets are particularly effective in the lower grades of primary school, as they allow children to identify with characters and situations while reducing potential social anxiety associated with public performance.
- Drama games and improvisation allow pupils to explore various situations, roles, and interpersonal relationships freely. Through improvisation and guided dramatic activities, children develop independent thinking, problem-solving abilities, social empathy, and teamwork (Čečuk, Dević, Ladika, 1990). Active engagement in drama games also encourages metacognitive reflection, as pupils analyse characters' actions, reconsider decisions, and examine the consequences of particular behaviours—preparing them for critical thinking in real-life contexts.

The children's playlet, therefore, serves multiple functions: beyond providing aesthetic and literary experience, it develops linguistic competences, emotional and social maturity, and foundational skills necessary for responsible and sustainable behaviour. The application of different types of children's playlets in Croatian language teaching and across other subject areas may be adapted to pupils' developmental stages, thematic goals, and educational content, underscoring its significant role in comprehensive upbringing and education for sustainability.

Children's Playlets and Education for Sustainability

Within the teaching of the Croatian language in the early years of primary school, the children's playlet represents a particularly effective tool for fostering education for sustainability, as it enables the integration of ecological, social, and ethical themes into the educational process. Through dramatization, children assume the roles of characters from nature, the animal world, or human communities, creating the conditions for the development of empathy, critical thinking, responsibility, and social sensitivity. Such experiential activity allows pupils to explore causal relationships and moral dilemmas through symbolic play, and to consider the consequences of their actions in a safe and structured environment (O'Toole, Haseman, 1988; Way, 1967).

The interactive nature of children's playlets ensures the active involvement of every pupil in the learning process. By taking on different roles, children develop the ability to view problems from multiple perspectives—an essential competence for sustainable action. For example, dramatizing a story in which characters symbolise a river, a forest, or animals allows pupils to experience the effects of environmental pollution, irresponsible behaviour, or the neglect of shared resources. These constructed situations establish links between fiction and real life, encouraging critical reflection and consideration of ethical and ecological values.

Children's playlets also contribute to the development of cognitive, social, and emotional competences. Cognitively, pupils learn to analyse situations and develop solutions; socially, they learn to collaborate and communicate within a group; emotionally, they cultivate empathy and the ability to recognise the feelings of others. In this way, children's playlets become a

means of integrated learning that encompasses pupils' intellectual, social, and moral development, thereby directly contributing to the competences for sustainable behaviour defined in international frameworks for Education for Sustainable Development (ESD) and UNESCO guidelines (UNESCO, 2019, 2021).

The use of children's playlets in educational contexts provides teachers with flexible methods for integrating sustainability-related themes into everyday practice. Through planned and structured dramatic activities, pupils are encouraged to think independently, investigate, and propose solutions to challenges in the community, the natural environment, and interpersonal relationships. Thus, children's playlets are understood not merely as literary or performative texts, but as a means of active learning, the development of social responsibility, and the preparation of children for conscious and sustainable participation in society.

The Role of Children's Playlets in Developing Sustainability Education

Within Croatian language teaching in the early years of primary education, children's playlets occupy a special place, as they enable active pupil participation and the development of key competences for a sustainable lifestyle. Their specific dramatic structure and interactive character make them an effective method for cultivating ecological, social, and ethical awareness.

a) Development of Social and Emotional Competences

Through children's playlets, pupils engage in various situations and problems that reflect real-life contexts. By assuming roles, children develop empathy, the ability to understand different perspectives, collaboration, and a sense of responsibility towards the community (Bolton, 1984; Neelands, 1992). The portrayal of characters from nature, animals, or social situations allows children to experience both emotional and cognitive dimensions of scenarios beyond their immediate daily lives, thereby fostering critical thinking and moral reflection (Ladika, 1970; Kunić, 1990).

b) Ecological and Social Awareness

Through the dramatic form of the children's playlet, pupils are introduced to sustainability topics, including environmental protection, responsible behaviour towards nature and animals, and cooperation within the community. Stories addressing these themes serve as a bridge between fiction and reality, enabling children to apply learned values in concrete situations. The personification of animals, plants, or natural elements encourages the development of ecological empathy, as pupils reflect on the consequences of human actions on the environment (Way, 1967; Solar, 2001).

c) Active Experiential Learning

As a dialogic and performative dramatic form, children's playlets facilitate experiential learning, in line with the "learning-by-doing" principle in drama pedagogy (O'Toole, Haseman, 1988). Pupils learn to recognise the consequences of their actions through character discussion, decision-making, and the simulation of various scenarios, developing responsibility and the ability to critically evaluate social and ecological issues. This promotes the development of systematic and ethically grounded thinking, which forms the foundation for sustainable action.

d) Development of Linguistic and Communicative Competences

Beyond social and ethical development, children's playlets significantly contribute to linguistic competence. Through dialogue, monologue, and the performance of stage directions, pupils learn to express themselves clearly and precisely, develop creativity in speech, and expand their vocabulary. Interpretation and improvisation further encourage argumentation skills, the ability to articulate opinions, and the capacity to reflect on and express views related to social and ecological matters (Čečuk, Dević, Ladika, 1990; Šimunov, 2007).

e) Integration of Competences for Sustainable Development

The combination of social, emotional, linguistic, and ecological learning within children's playlets enables the systematic development of competences identified in international Education for Sustainable Development frameworks as essential: critical thinking, responsible action, social sensitivity, empathy, and the ability to anticipate the consequences of one's actions (UNESCO, 2019; Rieckmann, 2018). In this way, children's

playlets become a powerful tool for integrated education, allowing pupils to internalise principles of sustainability through active participation and reflection in everyday life.

Methodological Premises and Analytical Framework

The corpus consists of a representative selection of *children's playlets* included in Croatian language textbooks for grades 1–4 of primary school. The selection was guided by criteria of literary and pedagogical relevance: the presence of fundamental dramatic components (characters, situation, dialogue), thematic and structural appropriateness for young pupils, the inclusion of motifs related to the understanding of natural and social phenomena, and a recognisable role in fostering communication competences.

The analytical procedure was conducted in three complementary stages.

First, a thematic analysis identified recurring thematic patterns and value orientations conveyed to pupils trough the playlets.

Second, a discourse analysis of dialogue was carried out, focusing on lexical, syntactic, prosodic, and interactional elements that contribute to the development of pupils' spoken language and communication skills.

Third, the pedagogical potential of the playlets was examined, in accordance with existing theoretical insights into the role of dramatic play in children's learning and development (Nemeth-Jajić, 2008; Pokrivka, 1985; Šimunov, 2007).

This interdisciplinary methodological framework allows the playlets to be regarded simultaneously as literary-artistic forms, instruments for linguistic development, and pedagogical tools, providing a broad and theoretically grounded approach to analysing their impact on early language and cognitive education.

Analysis of Selected Children's Playlets from Croatian Language Textbooks for Early Primary Education

As demonstrated in the previous chapter, the children's playlet in Croatian language teaching for young learners plays a key role in developing

competences necessary for sustainable action. Through play and role-taking, pupils cultivate empathy, responsibility, collaboration, and critical thinking. To identify and further strengthen these competences within the school environment, it is necessary to conduct a detailed analysis of selected playlets included in textbooks for the early grades of primary education.

The analysis of playlets is carried out through a dual approach:

1. Literary-theoretical approach – The playlet is examined as a form of dramatic text for children, with particular attention to thematic content, characterisation, relationships between characters, and the ways in which dramatic elements (dialogue, monologue, plot, conflict) convey values related to sustainability, including environmental care, social solidarity, and ethical behaviour.
2. Methodological approach – The playlet is viewed as a teaching tool aligned with curricular values and educational objectives. Special emphasis is placed on the didactic possibilities it offers teachers: how to engage pupils in active participation, and how to foster critical thinking, creativity, and problem-solving skills through the performance of dramatic texts.

In this chapter, the selected playlets are analysed through the lens of contemporary theories of children's literature, drama pedagogy, and education for sustainable development. The analysis focuses on the following aspects:

1. Thematic content – how the playlet addresses ecological, social, and ethical themes, and how these themes can encourage pupils to reflect on sustainable behaviour.
2. Characters and dramatic situations – which roles pupils may assume and how interaction with characters fosters social and emotional competences.
3. Dramatic elements and performative possibilities – dialogue, monologue, conflict, as well as stage elements, movement, and improvisation are analysed in the context of active learning and the development of sustainability awareness.
4. Didactic implications – how teachers can use playlets in the classroom to promote the development of attitudes and behaviours associated with responsibility toward the community and the environment.

The aim of this chapter is to demonstrate how the content and performative elements of *children's playlets* enable pupils, through experiential learning, to develop attitudes and skills essential for sustainable living. By linking the theoretical framework, the analysis of dramatic texts, and methodological possibilities, the contribution of playlets to the development of values, attitudes, and competences related to ecological, social, and ethical responsibility becomes clearly evident.

Theoretical Framework of the Analysis

Children's Playlet as a Literary and Performative Form

According to Rosandić (1988), dramatic structure consists of three fundamental elements: the text, the actor, and the audience. In the context of children's playlets, these elements appear in a simplified form, adapted to the abilities and experiences of young school-aged pupils. The playlet text contains the basic plot and dialogue between characters but remains shorter and simpler than conventional drama, which makes it easy for children to understand and perform.

The actors—namely the pupils—actively participate in interpreting characters, allowing them to adopt different perspectives and express emotions through performance. The audience, typically their classmates or the teacher, contributes to the performative situation and motivates pupils to reflect on the effects of their actions and spoken words.

Solar (2001) emphasizes that dramatization and the dialogic structure of the playlet help children develop the ability to take another person's perspective, which is a key component of emotional literacy. Through dialogue, pupils learn to articulate their own views while also listening to and understanding opposing perspectives, supporting the development of social awareness and critical thinking. Although monologues are rare in simple children's playlets, they allow pupils to verbalize characters' inner thoughts, fostering introspective and interpretive skills.

Despite its simplicity, the playlet includes several fundamental dramatic components:

- Conflict – typically mild and pedagogically structured, conflict forms the basis of the plot and teaches problem-solving. In the

context of sustainability education, conflicts often symbolize ethical dilemmas, such as human–nature relationships, responsible vs. irresponsible behaviour, or tension between individual interests and collective cooperation.

- Dialogue – enables direct character interaction, supports language development, and expresses diverse viewpoints on ecological, social, or moral issues.
- Rhythm – creates performance dynamics and helps children follow plot progression. Variations in tempo, movement, or staging hold pupils' attention and encourage active engagement.
- Motivation of action – each scene and exchange carries a clear purpose and internal logic, helping pupils understand cause-and-effect relationships and recognize the consequences of decisions—key elements in learning about sustainability and responsibility.

In sum, even in its simplified form, the children's playlet incorporates essential dramatic elements tailored to pupils' developmental levels. Through these components, children not only understand the story and characters but also develop emotional, social, and ecological literacy, preparing them for conscious and responsible action in everyday life.

Drama Pedagogy and the Development of Children's Competencies

Drama pedagogy theorists (Way, 1967; Bolton, 1984; Neelands, 1992) highlight the multiple benefits of dramatic forms for children. Through children's playlets and related dramatic activities, pupils develop imagination and creativity, enabling them to explore new ideas, perspectives, and strategies for solving problems. Participating in dramatic situations fosters empathy: by taking on roles with diverse experiences and values, pupils learn to recognize others' feelings and viewpoints.

Dramatic forms also support the development of key social skills—communication, cooperation, negotiation, and conflict resolution—which are essential for responsible and inclusive behaviour within the community. Through playlets, children can practically explore social norms in a safe and structured environment, experimenting with different behaviours and learning to recognize their consequences. Dramatic activities

simultaneously encourage problem-solving, as pupils encounter situations requiring thoughtful, strategic, and ethical responses.

Kunić (1990) and Ladika (1997) particularly emphasize the educational potential of the children's playlet, noting that through role-taking children do not merely observe how things are but also explore how things **could be**. This capacity for imaginative projection is fundamental to sustainability, which relies on envisioning alternative futures, reflecting on consequences, and making responsible decisions. Through playlets, pupils can experiment with different behavioural patterns related to nature, community, and social norms, fostering the competencies needed for sustainable action.

Thus, drama pedagogy not only contributes to pupils' cognitive and emotional development but also builds social and ecological responsibility, positioning the children's playlet as an effective tool for integrating education for sustainable development into Croatian language instruction.

Theoretical Foundations of Education for Sustainable Development

Education for Sustainable Development (ESD) is grounded in key international documents and guidelines, including UNESCO recommendations (2019, 2021) and the global Agenda 2030 framework. These documents emphasise the need for education that equips pupils with competencies for responsible societal engagement, environmental stewardship, and the promotion of social justice. Age-appropriate competency models (Biasutti & Frate, 2017; Rieckmann, 2018) further point out that sustainability competencies cannot be developed in isolation; instead, they require an integrated approach that encompasses cognitive, affective, and practical learning dimensions.

The foundational competencies for sustainable development include:

1. Critical thinking – the ability to identify the causes and consequences of environmental and social issues.
2. Responsible action – expressed through thoughtful decision-making in everyday contexts.

3. Anticipatory competence – recognising the short- and long-term effects of one's behaviour on the environment and community.
4. Social sensitivity – readiness to collaborate, understand others, and respect differences.
5. Empathy and community-oriented care – the capacity to recognise the needs of others and the motivation to act in alignment with sustainable values.
6. These competencies are particularly effectively fostered through dramatic pedagogical forms such as playlets. Pupils are not positioned merely as observers; rather, they actively experience, explore, and co-construct situations. Through role-taking, interaction, and improvisation, they examine alternative courses of action and their potential outcomes, thereby developing critical and anticipatory thinking as well as a sense of moral responsibility. This aligns with the principle of learning by doing, central to drama pedagogy (O'Toole & Haseman, 1988), which emphasises experiential learning supported by reflection and creative problem-solving.
7. Within the context of Croatian language teaching in the early grades, playlets thus become a powerful medium for integrating ESD. They link the literary dimension (story, character relations, moral dilemmas) with practical, experiential learning and the development of value-based attitudes. Through such dramatic forms, pupils learn to reflect on their thoughts and actions in relation to nature, the community, and society, contributing to the gradual formation of comprehensive competencies for sustainable development.

Methodological Approach to the Analysis of Children's Playlets

The analysis of children's playlets in Croatian language textbooks for younger school pupils requires a systematic and multilayered approach that integrates literary-theoretical and methodological perspectives. Such an approach enables the playlets to be examined simultaneously as literary forms and as pedagogical tools that support the development of

sustainability competencies. The analytical procedure is structured into several key steps:

1. Identification of Dramatic Elements – This step involves recognising the fundamental components of the children's playlets: characters, conflicts, dialogue, occasional monologues, and the motivational logic of the plot. Even the simplest playlet contains conflict and dialogue, which encourage pupils to consider different perspectives and adopt various roles. Within the framework of education for sustainability, such conflicts often symbolise real-life challenges in social and natural contexts, such as tensions between responsible and irresponsible behaviour or between individual needs and the common good.
2. Thematic Analysis – This step identifies ecological, social, and ethical themes and the values conveyed through the playlets. Special emphasis is placed on motifs that explicitly or symbolically foster awareness of sustainable behaviour, empathy toward nature and other people, and critical reflection on the consequences of one's actions. Thematic analysis helps teachers recognise the educational potential of the playlets and align classroom performance with broader curricular objectives.
3. Assessment of Pedagogical Potential – The playlets are evaluated in terms of their possible integration into teaching practice. This includes considerations of how to ensure participation for all pupils, how the texts support the development of linguistic and social competencies, encourage cooperation, and strengthen responsibility. Assessing pedagogical potential enables teachers to plan activities that foster communication skills while cultivating behaviours aligned with sustainability values.
4. Interactivity and Performance – A key aspect of the analysis concerns how dramatization and performance influence pupils' emotional and social engagement. Active involvement in role-play within playlets enables learning-by-doing, a principle central to drama pedagogy, allowing pupils to experience situations rather than merely observe them. Performance activities develop empathy, promote reflection, and deepen understanding of cause-and-effect relationships in social and natural environments.

By combining literary-theoretical and methodological approaches, children's playlets are analysed both as literary works with a distinct dramatic structure and as effective teaching tools for developing sustainability competencies. This integrated perspective supports the systematic planning of teaching activities that include creativity, social interaction, and reflection on ethical and ecological questions, thereby encouraging responsible and conscious behaviour in line with the principles of sustainable development.

From a curricular perspective, analysing children's playlets in textbooks for lower primary grades demonstrates how these pedagogical guidelines are realised in classroom practice. Through playlets, pupils develop language skills, social and emotional competencies, and engage with cultural and moral values. At the same time, dramatization allows for an exploratory and experiential approach that connects classroom content with real-life contexts, in accordance with curricular goals of holistic pupil development.

The following section provides a detailed analysis of children's playlets from first to fourth grade, highlighting thematic diversity, character construction, pedagogical potential, and possibilities for classroom implementation. This analysis offers insight into the development and role of playlets throughout the early primary years and their contribution to competence development and curricular implementation.

Curriculum and Children's Playlets in Croatian Language Teaching

The curriculum for teaching the Croatian language in the lower grades of primary school focuses on the development of pupils' linguistic, social, emotional, and cultural competencies. Its objectives include fostering communication skills, encouraging creative expression, promoting reading and comprehension of literary texts, and shaping positive attitudes toward learning and collaboration. Within the curriculum, the importance of interactive and creative teaching methods is emphasized, with children's playlets occupying a central place.

In Croatian language classes, children's playlets are used as a means of linking theoretical content with practical language use. They enable pupils to actively participate in learning through dramatization, character

interpretation, and dialogue, while also developing social skills such as cooperation, empathy, and responsibility. Through playlets, pupils practice expressing their own emotions, recognizing the feelings of others, and developing critical thinking and problem-solving skills.

The curriculum further emphasizes connecting classroom content with real-life contexts and the local community. Playlets addressing themes from everyday life, nature, culture, and local customs encourage an investigative approach, stimulate curiosity, and motivate learning. In this way, playlets serve as a bridge between curriculum goals and practical teaching, enabling the integration of linguistic, social, and cultural competencies.

The inclusion of children's playlets in the teaching process aligns with expected learning outcomes, as pupils not only develop language skills but also acquire abilities for teamwork, creative problem-solving, and literary interpretation. Therefore, within the curriculum, playlets are not merely a form of entertainment but an essential pedagogical tool contributing to the holistic development of pupils.

Application of Analytical Approaches to Selected Children's Playlets

Applying theoretical and methodological frameworks to the analysis of selected children's playlets from Croatian language textbooks allows for a comprehensive understanding of these dramatic texts and their educational functions. Through a literary-theoretical approach, the basic dramatic elements—characters, conflicts, dialogue, and plot motivation—are identified and assessed in terms of their appropriateness for children's perception and developmental stage. Conflicts in playlets reveal pedagogically structured situations in which values and ethical principles are confronted, such as human interactions with nature, responsible versus irresponsible behavior, or cooperation versus lack of collaboration. These scenarios allow pupils to develop critical thinking, emotional literacy, and a sense of responsibility through active dramatic experience.

From a methodological perspective, the analysis evaluates the pedagogical potential of playlets. Particular attention is given to opportunities for pupils' active participation through role-taking, dialogue interpretation, and engagement in staged scenarios. The applicability of playlets in different

teaching contexts is also considered, including their role in developing language skills, collaborative abilities, and social awareness.

By combining literary-theoretical and methodological perspectives, children's playlets are understood not only as literary texts but also as effective teaching tools. This dual perspective creates a bridge between theoretical analysis and classroom practice, providing pupils with opportunities for experiential learning and the development of competencies necessary for sustainable thinking and behavior.

Analysis of Children's Playlets in Croatian Language Textbooks for Early Primary Education

Theoretical Framework of Analysis

The analysis of children's playlets in textbooks for early primary education is based on a combination of literary-theoretical and methodological approaches. The playlet is viewed as a simple dramatic form that allows students to actively participate and explore different situations and characters. According to Rosandić (1988), the dramatic structure includes three fundamental elements: text, actor, and audience, which in the playlet are manifested at a simplified level adapted for children. Solar (2001) emphasizes that dramatization and the dialogical structure help children develop the ability to take another's perspective, a key component of emotional literacy.

Even in its simplest form, a children's playlet includes basic dramatic components that support the development of students' social, emotional, and cognitive dimensions:

- Conflict – often mild and pedagogically structured; in the context of sustainability, it appears as a conflict of values: human ↔ nature, irresponsible behavior ↔ responsible behavior, lack of collaboration ↔ cooperation. Such conflicts encourage students to reflect and critically assess the consequences of their actions.
- Dialogue – enables the expression of different character perspectives and the development of communication skills.
- Rhythm – the alternation of scenes, dialogues, and actions creates dynamism and maintains students' attention.

- Motivation of action – each element of the plot follows a logical sequence and has pedagogical purpose, facilitating understanding and interpretation of dramatic events.

Dramatic pedagogy (Way, 1967; Bolton, 1984; Neelands, 1992) emphasizes the development of imagination, creativity, empathy, and social skills through play and dramatization. Vladimir Kunić (1990) and Zvjezdana Ladika (1997) particularly highlight the educational potential of children's playlets, as children through role-play learn not only how things are, but also how things could be, which is of great importance for education for sustainable development.

Sustainability principles are based on international documents such as UNESCO guidelines (2019, 2021) and the Agenda 2030, while student competencies include: critical thinking, responsible action, the ability to foresee consequences, social awareness, and empathy (Biasutti & Frate, 2017; Rieckmann, 2018). Through children's playlets, students experience these competencies in a safe and experiential context, enabling more effective application in real-life situations.

Overview of Children's Playlets in Textbooks

Croatian language textbooks for early primary education include a significant number of children's playlets that differ in thematic focus, form, and methodological function. They represent an integral part of teaching materials and serve not only as literary content but also as tools for active learning, fostering students' linguistic, social, and emotional competencies.

Thematic groups of playlets:

1. Social sustainability – promoting collaboration among students, developing friendships, emphasizing helping others, and practicing sharing and community. Dramatic situations place students in roles that require joint action and mutual respect, thereby enhancing empathy and social awareness.
2. Environmental awareness – fostering a responsible attitude toward nature and the environment. Characters in playlets often care for animals, plants, or natural resources. By identifying with

these characters, students gain an understanding of the ecological consequences of human actions, promoting critical thinking and reflection on sustainable behavior.

3. Moral and ethical values – shaping attitudes toward responsibility, respect, empathy, and collective well-being. Conflicts and dilemmas in playlets reflect real-life situations, helping students develop judgment, decision-making skills, and reflection on the consequences of their own actions.

Forms of playlets:

- Puppet playlets – develop visual presentation and motor skills, enabling work with puppets, movement, and music.
- Fairy-tale playlets – stimulate imagination, creativity, and symbolic play.
- Humorous playlets – foster social and affective competencies through play and laughter.
- Action playlets – strengthen coordination and teamwork skills.

The selection and adaptation of children's playlet forms according to grade level allow for the gradual development of competencies. Lower grades are introduced to simpler, dialogue-based playlets, while higher grades incorporate more complex conflicts, moral dilemmas, and ecological themes. An overview of playlets in textbooks provides a clear map of teaching materials, serving as a foundation for a systematic grade-by-grade analysis.

Analysis of Children's Playlets by Grade Level

Analyzing children's playlets according to grade level provides a detailed insight into the gradual development of students' competencies through Croatian language textbooks. In the lower grades, simple dialogue-based playlets prevail, structured so that students develop social and emotional competencies through conversation and short scenes. These playlets often depict everyday situations at school, at home, or during play, encouraging recognition of basic moral and social values, such as cooperation, sharing, helping, and respecting others. Typical scenarios involve students assuming the roles of friends, teachers, or animals, thereby fostering empathy and the ability to consider others' perspectives.

In the upper grades, more complex conflicts and moral dilemmas are introduced, frequently linked to ecological and social themes. Characters become more diverse, and their decisions and actions require students to engage in critical thinking, reflection, and independent judgment. This gradual increase in the complexity of dramatic situations allows students to be progressively introduced to more challenging social and ethical contexts, enhancing their capacity to assess the consequences of actions while reinforcing empathy, responsible behavior, and sustainability awareness.

In this context, the children's playlet functions as a tool for integrating theoretical knowledge with practical experience, as students do not merely observe situations passively but actively engage in them. Dramatic play enables experiential learning through role assumption, dialogue participation, conflict resolution, and peer cooperation. Through this active engagement, the key pedagogical value of playlets is realized—the development of competencies necessary for sustainable thinking and action across linguistic, social, and emotional domains.

Furthermore, analysis by grade level highlights the progression of content and complexity: from simple, mildly conflictual dialogues and situations in lower grades to more elaborate scenarios featuring multiple conflicts, moral dilemmas, and ecological issues in upper grades. This progression reflects children's developmental needs while demonstrating how Croatian language textbooks deliberately foster students' values, attitudes, and competencies in alignment with educational objectives related to sustainability.

Analysis of Children's Playlets for the First Grade

The analysis of children's playlets in Croatian language textbooks and primers for the first grade demonstrates a clear connection between dramatic content, children's developmental needs, and the objectives of education for sustainable development. Through playlets, students actively participate in situations that foster social sensitivity, empathy, critical thinking, and responsible behavior. Most first-grade playlets are adapted to the students' language level, emphasizing short dialogues, rhyme, and visual cues.

Thematic Orientation

Most first-grade playlets address situations close to children's everyday experiences, such as family, school, nature, friendship, and caring for others. Examples include:

- Social sustainability: Playlets such as *Dvije lopte* (S. Kireta-Babić) and *Koji je prst najvažniji* (N. Sabadi) encourage cooperation, community, and mutual respect among students.
- Ecological awareness: Playlets *Djevojčica i drvo* (M. Gavran) and *Začuđeni mjesec* (J. Balaško) develop understanding of natural processes and the consequences of human actions on the environment.
- Moral and ethical values: Playlets *Božićna želja* (J. Čunčić-Bandov) and *Proljetno buđenje* (J. Čunčić-Bandov) promote judgment, empathy, and awareness of collective well-being.

Types of Playlets and Methods of Performance

Children's playlets appear in various performance forms, allowing the development of different competencies:

- Puppet playlets (*Učena sova*, *Torba kraj puta*) develop visual perception, motor skills, and teamwork.
- Fairy-tale playlets (*Zeko i snjegović*, *Dvije pahuljice*) stimulate imagination and creativity.
- Humorous playlets (*Jooj, šala!*, *Lav i žirafa*) foster social and affective competencies through play and laughter.
- Action playlets (*Proljetno kreketanje*, *Oblačni razgovor*) strengthen coordination and active participation in groups.

Didactic Activities

Most playlets include methodological tasks that enable students to actively experience situations rather than merely observe them. Examples of tasks include:

- Transforming the text into a puppet show (*Proljetno buđenje*, *Radoznali gujcek*).
- Movement and musical interpretation (*Dvije lopte*, *Zeko i snjegović*).

- Creative tasks such as drawing or creating puppets and stage settings (*Lav i žirafa*, *Božićna jelka*).
- Linking playlets with learning and everyday life – recognizing emotions, responsibility, and appropriate behavior (*Tiše, tiše, bit će kiše*, *Prvašić i budilica*).

Characters and Structure

In the lower grades, characters are usually stereotypical – animals, objects, or children – facilitating identification and emotional accessibility. Over time, more complex conflicts and moral dilemmas are introduced, promoting the development of critical thinking and the ability to consider consequences. The structure of first-grade playlets is clear: initial situation – conflict – resolution, with rhyme and repetition supporting memory and language perception.

Pedagogical Potential

Through children's playlets, students develop fundamental competencies for sustainability:

Critical thinking – analyzing conflicts and character decisions (*Djevojčica i drvo*, *Kako doći bliže Suncu*).

Responsible behavior – recognizing and practicing appropriate actions in various situations (*Božićna želja*, *Uskrsna zgoda*).

Ability to consider consequences – reflecting on character reactions and personal behavior (*Lav i žirafa*, *Tiše, tiše, bit će kiše*).

Social sensitivity and empathy – experiencing others' emotions through role-play (*Dvije lopte*, *Učena sova*).

Care for community and environment – developing awareness of nature and mutual responsibility (*Začuđeni mjesec*, *Djevojčica i drvo*).

First-grade children's playlets represent a key tool for integrating literary content with methodological activities. Through them, children actively explore, interpret, and express themselves, enabling systematic development of linguistic, social, emotional, and ecological competencies. Incorporating playlets into lessons not only increases student motivation and engagement but also lays the foundation for more complex forms of learning about sustainability and social responsibility in later grades.

Analysis of Children's Playlets for the Second Grade

The analysis of children's playlets in Croatian language textbooks and workbooks for the second grade demonstrates a clear connection between dramatic content, children's developmental needs, and the objectives of education for sustainable development. Through playlets, students actively engage in situations that encourage creativity, social sensitivity, empathy, and responsible behavior. Most second-grade playlets are written in rhyme, include stage directions, and clearly defined roles, facilitating performance and understanding of the characters.

Thematic Orientation

Second-grade playlets cover broader topics related to children's experiences and their environment, including nature, family, social situations, customs, and moral dilemmas. Examples include:

Social sustainability: Playlets such as *Obitelj Ježićko* (J. Čunčić-Bandov) and *Dvije lopte* (S. Kireta-Bebić) promote cooperation, teamwork, and mutual respect among students.

Ecological and natural science awareness: Playlets such as *Kućica za leptire* (J. Balaško) and *Potočnice* (J. Čunčić-Bandov) encourage reflection on nature, animals, and the importance of environmental preservation.

Moral and ethical values: Playlets such as *Nemoguća ljubav* (L. Pukec) and *Blago i lijek* (L. Pukec) invite students to think about friendship, love, respect, and responsible behavior.

Customs and tradition: Playlets such as *Nikolinje* and *Uskrsni medo* (J. Čunčić-Bandov) introduce children to cultural customs and holidays, encouraging creativity and participation in shared activities.

Types of Playlets and Methods of Performance

In the second grade, children's playlets appear in various performance forms, supporting the development of multiple competencies:

- Puppet playlets (*Nikolinje*, *Uskrsni medo*) develop motor skills, visual perception, and teamwork.
- Fairy-tale and animal playlets (*Zaljubljena žaba*, *Lav i žirafa*) stimulate imagination, creativity, and identification with characters.

- Humorous playlets (*Pijetao bez posla*, *Maskenbalske šale*) foster social and affective competencies through play and laughter.
- Didactic and action playlets (*Usnula jesen*, *Kiša na jelovniku*) strengthen coordination, reading comprehension, and active group participation.

Didactic Activities

Most playlets include tasks that allow students to actively experience situations:

Transforming the text into a puppet or theater performance (*Snjegović u kaputu*, *Obitelj Ježićko*).

Movement, musical interpretation, and expression of emotions (*Dvije pahuljice*, *Lav i žirafa*).

Creative tasks – drawing, making puppets, or designing stage settings (*Cvijet i bubamara*, *Bubamara i krijesnica*).

Linking playlets with learning and daily life – recognizing emotions, behaviors, and moral decisions (*Nemoguća ljubav*, *Na raskrižju*).

Characters and Structure

Characters in the second grade become more complex compared to the first grade. Children encounter stereotyped animals and objects, but also human characters with clear motivations. Conflicts and situations in the playlets develop critical thinking and the ability to consider consequences. The structure of the playlets remains clear: initial situation – conflict – resolution, with rhyme and repetition supporting memory and language perception.

Pedagogical Potential

Through children's playlets, students develop fundamental competencies for sustainability:

- Critical thinking – analyzing conflicts and character decisions (*Nemoguća ljubav*, *Blago i lijek*).
- Responsible behavior – recognizing appropriate actions in different situations (*Nikolinje*, *Lav i žirafa*).
- Ability to consider consequences – reflecting on character reactions and personal behavior (*Na raskrižju*, *Proljetne sveznalice*).

- Social sensitivity and empathy – through roles where students experience others' feelings (*Dvije lopte*, *Obitelj Ježićko*).
- Care for the environment and community – developing awareness of nature and mutual responsibility (*Kućica za leptire*, *Potočnice*).

Second-grade children's playlets represent a key tool for integrating literary content and methodological activities. Through them, children actively explore, interpret, and express themselves, supporting the development of linguistic, social, emotional, and ecological competencies. Incorporating playlets into lessons fosters creativity, teamwork, social and moral sensitivity, and lays the foundation for more complex learning in higher grades.

Analysis of Children's Playlets for the Third Grade

The analysis of children's playlets in Croatian language textbooks and workbooks for the third grade shows an expansion of thematic and content range compared to lower grades. Through playlets, students continue to develop social, emotional, and cognitive competencies, while third grade introduces elements of critical thinking, an investigative approach, and connections to the real world. Playlets remain adapted to the students' language level, but dialogues become longer, and themes more complex, including ecological, moral, health, and cultural content.

Thematic Orientation

Third-grade playlets cover a wider spectrum of topics and situations that encourage students to think critically and explore the world:

- Seasons and nature: Playlets such as *Sve u svoje vrijeme* (K. Grozdanić) and *Dolazi proljeće* (M. Kušec) develop awareness of natural processes and the importance of environmental preservation, exploring changes in nature and phenomena such as pollution and climate change.
- Healthy nutrition and health care: Playlets *Iz poljskog svijeta* (S. Kireta-Bebić) and *Vitamini i minerali* (S. Petrov) encourage reflection on dietary habits and responsibility for personal health.
- Moral and ethical values: Playlets such as *Nezadovoljna gljiva* (J. Čunčić-Bandov) and *Darovi svetog Nikole* (A. Kraljević) develop

recognition of traits such as envy, pride, and generosity, strengthening social sensitivity and empathy.

- Cultural heritage and customs: Playlets *Karnevalska veljača* (A. Kraljević) and *Božićne želje* (J. Čunčić-Bandov) introduce students to customs, holiday traditions, and local variations in celebrations.
- Interactive learning and exploration: Playlets *Puž muž kaži roge van…* (V. Zemunić) and *Svjetionik i brod* (J. Balaško) include investigative tasks, encouraging students to connect the content of the playlets with real-world information.

Types of Playlets and Methods of Performance

Third grade includes a variety of playlet formats, supporting the development of multiple competencies:

- Puppet playlets: *Rasparana slikovnica* (Ž. Horvat-Vukelja) and *Čarobni recept Djeda Božićnjaka* (N. Šarić) develop motor skills, coordination, and teamwork.
- Playlets in verse: Most playlets, such as *Vitamini i minerali* and *Muke zbog jabuke*, are written in rhyme, facilitating memorization and developing rhythmic and language perception.
- Didactic playlets: *Domaći kruh* (L. Pukec) and *Pliva patka preko Save* (D. Grundler) include tasks such as drawing, making puppets, and dramatization, linking creativity and practical application of knowledge.
- Thematic interactive playlets: *Nezadovoljna gljiva* and *Pismo jeseni* (J. Čunčić-Bandov) allow students to explore moral dilemmas, emotions, and interpersonal relationships through play.

Characters and Structure

Characters become more diverse and are typified according to their function:

- Animals and plant characters: Bees, snails, ants, mushrooms, pines, and ducks help understand the natural world and ecological awareness.
- Children and humans: Characters such as Tomica, Ivana, Renata, and Sveti Nikola connect students with cultural and social aspects of life.

- Objects and abstract characters: Lighthouse, spoon, fork, and vitamins encourage symbolic thinking.

The structure of playlets continues to follow a logical sequence: introduction – conflict/problem – resolution, often with rhyme and repetition, facilitating understanding and memorization.

Pedagogical Potential

Third-grade children's playlets contribute to the development of the following competencies:

- Critical thinking: Analyzing conflicts and character decisions encourages reflection on consequences (*Nezadovoljna gljiva*, *Muke zbog jabuke*).
- Responsible behavior: Students practice responsibility through tasks such as planning nutrition or caring for the environment (*Vitamini i minerali*, *Dolazi proljeće*).
- Social sensitivity and empathy: Participation in roles helps students understand others' emotions (*Darovi svetog Nikole*, *Slon i bubamara*).
- Ecological and health awareness: Playlets provide learning about nature, climate, nutrition, and health through interactive tasks (*Sve u svoje vrijeme*, *Iz poljskog svijeta*).
- Cultural and local heritage: Playlets connect students with customs and traditions, fostering an investigative approach and sense of belonging (*Karnevalska veljača*, *Božićne želje*).

Third-grade playlets expand the function of dramatic expression from play and rhythmic learning to an investigative, socially aware, and culturally conscious approach.

Analysis of Children's Playlets for the Fourth Grade

The analysis of children's playlets in Croatian language textbooks and workbooks for the fourth grade shows a further expansion of thematic range and complexity compared to lower grades. Students continue to develop social, emotional, and cognitive competencies, with additional emphasis on critical thinking, investigation, creative expression, and reflection on personal experiences. Dialogues become more complex, and

themes include ecology, moral and ethical dilemmas, cultural heritage, health, and interpersonal relationships.

Thematic Orientation

Fourth-grade playlets cover topics that connect literary texts with the real world and students' experiences:

- Nature and seasons: *Kako prebroditi hladne dane* (K. Grozdanić) explores the lives of animals in winter and the importance of caring for the environment.
- Health and nutrition: *Vitamini i minerali* (S. Petrov) introduces students to the functions of vitamins and minerals and the importance of healthy habits.
- Moral and ethical values: *Ne sudi knjigu po koricama* (K. Grozdanić) and *Najveće blago* (V. Karoglan) develop critical thinking, empathy, and recognition of the values of friendship, family, and personal virtues.
- Cultural heritage and customs: *Domaća zadaća za Dane kruha* (C. Goluža), *Bajka o Orašaru i Mrvici* (S. Škrinjarić), and *Morska ravnica* (K. Grozdanić) familiarize students with cultural customs, local traditions, and dialects.
- Interactive learning and investigation: Playlets such as *Zanimanje mama* (K. Grozdanić) and *Oblak, pahulje i vjetar* (J. F. Radulović) encourage students to explore media, create stories, and design new scenarios.

Types of Playlets and Methods of Performance

Fourth grade features diverse playlet formats, enabling the development of multiple competencies:

- Classic playlets: *Miš i div* (V. Huljić), *Život naglavačke* (L. Pukec), *Telefonska zbrka* (S. Beraković) develop character interpretation and dialogue comprehension.
- Playlets in verse and rhyme: *Muke po bajkama* (K. Barić) and *Bajka o Orašaru i Mrvici* facilitate memorization, rhythmic perception, and emotional expression through voice and movement.
- Didactic playlets: *Domaća zadaća za Dane kruha* and *Vitamini i minerali* include practical tasks, drawing, set creation, and creative dramatization.

- Thematic interactive playlets: *Tri smijeha i mali smješko* (S. Petrov) and *Morska ravnica* allow students to explore emotions, interpersonal relationships, and natural phenomena.

Characters and Structure

Fourth-grade characters are diverse and typified according to their function:

- Animals and natural characters: Birds, squirrels, dolphins, and forest and marine creatures promote ecological and environmental learning.
- Children and adults: Characters such as Lovro, Petar, Filip, mama, baka, and učiteljica connect students with real-life experiences.
- Objects and abstract characters: Vitamins, books, cloud, snowflakes, and wind symbolize abstract concepts and stimulate symbolic thinking.

Playlet structure follows a logical sequence: introduction – conflict/problem – resolution, often with rhyme, song, or repetition to facilitate interpretation and memorization.

Pedagogical Potential

Fourth-grade children's playlets contribute to the development of the following competencies:

Critical thinking and reflection: Analyzing characters' decisions and behavior encourages reflection on consequences (*Ne sudi knjigu po koricama*).

Responsible and active behavior: Students practice responsibility through care for animals, the environment, and personal health (*Kako prebroditi hladne dane*, *Vitamini i minerali*).

Social sensitivity and empathy: Participation in roles develops understanding of others' emotions (*Najveće blago*, *Bajka o Orašaru i Mrvici*).

Ecological and health awareness: Playlets provide interactive learning about nature, climate, nutrition, and health (*Oblak, pahulje i vjetar*).

Cultural and local heritage: Familiarity with customs, traditions, and dialects fosters a sense of belonging and an investigative approach (*Domaća zadaća za Dane kruha*, *Morska ravnica*).

Fourth-grade children's playlets expand dramatic expression toward more complex, research-oriented, and socially aware activities. Through playlets,

students interpret texts, connect them with the real world, develop creativity, and complete tasks independently, supporting the development of competencies important for social, moral, and cultural awareness.

Discussion

The analysis of children's playlets demonstrates that their pedagogical and literary function extends beyond merely illustrating thematic units in textbooks. As a specific type of dramatic discourse designed for children, playlets integrate experiential, emotional, cognitive, and linguistic learning, creating conditions for constructing personal interpretations of the world. They function as spaces where students actively engage in meaning-making through dialogue, role play, and interaction with peers.

From a methodological perspective, these findings indicate the potential for further interdisciplinary research on playlets, particularly studies that incorporate developmental psychology, communication studies, and reception theories. Future research could include comparative analyses of different textbook editions, changes in the conceptualization of playlets in curricular documents, and empirical observation of students' responses to playlets in classroom practice.

The theoretical contribution of this work lies in understanding playlets as a hybrid genre that combines literary dimensions, communicative functionality, and pedagogical purpose. Within the context of the contemporary Croatian Language Curriculum, playlets are confirmed as a text type that simultaneously develops speaking and interpretive competencies while fostering imaginative and experiential learning.

Although the corpus analyzed is limited to select textbook editions, the identified trends indicate stable patterns in depicting the world and interpersonal relationships in playlets, suggesting avenues for broader empirical research.

Development Across Grades

The analysis of playlets in textbooks for the first four grades of Croatian language illustrates a gradual are introduced to playlets through simple narrative situations, short dialogues, and expansion of thematic scope, character complexity, and pedagogical potential.

- First grade: Students recognizable characters—often animals or children. These playlets develop foundational linguistic and social competencies, allowing children to practice communication, emotional expression, and basic moral values through play and dramatization.
- Second grade: Playlets broaden thematically to include moral, ecological, and cultural content. Characters and dialogues become more diverse and complex, fostering critical thinking, responsible behavior, collaboration, and empathy. Features such as rhymed verses, repetition, and stage directions enhance comprehension, memorization, and performance.
- Third grade: Playlets further expand pedagogical and content potential. Students encounter moral dilemmas, ethical values, and questions of responsibility (*Nezadovoljna gljiva, Darovi svetog Nikole*). Playlets include investigative and interactive tasks connecting literature to real-world contexts, while characters grow in complexity, including abstract concepts and symbolic representations. Performance methods involve puppetry, didactic exercises, and thematic interactive playlets, supporting creativity, teamwork, and independent reflection.
- Fourth grade: Playlets enrich cognitive, social, and cultural competencies. Themes become increasingly complex, covering ethical dilemmas, cultural heritage, family and social situations, and scientific or practical content (*Morčić, Vitamini i minerali*). Characters include humans, animals, objects, and abstract concepts; dialogues are more elaborate and may feature dialectal or stylistic variation, enhancing linguistic flexibility and social awareness. Stage directions and performance instructions encourage creative and investigative approaches, integrating literary, artistic, and curricular learning.

Across all grades, there is a clear progression from simple narrative playlets to complex dramatic texts requiring active student engagement, independent thinking, research, and creative interpretation. Playlets foster linguistic and literary literacy, emotional intelligence, empathy, social skills, and a sense of community belonging. Integrating cultural, ecological, and health-related topics makes lessons interactive, motivating, and relevant to students' everyday lives.

Conclusion

Playlets in textbooks and readers for the lower grades of elementary school represent a powerful pedagogical tool that gradually develops students' linguistic, cognitive, social, emotional, and cultural competencies. From the first to the fourth grade, there is continuous progression in the complexity of characters, dialogues, and thematic scope. Early grades emphasize play, rhythm, and simple comprehension, while higher grades cultivate critical thinking, an investigative approach, real-world connections, and symbolic thinking.

Through active participation, dramatization, and creative interpretation, students acquire new knowledge, develop responsible behavior and moral values, and become familiar with cultural heritage and traditions. The use of playlets in teaching enriches not only literary experience but also overall student development, integrating educational, social, and cultural dimensions into a unified and stimulating pedagogical context.

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ODRŽIVOST KROZ IGROKAZE U ČITANKAMA HRVATSKOGA JEZIKA ZA MLAĐU ŠKOLSKU DOB

Sažetak

Rad istražuje ulogu igrokaza u čitankama hrvatskoga jezika za mlađu školsku dob kao sredstva za razvoj održivosti u školskom kontekstu. Posebna se pažnja posvećuje analizi dramskih situacija, uloga likova i tematskih motiva te njihovom doprinosu oblikovanju ekološke, socijalne i etičke svijesti učenika. Rad se temelji na kombinaciji književnoteorijskog i metodičkog pristupa, pri čemu se igrokaz sagledava i kao književna forma i kao nastavno sredstvo. Kroz detaljnu analizu odabranih igrokaza, istražuju se metodičke mogućnosti njihove primjene u nastavi hrvatskoga jezika, uključujući razvoj kompetencija potrebnih za odgovorno i održivo djelovanje, poput empatije, kritičkog mišljenja, sposobnosti sagledavanja posljedica te socijalne osjetljivosti. Rad povezuje teorijske pristupe ekokritike, dramske pedagogije i suvremene metodike hrvatskoga jezika, naglašavajući važnost iskustvenog i participativnog učenja, suradnje među učenicima i kreativnog izražavanja u ranoj školskoj dobi. Analiza pokazuje da igrokazi, zahvaljujući svojoj interaktivnoj i dijaloškoj naravi, ne samo da omogućuju bolje razumijevanje književnih i dramskih principa, nego i aktivno potiču razvoj kompetencija potrebnih za održivi način razmišljanja i djelovanja. Rad doprinosi teorijskom i praktičnom razumijevanju funkcije dječjeg igrokaza u obrazovanju za održivi razvoj te naglašava njegovu potencijalnu ulogu u oblikovanju vrijednosti, stavova i ponašanja mladih učenika u skladu s međunarodnim smjernicama za obrazovanje za održivi razvoj.

Ključne riječi: čitanke, dječja književnost, igrokaz, metodika, održivost

Nina Mance[9]

SUSTAINABILITY OF THE OLD LANGUAGE CONDITION IN THE SPEECH OF THE CROATIAN VILLAGE (ON THE EXAMPLE OF THE VILLAGE OF ŠLJIVOŠEVCI)

Review Article
https://doi.org/1059014/OGJV4729

Abstract

Based on linguistic research from the mid-last century, specifically the research of Josip Hamm in 1949 and Stjepan Sekereš in 1974, and my own contemporary research of the Slavonian dialect, this paper will present the characteristics of the speech in the research of two Croatian dialectologists and the features of the contemporary state of speech in Croatian villages at all linguistic levels. The research is based on the study of the Podravina subdialect of the Slavonian dialect of the Shtokavian group, with the modern linguistic analysis based on the speech of the village of Šljivoševci. Significant changes have occurred in the speech of the Croatian village seventy years after Hamm's research and fifty years after Sekereš's research. This paper will show which linguistic levels are most susceptible to changes and which preserve the old linguistic condition.

Keywords: Croatian village, Podravina subdialect, Slavonian dialect, sustainability of speech, Šljivoševci

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Introduction

Heritage, patrimony, or ancestral inheritance represents the entirety of cultural heritage or cultural goods, including individual immovable, movable, and intangible cultural goods (Kostović-Vranješ, 2015: 445).

The concept of heritage encompasses both material and immaterial goods of a certain nation, and due to the diversity of nations, it is possible to speak of the heritage of a certain region, city, municipality, and even family. Nurturing the traditional heritage of a nation or a specific region is an important factor in working with children from early childhood, as it develops sensitivity towards language, music, art, spiritual, cultural, and natural wealth of the area to which the children belong (Kostović-Vranješ, 2015, according to Paragvaj, Ujčić, 2005).

In exploring traditional heritage, it is important to be attentive and not overdo the content, but to enable children's activity and productivity and encourage them to engage in investigative work by asking questions, drawing conclusions, participating in the presentation of traditional content, and discovering the importance of uncovering traditional values that are integral to students' lives. Cultural heritage represents a value that is not reflected in an object or practice itself, but in the meaning of that object or practice for life (Šošić, 2014, according to Forrest, 2010; Gillman, 2010).

Each nation will direct its national heritage towards different forms such as religion, customs, human relationships, song and dance, and the like, attributing to them historical, educational, economic, representative, or other values, which ultimately can be unified in one cultural good. Traditional heritage as an intangible manifestation of a certain culture is reflected in social customs and is evident in social values, beliefs, customs, language, dance, and other aspects of human activity, as discussed by Prott and O'Keefe (1992) who add the concept of manifestations that are a reflection of a certain way of life and testify to the history and validity of that way of life, which are preserved from oblivion by reconstruction in the present.

The concept of heritage in the complex term "cultural heritage" more clearly reflects the contemporary understanding that these are the goods inherited by the current human generation from earlier ones, which then includes the obligation to protect and preserve these same goods to the

greatest possible extent for future generations (Šošić, 2014). Heritage becomes a national good, and the power it possesses as a bearer of the identity of a particular social community, on one hand, represents the past of that community, and on the other, it implies its present and future (Jelinčić, 2010).

It is necessary to think more thoroughly about the processes of preservation, nurturing, and promotion, as we cannot predict how long it will take for traditional heritage resources to vanish, for various reasons. The sustainability of local, and therefore national, cultural identity greatly depends on the actions of each individual.

The dialect of the Slavonian region is an integral and inseparable part of the traditional heritage of the Croatian people. Croatian cultural heritage includes culture, customs, beliefs, norms, costumes, dances, but also the speech of a place which, as the lowest level idiom, greatly reflects the way of life in that particular place. Furthermore, by nurturing and transmitting local dialects, we preserve from oblivion an essential part of human life that is acquired from an early age, thus ensuring the existence of the people, their culture, and most importantly their cultural and linguistic identity.

Slavonian Dialect

The Slavonian dialect refers to Croatian old Shtokavian speeches located in Slavonian Podravina, Slavonian Posavina, the central eastern part of Slavonia, the Croatian part of Baranja, and some places outside the borders of the Republic of Croatia (some places in northeastern Bosnia, in the western Bačka region of the Danube in Serbia, and a few places along the Drava in Hungary). The Slavonian dialect is spoken exclusively by Croats.

The name "Slavonian dialect" does not encompass all meanings, as it is spoken not only in Slavonia but also in Baranja and outside the borders of the Republic of Croatia, and not all of Slavonia speaks the Slavonian dialect. The Slavonian dialect is spread in the southern and northern parts of Slavonia, the central eastern part around Našice, Đakovo, and Vinkovci, and the central western part around Požega. The speech of Croats from Ilok, Babska, Tovarnik, and other places, which have recently been

considered part of the Šumadija-Vojvodina dialect, and the speech of the place Ilača, can also be consudered Slavonian dialects.

The Slavonian dialect is known as the Šokački speech among the people. Considering the accent system, the Slavonian dialect can be divided into several groups:

Speeches that maintain the old accentuation, which, according to Milan Moguš, have three old accents (̏, ̂, ́) in all old positions. This accent system can be heard in the far east of the Ikavian- Ekavian speeches in Slavonia around Vrpolje and in a few places around Valpovo in Slavonian Podravina.

Speeches with a newer accentuation using a circumflex accent (̃). These speeches, in addition to the three old accents (̏, ̂, ́), also recognize two new ones (̀, ́). This accentuation is found in most Slavonian dialect speeches. In some places of this group, words with two accents (žènä) can be heard.

A smaller group of speeches where the acute accent is used only occasionally. In these speeches, the same word can be heard with both the acute and another accent.

The Ilok group of speeches has an older dual-accent and a newer four-accent system.

Speeches of the Slavonian dialect are "šćakavski." Old groups *skj and *stj and new ones that arose after the loss of the semi-vowel change to šć. Thus, even today, in these speeches, one can hear: šćâp*, oprâšćam,* šćĩpat.

In the speeches of the Slavonian dialect, the absence of the sound h is extremely pronounced. It either completely disappears, or the hiatus caused by the absence of the sound h is resolved by inserting the sounds v or j: *râst, doödi; sûvo, orëj*.

Another feature of the Slavonian dialect is the softening of the sounds l and n before the sound i: *mòljit, vòljit, naslönjit*.

The final "i" in the infinitive is generally lost: *dõjt, nãjt*.

The resonant l at the end of a syllable in nouns and adjectives often remains unchanged: *pëpel, vësel, dèbel.*

In the verbal participle, the vowel cluster ao is reduced to o: *kòpo, làgo, mögo*.

Verbs whose infinitive base in the standard language ends in -nu end in -ni in the Slavonian dialect: pogìnit, osvànit, klèknit. A special verb is "metnuti," where we might expect "mètnit" by analogy to poginit and osvanit, but "mètit" appears.

According to the ending for the 3rd person plural present tense, the Slavonian dialect can be divided into three groups:

- 3rd person plural predominantly on -iju-eju (ìdeju, *nȍsiju*)
- 3rd person plural predominantly on -aje (ìgraje *se*)
- Group with the 3rd person plural predominantly on -u (*dȓžu*).
- In the Slavonian dialect, the passive participle ending in -t is much more common than in the standard language: *posȁdito, razbȉta*.
- The present participle generally appears without the final -i: ïduć, šúteć, *bèruć*.

Podravina Subdialect of the Slavonian Dialect

The Slavonian dialect is divided into subdialects:

- Posavina subdialect
- Podravina subdialect
- Baranja subdialect.

Ljiljana Kolenić claims: "Within the Slavonian dialect, we can talk about subdialects: Posavina, Podravina, and Baranja. The Posavina (southern) subdialect of the Slavonian dialect is Ikavian and semi-Ikavian (Ikavian-Ekavian), and to a lesser extent Ekavian. The Podravina (northern) subdialect is Ekavian, and the Baranja subdialect is Ikavian-Ekavian." (Kolenić 2003:175).

The research for this paper was conducted based on the Podravina subdialect: Stjepan Sekereš described the boundaries of the Podravina subdialect and divided the Podravina subdialect into speeches (Sekereš 1967:137).

According to his interpretation, the western boundary is from Virovitica through Turanovac to the Drava, the northern boundary goes along the Drava River north of Bušetina to Osijek, the eastern boundary from Osijek is through Brođanci to Habjanovci, and the southern boundary goes from Habjanovci through Koška, Podgorač, Našice, Feričanci, Bokšić,

Beničanci, Rakitovica, Viljevo, Čađavica, Novak, Suhopolje to Virovitica. He also includes the speeches of Erdut and Aljmaš, villages east of Osijek, in this subdialect. Sekereš also emphasizes that he disagrees with the classification of the speeches of settlements around Virovitica, where the Ikavian speech is located, into the East Herzegovinian dialect, as he believes that the speeches of these settlements are quite similar in their accentual, phonetic, morphological, syntactic, and lexical features to the Ekavian speech of Slavonian Podravina, and therefore belong to the Podravina subdialect.

Sekereš further divides the Podravina subdialect into the following speech groups:

- Western Podravina speech group
- Eastern Podravina speech.

The Western Podravina speech group encompasses the area of the Podravina subdialect to the west of Donji Miholjac, and this group can be divided into two basic speeches: the Čađavica- Sopje speech and the Turanovac-Rušani speech. The boundary between these two speeches is from the Drava near Detkovac through Gradina to Suhopolje.

The Eastern Podravina speech encompasses the area to the east of Donji Miholjac.

The main linguistic features of the Podravina subdialect according to Stjepan Sekereš can be summarized in the following common characteristics:

- Retention of the acute: *starovẽrski,* čõrba*, bĩlo*
- Long falling accent in words like: *dîm, sîr*
- Long falling accent on two-syllable words: *vênac, glâva*
- Short falling accent in words like: *kȍvač, jȕnak*
- Short falling accent in words like: *jȅlen,* èkser
- Short falling accent in words like: *jȅzik, sȅlo*
- No differentiation between the sounds č and ć; pronunciation closer to č: *nočom*
- The replacement of the yat sound most often with e: *dete, mleko*; in isolated lexemes, it is possible to replace it with i: *divojka, dvi*
- Contraction of the vowel cluster ao to o: *pitao>pito, mogao>mogo, pjevao>pevo*

- Absence of the phoneme h in any position: *rast, njiovu, gra*; it can sometimes be replaced with the sounds v or j: *kruva, snaje*; in some lexemes, it can be replaced with the sound k: *siromak*
- Some consonant clusters are simplified: *tica, jeno, srbeti*
- Softening of the sounds l and n: *voljim, moljitva, lužnjica*
- The consonant cluster jd remains unchanged: *dojdem, najdem, pojdem*
- The vowel cluster io is pronounced as ijo: *bijo, vozijo*
- Sometimes, a prosthetic v appears before the initial sound u: *vuže, vuzak*
- The yat sound after the sound r disappears, making r syllabic: *umrti, prostrti*
- Sibilantization and palatalization do not occur: *papriki, vojski, zecevi*
- Adjectives in the comparative have the ending eji: *pametneji, stareji*
- In the instrumental, instead of the forms mnom, tobom, sobom, the pronouns have the forms *menom, tebom, sobom*
- Old case forms are preserved: *voziti se na koli, držati u zubi*
- Nouns ending in -t and some others often have the ending -(j)om in the instrumental:
- *pamećom, mašćom,* ćerjom
- The 2nd person pronoun oni has the genitive form nji: *od nji sam došo*, and the accusative form nje: *nje smo sreli*
- Instead of the reflexive-possessive pronoun svoj, the possessive pronoun is used: *uzo sam moju biciklu*
- Instead of the possessive pronoun njezin, the genitive of the personal pronoun *ona* is used: *to je nje* ćerka
- Instead of the forms počinjati, načinjati, the forms počimati, načimati are used
- Verbs of the second type, instead of ending in -nuti, end in -niti: *klekniti, osvaniti, potoniti*
- Verbs ending in -ivati have the ending -ivam in the 1st person present: *istovarivam, zavezivam*
- To express prohibition in the imperative, instead of nemoj, nemojte, the forms *neka, nekate* are used

- The present tense of the verbs vidjeti, gledati, moći in the present tense has the forms
- *viđem, gledem, možem* or *morem*
- Verbs with the present tense ending -em have the ending -eju in the 3rd person plural:
- pobegneju, pokreneju
- Adverbs receive suffixes: *ovudak, tudak, onudak*
- Hypocoristic male names are formed with the suffixes -o, -oš, -eta: *Ivo, Pavo, Tonoš, Jozeta*
- Hypocoristic female names are formed with the suffixes -a, -ača, -ena: *Mara, Kata, Marača, Lenkena* (Sekereš 1962).

Josip Hamm's research

Among the researchers who studied the speech of Slavonian Podravina, the priority should certainly be given to Josip Hamm (1949). The boundary of his study of Podravina speeches included all places between Osijek, the Drava, and Donji Miholjac on one side and the line Osijek-Habjanovci-Poreč-Donji Miholjac on the other side – the area he called Lower Podravina (Hamm 1949).

At the very beginning of the monumental work "Shtokavian Speech of Lower Podravina," Josip Hamm states: "A long time ago, I went to Lower Podravina to collect material for a significant dialectological study. My initial intention was to travel through the entire area of Podravina Shtokavian dialect, from Aljmaš and Erdut to Virovitica, hoping to extend my research further south and connect with Ivšić's studies on the Šaptinovac dialect, the modern Posavina speech, and Croatian Kajkavian speeches (...). But then I abandoned that idea." (Hamm 1949:5) Hamm continues to explain why he abandoned such a dialectological study. He emphasizes that almost every dialectological work in our country represents a separate chapter and that older ones often do not provide answers to important (e.g., accentual) questions or give them generally and unreliably, sometimes even inaccurately, that they are of little use for broader synthetic work (Hamm 1949:5). He further emphasizes that accentuation should be the primary criterion for linguistic division, as Ivšić did in his study of the Kajkavian language of Croats, where the representation of an entire

speech was placed on an accent-intonation basis. This was a significant step forward because, in our region, accentuation should be the primary criterion for linguistic division (…) (Hamm 1949:6).

Hamm also criticizes previous dialectological research for not sufficiently addressing the migrations of the area, saying: "Another significant shortcoming in dialectological works is the insufficient attention to the migratory background on which a speech developed. (…) Every speech in its current form is the result of the real components that preceded it. Language cannot be imagined without those who speak it, just as speech (dialect) cannot be imagined without the land on which it emerged." (Hamm 1949:7). According to Hamm, modern dialectology should also use extralinguistic data, so he first deals with the migrations of the population of the studied area. He notes that from the Peace of Požarevac in 1718 to the collapse of Austro- Hungary in 1918, there were almost no significant changes between Osijek and Donji Miholjac that would indicate larger migrations and linguistic influences from outside. The changes that occurred during the Turkish period or immediately after the Turks strengthened rather than weakened the indigenous population in the settlements that survived. He concludes that in the 18th and 19th centuries in Lower Podravina, there were no significant changes that could have influenced the local speech. Hamm dedicates a large part of his work to accentuation and also addresses morphology and lexicon.

Regarding accentuation, Hamm first comments on Ivšić's interpretation of the Posavina acute and its comparison with the Čakavian and Kajkavian acute. He emphasizes that it is a pity that Ivšić did not more precisely define the difference between the Posavina and Kajkavian acute, especially since it is sometimes believed that today's Podravina Shtokavians are descendants of former Kajkavians who partially Shtokavianized before the Turks and could easily have preserved this older accentual feature.

Furthermore, Hamm states that the Podravina acute belongs to rising accents or accents with a rising intonation. In it, the expiratory force is stronger in the second part than in the first and stronger than the force with which the next syllable is pronounced. He also notes that in addition to the acute and the long rising accent, there is a special accent in some speeches that some dialectologists mark with the signs ˆ and ″ or simply ˊ and ˊ, but it often replaces the older ˜. By intonation, it is similar to the

acute, and Ivšić calls such an accent sluggish (″) and records it for some Kajkavian and Posavina speeches. Hamm claims that, due to the relatively shorter initial part of the accent and the higher intonation of the following syllable, this accent has a special feature of lightness and buoyancy, so he calls it "saltans," and since it is shorter than the acute, he extends the name of such an accent to "semi-long saltans" (’). Interestingly, Hamm claims that this accent is more common in women's speech than in men's and more in younger than in older people's speech. He divided the entire area of Lower Podravina into eastern, western, and central parts concerning the semi-long saltans.

Regarding morphological features, Josip Hamm highlighted three characteristic features of Lower Podravina: the instrumental singular of non-palatal noun bases in masculine and neuter with -em: stolem/kajmakem in the eastern part, while in the western part (except for slight exceptions: putem, poslem, kotlem) it remains -om; longer and shorter forms for the 3rd person plural present: -u, -eju, -iju: kradu/kradeju, vozu/voziju; pejoratives for female personal names: -ena: Marena, Lenkena (western part) -aka: Kataka -uša: Jeluša -ača: Anača (eastern part). The suffix for male personal names is most often -oš: Ivoš, Đuroš, and sometimes the suffix -eta is heard: Iveta, Đureta. Based on morphological research, Hamm concludes that the core of Podravina Shtokavian is clearly outlined: it is located in the western area, and its foundation is Tb, Vc, Gt, Cr, Mc, Kn, and Čm. These settlements can today be considered the purest representatives of this Podravina speech (Hamm 1949:52).

At the end of his work, Josip Hamm expresses his opinion on the origin of Podravina Shtokavian and addresses Pavičić's theses on the Kajkavian origin of Podravina Shtokavian.

Examining the scientific opinions on Podravina Shtokavian (Jagić, Rešetar, Gopić, Klaić, and others), Hamm presents several hypotheses about the origin of Podravina Shtokavian: 1. Podravina Shtokavians were originally Kajkavians who later Shtokavianized; 2. Podravina Shtokavians could have preserved the characteristics of the old Slavonian Shtokavian speech from the time before the community with neighboring Kajkavians, with whom they could have had some common features; 3. Podravina Shtokavians could have been originally settlers from Posavina and Bosnian areas settled by the Turks on land that once belonged to Kajkavian natives.

Hamm immediately dismisses the third hypothesis because it cannot be proven either historically or linguistically. Hamm believes that evidence of the remaining two hypotheses should be sought in the analysis of Podravina speech, particularly in the western area, which he believes has preserved the most antiquity. He calls the speech of this area the central speech. Citing many linguistic features of Podravina speeches, he dismisses Pavičić's theses on the Kajkavian origin of Podravina Shtokavian and this one with the fact that Podravina accentuation is partly older than Kajkavian and represents a continuation of the development that preceded the accentuation in some Posavina speeches. Therefore, it cannot be objectively proven that Podravina Shtokavian is a direct continuation of the former Kajkavian speech. Supporting the thesis of the Shtokavian origin of Podravina speeches, he emphasizes that Shtokavian could have been brought from the south or autochthonous. In conclusion, he says: "It remains to say what I think about the origin of Podravina Shtokavian. (…) Podravina Shtokavian is a natural continuation of that archaic Shtokavian speech that spread throughout Slavonia during the great migrations and has remained there. (…) The original boundaries of this archaic type of Shtokavian speech in Slavonia and the southern regions are difficult to establish." (Hamm 1949:67). The main features of this speech were "ščakavism" (šć, žđ), soft pronunciation of the sound č, common accent with characteristic acute, and dual pronunciation of Proto-Slavic semi- vowels: one lower (ъ) that eventually turned into a and one higher (ь) that turned into e or a similar sound. Such pronunciation favored the early division of archaic Shtokavian into two parts, one northern (ekavci) that retained the basic e for Proto-Slavic ě, and one southern (ikavci) that through a closed e (ẹ) turned into i. At the same time, the southern branch, when the full vocalization of the sound ь occurred, gave priority to the pronunciation a, while the more conservative northern branch oscillated between e and a until finally also turning to a. Josip Hamm also marks the boundaries of the archaic type of Shtokavian speech: the northern boundary probably reached the Drava and Danube, where it touched the northwestern boundary of neighboring Shtokavian speeches in Srijem, and further south along the Bosna and Neretva river basins gradually descended to the sea, from where it came to the Sava through the Cetina and Una along the Čakavian area. The western boundary reached Virje and Gola, and the southern boundary reached Okučani. The boundary between the northern and southern

branches probably originally ran along the Sava River: this is indicated by the Ekavian toponymy near Okučani, Nova Gradiška, Brod, and Đakovo (…) (Hamm 1949:67).

Research of Stjepan Sekereš

Stjepan Sekereš published an extensive work on the speech of Slavonian Podravina, the first part in 1974 and the second part in 1975. The work is the result of his research on the Ekavian speeches of Slavonian Podravina from Erdut to Vaška. The Podravina speech, which has many Kajkavian elements, is among the most archaic Shtokavian speeches, as Sekereš emphasizes (Sekereš 1974:125). He divides the speeches encompassed by this work into two basic speeches: western and eastern speech. He emphasizes that the main difference between these speeches is in the accent (nãrod-nârod, lïvada-livädа), the pronunciation of the sound č (kuća-kuč'a), the pronunciation of the infinitive (pevat-pevati), and the formation of the comparative (noviji-noveji). Sekereš includes both speeches, along with the Virovitica speech, in the Podravina subdialect, while the speech of Ikavian settlers in that area is classified as the East Herzegovinian dialect. He also addresses Josip Hamm's work "Shtokavian Speech of Lower Podravina," stating that it is the most comprehensive work on the speech of that area, but criticizes Hamm for including the speech of some settlements between Osijek and Donji Miholjac while ignoring the other settlements of Slavonian Podravina. Sekereš emphasizes that he does not find the semi-long saltans (') mentioned by Hamm, concluding that Hamm likely took some finer nuances in the pronunciation of the short falling accent as a new accent, which cannot be a characteristic of the common speech of that entire area, but only of the speech of some individuals in that area (Sekereš 1974:125). Sekereš, contrary to Hamm, mentions the high rising accent (‘) that appears in almost all villages around Donji Miholjac and in Podravina villages up to Vaška. Regarding the reflection of yat, he emphasizes that the speeches of Slavonian Podravina are mostly Ekavian, but there are also Ikavian speeches that emerged under the influence of settlers from Bosnia during migrations in the past.

In his work, Sekereš provides data on the migrations of the population of Slavonian Podravina from the settlement of Slavs in the late 6th and early

7th centuries, through Turkish rule in the 16th and 17th centuries, to migrations in the 20th century. According to the origin of the population, Sekereš divided the settlements in Slavonian Podravina into six groups.

The first group includes old settlements where the majority are natives (from the same place or surrounding villages). In these places, the old speech is well preserved. Such settlements are: Brođanci, Abljanovci (Habjanovci), Bizovac, Satnica, Arkanovci (Harkanovci), Želčin (Zelčin), Marjančaci, Nard, Valpovo, Bocanjevci, Vinograci, Tiborjanci, Veliškovci, Gat, Marjanci, Kunišinci, Čamagevci (Čamagajevci), Lacići, Beničanci, Šljivoševci, Rakitovica, Črnkovci, Bočkinci, Podgajci (Podravski Podgajci), Sveti Đurađ (Đurađ), Noskovci, and Sopje.

The second group includes old Croatian settlements where the majority are natives, but there are also many settlers from various Yugoslav regions. In these settlements, settlers could have had a minor influence on the speech of the natives.

The third group includes settlements where settlers from various regions are the majority, and natives are in the minority.

The fourth group includes Serbian settlements where the majority are Serbian settlers.

The fifth group includes Serbian settlements where there are Croats in a greater or lesser extent.

The sixth group includes all settlements that emerged in the 20th century (mostly after the First World War), where newer settlers from various regions live.

Sekereš further emphasizes that he will focus only on the speech of the first five groups in his work, as he believes that the speech of the sixth group has no connection to the speech of the old population of that area and is not important for the speech of Slavonian Podravina. It will be noted that the village of Šljivoševci, which is the subject of this paper, was classified by Stjepan Sekereš in the first group of settlements.

After describing all the migrations that occurred in that area, it is clear that they influenced the speech of the native Podravina population, which he claims is Ekavian with an older accentuation. Sekereš states that Kajkavian dialect, Slavonian Posavina speech, and East Herzegovinian dialect could have influenced the speech of Slavonian Podravina. He emphasizes

that Kajkavian dialect and Posavina speech could have influenced the speech of some rural settlements of that area before the 16th century, and from the 16th century, the East Herzegovinian dialect had a strong influence through settlers from that dialect area. The strongest influence was in the southern and northern parts of the Podravina speech.

The rest of the work is dedicated to describing linguistic levels from accentuation, phonology, morphology to word formation, syntax, and lexicon. In the first part of the work on the speech of Slavonian Podravina, he presented dialectological maps of Slavonian Podravina according to the accent criterion and the reflection of yat (Sekereš 1974).

Methodology

The research began with theoretical preparation: studying literature related to dialectological data on the speeches of the Podravina subdialect of the Slavonian dialect; this includes primarily the works of prominent dialectologists Josip Hamm and Stjepan Sekereš, discussed in the section on the Slavonian dialect.

The research also involved fieldwork, following the guidelines of Mate Hraste on field research, accepted by other dialectologists. Most of the research was based on spontaneous conversations with selected speakers on any topic of their interest, but it was essential that they relaxed and spoke in their vernacular speech. The term "vernacular speech" is borrowed from sociolinguistics, referring to the speech used by a person in everyday situations, the speech that is most natural to them (Labov 1984:29). The biggest obstacle was the observer's paradox, the fact that the presence of the observer modifies the speaker's behavior, i.e., speakers do not speak in the sam way in the presence of a researcher because they are aware of the act of speaking.

Speakers were informed that their conversations would be used to describe the speech of their place and were informed when the recording started and ended.

Speakers were recorded with an Olympus VN-5500PC dictaphone, and the research was conducted during February and March 2024 on several occasions.

Speakers

Speakers were selected according to well-known dialectological principles: attempts were made to find speakers of older age, to verify whether they had spent their entire life or most of it in their native place, whether their ancestors and spouses were from the same place, whether they had a lower level of education, and whether they were not completely under other linguistic influences. Although such speakers are hard to find today, it is still to a certain extent possible in Šljivoševci, but the village is extinguishing, as confirmed by the speakers.

In Šljivoševci, the speakers were: Ružica Kovačić (b. 1965), Katica Drašinac (b. 1948), and Stjepan Drašinac (b. 1945), to whom I extend my gratitude for their time, hospitality, kindness, and willingness.

Šljivoševci

Šljivoševci is a village in the Republic of Croatia, in Osijek-Baranja County, and belongs to the Municipality of Magadenovac. The Municipality of Magadenovac includes six villages: Beničanci, Lacići, Kućanci, Magadenovac, Malinovac, and Šljivoševci.

This paper further describes the contemporary state of the speech of Šljivoševci, a place where the archaic speech, retaining the characteristics of the Slavonian dialect, Podravina subdialect, is still somewhat preserved at all linguistic levels. Further analysis will reveal the level of retentionthis old state in the speech of Šljivoševci.

Šljivoševci is located at an altitude of 96 meters in the lowland of the eastern Croatian plain. It is believed that the village got its name from the abundance of plums that grow in the area. The first mention of the village name Šljivoševci dates back to 1333, and the center of the village is adorned by the parish church of St. Gregory. The church burned down in 1819 and remained unusable until 1874 when it was completely restored. After that, the renovation and decoration started, and in 1885, the clock was placed on the tower. In 1889, the church was paved with cement tiles, and that year new organs were acquired, thet still exist today.

The village has a school up to the 4th grade, which operates as part of the "Matija Gubec" Elementary School in Magadenovac. There is also a Cultural and Artistic Society "Seljačka Sloga," which has been continuously active since 2003 after a break from the 1970s. Residents are particularly proud of the Folklore Festival "Suncokret mi urodio diko," which is held traditionally every year. On the way from Osijek to Šljivoševci, it is impossible not to notice the vast sunflower fields.

According to the data from the Croatian Bureau of Statistics, the village had 351 inhabitants in 2011, and according to the 2021 census, 276 inhabitants, indicating a population decline in the village.

The following is a description of the contemporary speech of Šljivoševci at all linguistic levels.

Phonological System Šćakavism

Šćakavism is a feature of all three Croatian dialects, but it is one of the main characteristics of the Podravina speeches. Stjepan Sekereš (1974: 145), traveling through Slavonian Podravina and recording speeches, concludes that in all Podravina villages where the old speech is well preserved, the clusters st' sk' are replaced by the cluster šć (šč): ščùka, *gùšćer,* ščípati*, kòšćica*. However, Stjepan Sekereš notes that there are also words with št: štèta*, prĩšt,* štène*,* štùka. In the speech of Šljivoševci, during encounters with speakers, only one example of šćakavism was recorded: *ne pušćaju doma*. Recently, more štakavisms have appeared, so šćakavism is a phenomenon that is disappearing from the speech of Šljivoševci.

Sound h

As noted by Hamm and Sekereš, and in today's speech of Šljivoševci, the sound h is an unstable unit without a fixed position. It can be completely omitted, or the hiatus caused by its omission can be bridged by inserting other sounds, most often the sounds j, v, or k. The omission of the sound h is frequent even among younger speakers. The recorded examples of the omission of the sound h include:

In the initial position: *ladnetina, ren*

In the central position: *ruvo, Mioljac, njiova, kuvala, duvan, naranit, njiov, kruva, poranit, plenat*

In the final position: *gra, pet, beli' ruva*.

Omission of Vowels

In the Slavonian dialect, the omission of vowels is very common, and this is also true in the speech of Šljivoševci; the examples show that vowel reductions are present regardless of:

a) the type of word,

b) the vowel in question, and

c) whether it is an apocope, central position in the word, or final position.

Found examples include: *nis(u), godna, ond, bil(i), snimo, kazo, Katca, ti sam, bud, bez brige*.

Omission of Consonants

Although the omission of consonants is an inevitable phenomenon in the Podravina speeches of the Slavonian dialect, it is a phenomenon that is disappearing in the speech of Šljivoševci, and only the example ćer was found among the speakers.

Softening of the Sounds l and n

The softening of the sounds l and n, known as muiranje, most often occurs before i and e, and sometimes before a. This phenomenon has been recorded by previous dialectologists and has not disappeared in the speech of Šljivoševci, with examples including: *podeljiti se, telji se (krava), voljim, moljim vas.*

Yat

The speeches of the Podravina subdialect of the Slavonian dialect, to which the speech of Šljivoševci belongs, are generally Ekavian, so the yat has developed into e. The Ekavian reflection of the yat sound is inevitable among older speakers, except when they try to speak "literary" language due to the observer's paradox, while the younger generation predominantly uses the standard reflection of the yat sound, although they can occasionally be heard using the Ekavian reflection of the yat sound. Recorded examples include: *zadremam, deteta, prešuteli, deca, teli, lepše, nedelje, dever, mesto, setim, sećam, lepa, celi, reč, dve, lepog, mleko, venčanje, venac, uvek, seno, pevalo se, navestit, sreda, verujem, testo, pripovedali, lepši,* šutela*, dečaka*.

Addition of Sounds

The addition of sounds is common in the Podravina speeches of the Slavonian dialect, including the speech of Šljivoševci. Therefore, it is not uncommon, especially among the older generation, to add prefixes, even more than one, to the base of the word: *zotimali, zopremane smo.*

The addition of a vowel was recorded in the demonstrative pronoun, probably by analogy to ovaj, onaj: *otom (... s otom Ružicom mojom...)*.

Sound Changes

In the Podravina speeches of the Slavonian dialect, there is generally no change from k to c before i, i.e., sibilantization does not occur, and this is also true in the speech of Šljivoševci; recorded examples include: *kad su bili zaruki, u vojski, dade vojski*.

Accents

The speech of Šljivoševci, regarding the accent system, belongs to speeches with older accentuation and reflects an older phase of the Croatian language. However, the acute (ˆ, new acute or neokaut), although a significant

feature of Shtokavian speeches of the Slavonian dialect, was surprisingly recorded only once in the speech of Šljivoševci in the example obrisáči.

On the other hand, the quick accents, which are recorded consistently in all speakers, both younger and older, are exceptionally well preserved: *ne trȅba, komentȉramo, nosȉlo, potrȕdimo se, komšȉje, zaborȁvila, pilȅćeg, pojȅli, kobȉle, sastȁnemo, metȉli, Topȍlje, počastȉt, komšȉje, komšȉluk, batȉna, strina, Marȉja, sušȁre, večȅru, tamjȁna, potrȁje, cipȅle, stojȉmo, nemȍjte, ponjȁva, nedȅlja, imȁle, kašȉkom, gužvȁre, dovȅzli, popečȅmo, potrȍšimo, lepȉnje, nosȉlo, pekmȅza, kajmȁka, kamȅnje, njegȍvi, pojȅde, ložȉle, vatru, poslȉkat, dolȁzio, udȁt, kobȉla, prosȉt.*

Regarding enclitics, the short falling accent generally remains at the end of the word. Thus, *kakȍ bi, kakȉ je (kakȉ je to s tebom),* and *kakȍ sam* in one accent unit are pronounced *kakȍbi*, *kakȉje*, and *kakȍsam*, so the short falling accent is actually on the penult, which is its usual place. The tendency for the short falling accent to keep its place on the penult is especially strong in older speakers.

In words combined with a proclitic, sometimes the accent jumps from the accented word to the proclitic: ù *selu ide se ù selo*.

Morphological System Pronouns

A significant phenomenon in the speech of Šljivoševci is that the dative plural of the personal pronoun oni appears in a stressed form even when it is in the position of an enclitic, as confirmed by the following examples: *da njim ne dam, da njim napišem, baci njim se jesti, napisala sam njim*.

Verbs

In the speech of Šljivoševci, the most interesting morphological features are the verbs.

The infinitive generally lacks the final i: *kazat, viit, it, reć, počastit*.

In the present tense bases, the new Shtokavian jotation groups -jd-, -jt- are absent at the boundaries of the prefixal and root morpheme, as illustrated

by the examples in the verb doći: *dojti, dojde, dojdemo, dojdu, and izaći: izajde*.

In contrast, in the 3rd person singular present, the verbs vidjeti and gledati appear with a jotated present base: *viđe, de viđe, viđem, ne viđete; gleđi*.

Hamm (1949:44-45), writing about the Shtokavian of Lower Podravina, states that in these speeches, various endings for the 3rd person plural present are possible, for example, -eju (*krādĕju, uprẽgneju,* šĭjeju), -iju (*nȍsiju, prȁviju, vȍziju*), -u (*pȅvū,* ĭgrū); sometimes even -aju. The analysis shows that these endings are confirmed in the speech of Šljivoševci (with the note that the grammatical morpheme -u did not appear in the analysis), as confirmed by the examples: *oćeju, ispregneju (se konji), povežeju (se za kola), (dok obredi) trajeju, (konji jedeju), (poslije se) upregneju,* ćeju, *klepećeju (krila), (oni njega) zoveju, nećeju; nastaviju (se svatovi); posvetiju (se mladenci), doradiju, moliju se; održaju*.

Syntax

The construction composed of the formula preposition iz plus noun in the genitive is a feature of Podravina speeches of the Slavonian dialect (Mance 2014). Confirmed examples from the speech of Šljivoševci include: *doći iz polnoćke; dok siđe iz kola*.

The adverb jako, besides expressing that something happened intensely, strongly, or to a great extent, is also used to indicate that something happened very often; for example: žene *su jako išle.*

The most common filler in the speech of Šljivoševci is the one meaning approval âda.

Animacy Category

In the speech of Šljivoševci, the accusative singular of nouns of the a-type that denote animate but also inanimate objects is equalized with the genitive, and this phenomenon is especially inevitable in older speakers. Confirmed examples include:

vodio je KUD-a, kopati kukuruza, imala sam štanda*, kuvala sam paprikaša, jel imate fenjera, kum traži blagoslova, tražim blagoslova od Gospodina Boga, mora izvršit svojeg zadatka, gnjetem nekakog papira, tučemo suncokreta, imamo tamjana, anđel je nosio bora, idem kuvat sosa,* čestitati *Božića, slušaj doživljaja jednog, on je taman izvadio zuba, nećete ormara poslikat*.

The verb *htjeti*

In the speech of Šljivoševci, there is also a sentence structure with the verb htjeti. The collected examples indicate a repeated event, a habit characteristic of a certain period in the past. The construction appears in two forms, both with the perfect tense of the verb htjeti, and one part of the examples has the verb in the infinitive, and the other part has the verb in the present tense:

tela sam moju decu i unučad peljat u crkvu, teo meće se u bale (duvan), isključivo je teo s ugljenom (sušit duvan), telo se sa ražnja rezati, otac je teo nareže, mi smo teli stojimo kod cure, teli su reć repice.

This construction appears very rarely in younger speakers, indicating that it is disappearing from the speech of Šljivoševci, but it is also significant that neither Josip Hamm nor Stjepan Sekereš mention such a construction in their research.

Lexicon

The speech of Šljivoševci is rich in lexical units characteristic of the Slavonian village, and we list only those lexical units that do not exist in the Croatian standard language and seemed most interesting to the author.

Batinke are wooden mallets used for beating sunflower seeds. *Bebke* are dolls, and *berška* is a cradle, while *steljka* is a walker (for small children who cannot yet walk independently). *Flute* are cakes made from potato dough, *repice* are potatoes, and *kolonka* is a metal container for carrying milk. *Krislinge* are colorful salon candies used for decorating the Christmas tree. *Plevnja* is the residue from threshing grain. If something is *pobrcano*, it means it is scattered and mixed up. *Pokrivača* is a head covering for older women, and *rojte* are decorations on a scarf. *Sos* is a broth or

tomato sauce. Šljivansko *belo ruvo* was festive clothing for younger women. Šupat means to look around. *Tilange* are white scarves, and *taclen* is a metal baking tray.

Sustainability of identity by preserving the language

Language and speech are basic characteristics of everyone's identity, with a primary focus on the mother tongue. This is the first language a child acquires at birth from the closest people. It does not necessarily have to be exclusively the mother, often in rural areas it can be the father, grandparents, or even close relatives, neighbors with whom the child communicates from birth, individuals with whom the child establishes a social and emotional bond. In this context, emotional and social connections and conditioning are very important for further development of the child's personality and for their identity determination and realization. In this context, the importance of a local dialect and its position and perception of speech production should be observed, both in children and adults. Loss of speech production in the local dialect or regional speech is a serious threat to losing one's identity or creating an identity crisis.

The native language is the foundation for acquiring all other languages, for successful development of linguistic activities, and for shaping the identity of the speaker, for the development of self-awareness, self-esteem, and self-confidence.

Bežen says: "Regional dialects are determined by territorial distribution that has changed throughout history due to population migrations. Large migrations, which significantly altered the geographical distribution of Croatian dialects, occurred during the time of Turkish conquests in the 16th and 17th centuries, when the Štokavian speakers from the east displaced especially the Chakavians and settled in their areas" (Bežen, 2009).

When it comes to Slavonia and its people, the mentioned time frame is important for creating a true picture of the development of identity and self-realization.

Preserving identity through language is one of the important ways in which we can express our culture, tradition, and belonging. Language

allows us to convey our uniqueness and personality, and to connect with other people who share the same values and beliefs.

Through language, we can preserve the heritage of our ancestors and maintain traditional customs and beliefs. Stories and legends are passed down that shape our identity and help us feel connected to our community and history.

It is important to nurture and develop our language skills in order to be able to preserve our identity and communicate with others in a way that is familiar and understandable to us. We can express ourselves in the most authentic way through language and remain true to our roots and values.

By preserving the language of our ancestors, we preserve the Croatian identity because language is a key element of national culture and heritage. Language is a way of communication that carries the values, tradition, and identity of a nation.

Through language, we transmit the stories, songs, customs, and traditions of our ancestors, thus preserving collective memory and a sense of belonging. Through language, we express our emotions, thoughts, beliefs, and identity, creating our personal and national identity.

Concluding Thoughts

The linguistic analysis in this paper has shown that the contemporary state of speech in Šljivoševci, especially among older speakers, still to a certain extent preserves the old condition of Croatian Shtokavian as recorded by Josip Hamm and Stjepan Sekereš in the mid-20th century. However, many linguistic features have disappeared from today's speech, and others appear much less frequently.

Here, once again, the linguistic features described by the two Croatian dialectologists will be noted, appearing to a greater or lesser extent in the speech of Šljivoševci:

- The new acute is almost gone; in meetings with speakers, it was recorded only once
- The Ekavian reflection of the yat sound is preserved in both older and younger speakers, although the reflection of yat as in the

standard language is often heard. The Ekavian reflection of the yat sound is mostly preserved in root morphemes

- The sound h generally remains mute in the speech of Šljivoševci; it can be completely omitted, or the hiatus caused by its omission is resolved by inserting the sounds j, v, or k; among younger speakers, under the influence of the standard language, it sometimes appears. The omission of the sound h is recorded in all positions in the word
- Šćakavism is disappearing and was also recorded only in one example: *pušćat*
- Of the morphological features noted by Hamm (1949) as characteristic of the Podravina subdialect, the longer forms for the 3rd person plural present: -eju, -iju, and -aju: *povežeju; nastaviju; održaju*, are still present today
- Systematically equalizing the accusative singular for a-type nouns that denote both animate and inanimate objects with the genitive singular: *kuvala sam paprikaša, jel imate fenjera, kum traži blagoslova*
- The speech of Šljivoševci abounds with the syntactic construction with the verb htjeti, appearing in two forms: with the perfect tense of the verb htjeti and the infinitive of the main verb or with the perfect tense of the verb htjeti and the present tense of the main verb. It is used to denote a repeated event or habit characteristic of a certain period in the past*: telo se sa ražnja rezati, otac je teo nareže*. Previous dialectologists do not record such a construction.

From the presented research results, it is evident that even today, the speech of Šljivoševci preserves the old state, but the influence of the standard Croatian language is evident at all linguistic levels, especially among the younger generation. However, the influence of the standard language is the least at the phonological level because old linguistic features are generally best preserved there. The research shows that organic speeches are slowly but surely disappearing, and to reconstruct them in the future, it is necessary to meticulously record them now.

Furthermore, preserving the language of our ancestors helps to maintain linguistic diversity, which is crucial for the overall health of global communication. Each language has its own unique structures and expressions,

offering different ways of perceiving the world. By preserving diverse languages, we are enriching the global mosaic of human expression and understanding.

In addition, language is a vital tool for preserving traditional knowledge and practices. Many indigenous cultures have intricate knowledge systems that are encoded in their languages, from medicinal plants to ecological practices. By preserving these languages, we are also protecting valuable knowledge that can benefit society as a whole.

In conclusion, preserving the language of our ancestors is essential for maintaining cultural heritage, identity, and diversity. By honoring and protecting our linguistic heritage, we are ensuring that future generations will be able to connect with their roots, access traditional knowledge, and contribute to the richness of global communication. It is our responsibility to safeguard the languages of our ancestors for the benefit of all.

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ODRŽIVOST STAROGA JEZIČNOG STANJA U GOVORU HRVATSKOG SELA (NA PRIMJERU SELA ŠLJIVOŠEVCI)

Sažetak

Na temelju jezičnih istraživanja iz sredine prošloga stoljeća, točnije iz istraživanja Josipa Hamma 1949. i Stjepana Sekereša 1974. te vlastitih suvremenih istraživanja govora slavonskog dijalekta prikazat će se značajke govora u istraživanjima dvojice hrvatskih dijalektologa te značajke suvremenoga stanja u govoru hrvatskoga sela, i to na svim jezičnim razinama. Istraživanje se temelji na proučavanju podravskog poddijalekta slavonskog dijalekta štokavskog narječja, a suvremena jezična analiza temelji se na istraživanju govora sela Šljivoševci. U govoru hrvatskog sela dogodile su se znatne promjene sedamdesetak godina nakon Hammova istraživanja i pedesetak godina nakon Sekereševa istraživanja, a rad će pokazati i koje su jezične razine najpodložnije promjenama, a u kojima se pak čuva staro jezično stanje.

Ključne riječi: hrvatsko selo, održivost govora, podravski poddijalekt, slavonski dijalekt, Šljivoševci

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THE SIGNIFICANCE OF DISSEMINATING CULTURAL HERITAGE IN SHAPING SUSTAINABLE NATIONAL IDENTITY: A STUDY ON LITHUANIAN MINORITIES

Original Paper
https://doi.org/1059014/POPO5210

Abstract

National identity can be defined by how individuals perceive themselves and what they consider important when presenting themselves to others. In Lithuania, national communities face different attitudes towards their national identity. To preserve a sustainable national identity, it is crucial to pass on the testimony of its daily existence, which is its cultural heritage. Cultural heritage serves as a memory bank that embodies the essence of cultural identity and plays a significant role in nation building. This research aims to explore the elements of cultural heritage that are crucial for Lithuanian minority cultures (Karaites and Tatars) in defining their national identity in a multicultural environment and compare them with the frames created by the media. The research utilizes qualitative content analysis methods with a mixed instrument approach. Online media data was analyzed to identify the characteristics of cultural heritage and the media's position. Framing theory was used to examine the results of the content analysis, which focuses on interpretation schemes used by individuals or media. The analysis shows that the Lithuanian media portrays national minority cultural heritage in a positive light. However, the national identity of national minorities is primarily characterized by three frames: traditional cuisine, language and traditions, collective memory and shared history. Semi structured interviews were conducted with members of national minorities to explore the factors contributing to a sustainable national identity. The interviews revealed that national minority identity is influenced by factors beyond the three frames highlighted in the media. Through the comparative analysis, it became evident that the media does not accurately portrait the national identity of the national minorities (Karaites and Tatars) in Lithuania. Instead, it selectively emphasizes specific cultural elements while downplaying others.

Keywords: cultural heritage, mass media, national community, national minorities, sustainable national identity

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Introduction

Lithuania, like many other European countries, can be described as a multicultural country with a rich history of different nationalities, cultures, religions and customs. National identity can be defined by how a person perceives him/herself and what is important to him/her in perceiving and presenting him/herself to others. Ethnic communities living in Lithuania are confronted with the experience of two cultures, because a person from one ethnic community does not live in social isolation, but is a member of a community living in another culture. It is not only the members of a community who define their national identity as reflected in their daily lives, but also the media, which in turn communicate which cultural objects define the national identity of a particular nation. The media, as mass communicators, can successfully disseminate and reinforce stereotypes and opinions to the general public, thereby simultaneously reflecting and shaping public attitudes towards national communities.

Through assimilation, groups may adopt the values of the dominant culture and new patterns of self-identification, leading to feelings of alienation from their true culture (Grajzl *et al.*, 2018). In addition to assimilation, processes of globalisation and emigration can also have a negative impact on national identity. As a result, cultural heritage can become irrelevant to the very national community to which it belongs, as its members adapt to societal changes and promote the consumerist lifestyles of surrounding cultures (Widdis, 2019). Thus, it is important to clarify what is most important in defining national identity among various processes such as assimilation, globalisation and emigration.

This research aims to explore the elements of cultural heritage that are crucial for Lithuanian minority cultures (Karaites and Tatars) in defining their national identity in a multicultural environment and compare them with the frames created by the media. The subject of the research is the national identity of Lithuanian minorities (Karaites and Tatars), the communicative frameworks of cultural heritage dissemination and their influence on national identity have been little studied. In addition, too little attention is paid to the representation of national communities in Lithuania, and there is no in-depth study of what constitutes the identity of national communities, which can lead to misinterpretations of the nation and incomplete narratives in the media that do not allow the public

to get a full picture of the national communities in Lithuania. Over the last decade, the importance, influence and impact of cultural heritage on society and the economy, as well as the various challenges that cultural heritage faces, have been the main focus of analysis. Silva and Leal (2015) explored the relationship between rural tourism and national identity, Tudorache (2016) analysed the importance of intangible cultural heritage in the economy, Rasoolimanesh *et al.* (2017) studied the influence of communities in heritage conservation and tourism development.

Literature review

Researchers acknowledge that culture is difficult to understand because the concept is often implicit but can be labelled with different categories (Akhter, 2022). Culture is learned through perception, which is shaped by a variety of factors: place of birth and upbringing, language, people around you, environment, psychological stimuli. Another important concept is heritage, which can be understood as things, tangible or intangible, that are so important that we want to pass them on to future generations (Logan, 2007).

Cultural heritage forms the basis of how we think, feel, behave and interact with the world. Preserving cultural heritage is a way of preserving oneself, of protecting what is distinctive about a particular group, the authenticity of a people. In order to protect cultural heritage, there is a need for cultural heritage dissemination, which is the sharing of stories about the cultural heritage of a particular people through certain means in order to promote and preserve it, as well as to stimulate interest in and appreciation of the cultural heritage of a particular people, both within the culture itself and between different cultures (Ortiz *et al*., 2018; Bhandari, 2021). There are many ways in which cultural heritage can be disseminated, including through documents, events, festivals, tourism and community gatherings.

Recent research by Zort *et al.,* (2023) shows that families play a particularly important role in transmitting and preserving cultural heritage to younger generations through different narratives. By passing on cultural values and customs to their children, families keep culture alive and are

therefore integral to keeping cultural heritage alive and passing it on to future generations (Zort *et al.*, 2023).

Museums are an important way of preserving and disseminating history and cultural heritage. The museum is an instrument for the continuous education of the whole community, which not only displays cultural heritage, but also enables the recognition of human works and their relationship with the environment (Yoshida, 2004). Scholars emphasise that it is not only the exhibitions in a museum that allow one to feel the national spirit, but also the museum space itself, which can become an expression of intangible cultural heritage (Xie and Zhu, 2016). The fusion of tangible and intangible heritage allows for the creation of an experience that helps visitors to have a multidimensional view of what they see in the museum environment (Cordón, 2019).

In this era of globalisation, when society is changing rapidly, museums also need to adapt to social trends and offer new ways of communicating cultural heritage, so that the dissemination of cultural heritage is gradually moving away from the traditional face-to-face embodied presence to digital communication that transcends space and time (Jin and Liu, 2022). Digital technology and virtual reality involve the use of tools such as computers and software to preserve cultural heritage and create an environment for visitors to explore and interact with cultural artefacts (Reffat and Nofal, 2013; Kaul, 2012). The use of virtual reality in cultural heritage digitisation has expanded the range of images in visual culture. In addition to photographs, videos and scenes, the use of technology can provide a dynamic and 3D dimension (Jin and Liu, 2022). However, scholars Nikonova and Biryukova (2017) argue that the methods of using digital technologies do not convey the authentic essence of memory, history and tradition as consistently as traditional museums.

From a cultural perspective, the main purpose of literature is to provide the reader with knowledge of cultural history and heritage, while stimulating the imagination and the senses. Literature depicts and inspires social change and is generally perceived as a source of cultural representation (Akhter, 2022).

Culture and education are inseparable because culture paves the way for education and education is responsible for: preserving, transmitting, promoting culture, teaching adaptation to changing cultural patterns,

shaping personality, restoring unity among people and eliminating cultural backwardness. Although cultures change over time, there is a recognisable continuity of core values and patterns of behaviour and heritage that distinguish them from other cultures. This continuity is provided by the education system (Mathews and Savarimuthu, 2020). In addition, cultural heritage sites are important to society because they contribute to the formation and preservation of collective identity and national pride (Nilson and Thorell, 2018). Therefore, the promotion of cultural heritage sites is important to raise awareness of history and promote cultural pride, sense of identity and intercultural understanding.

Migration has been a key factor in the spread of cultural heritage for thousands of years (Pevtsova *et al.,* 2020). In the process, societies have exchanged various cultural elements such as language, values and symbols (Giddens, 2005). Over the last century, the spread of tourism has had a significant impact on the diffusion of cultural heritage. The emergence of tourism activities has accelerated the diffusion of cultural heritage, mainly due to the interaction between 'hosts' and foreign visitors. The dissemination of cultural heritage has also been accelerated by various technologies, media and globalisation (Wang and Du, 2021). Thus, the dissemination of cultural heritage can be an important tool in the processes of preserving and promoting cultural identity, but it is important to note that there are certain challenges that can disrupt the preservation and transmission of cultural heritage to future generations.

Rapidly changing societies and environmental conditions are among the major challenges. In a global world, the sustainability dimension has emerged and the integration of sustainability ideas complicates the preservation and transmission of cultural heritage. Various natural disasters, climate change and social unrest can cause damage to cultural heritage, especially to tangible objects that may be destroyed, for example as a result of natural disasters. Similarly, heritage sites are vulnerable to weather fluctuations, which can have a variety of indirect and direct consequences, such as the loss of tangible cultural features, reduced visitor numbers and disruption of socio-economic activities (Markham *et.al.,* 2016). Therefore, it is essential to integrate sustainability considerations into the conservation of cultural heritage. As Dastgerdi *et al.* (2019) argue, climate change will affect cultural diversity and socio-cultural interactions, forcing communities to change their working habits and lifestyles, compete for

resources, or migrate elsewhere due to climate-related disasters such as desertification, flooding, or sea-level rise. Thus, in the face of changing social and environmental conditions, the transmission of cultural heritage may become more difficult, as many tangible heritage sites may be damaged beyond recognition, while intangible heritage may become irrelevant as societies change and adapt to the new conditions that emerge.

Another major challenge is the commercialisation of cultural heritage. When cultural heritage becomes a commodity, it can become overly dependent on the pursuit of economic profit and lose its authenticity. Commercialisation can also lead people to forget the historical and cultural value of heritage and see it as a mere commercial commodity (Zhang *et al.,* 2021). However, the proliferation of heritage commercialisation can also have positive consequences, such as increasing people's awareness and interest in cultural heritage, as well as promoting tourism and economic growth (Besculides *et al.,* 2002). It is important to strike a balance between economic and cultural interests in order to preserve cultural heritage and achieve sustainable economic goals, while preserving core cultural values and principles (Cassel and Pashkevich, 2014, Kinnvall, 2004).

Cultural stigma is a very important challenge that can be particularly problematic as it refers to the general negative beliefs, prejudices, stereotypes and discriminatory structures in society (Low and Purwaningrum, 2020). In intercultural communication, it is crucial that the communication process focuses on cooperation, the ability to better understand other cultures, their representatives and their cultural heritage, and the ability to arrive at solutions that are acceptable to all participants. In this way, intercultural cooperation can become enjoyable, meaningful and productive, helping to broaden horizons and learn from each other (Samovar *et al.,* 2014).

National identity is a complex and multifaceted phenomenon. For this reason, each researcher defines and explains the concept by emphasising different perspectives. A nation is a community of people formed historically over time. This group of people is characterised by a distinct territory, an authentic language, a history and a particular economic and cultural life. A nation understands itself as a collective entity that develops and implements core values. Each nation is distinguished by its individuality in terms of language, culture and historical development. Uniqueness and

distinctiveness are seen as intrinsically valuable, as these individual qualities together contribute to the irreplaceable cultural diversity of humanity. Nowadays, due to globalisation and other processes, it is observed that civilisation is moving towards the homogenisation of cultures, and from this perspective, the uniqueness of each nation is not only valuable for itself, but also an asset for all other nations and for humanity as a whole (Boulding, 2019).

When analysing the concept of national identity, it is noticeable that some scholars focus more on culture and traditions, while others focus more on geography, but Pitkänen (2017) systematised the ideas expressed by different scholars and divided national identity into two components: ethnic and civic identity (see Table 1).

Table 1. Elements of national identity

TAUTINIO TAPATUMO DEDAMOSIOS MPONENTS OF NATIONAL IDENTITY	
Ethnic/cultural	Civic/political/national
Origin myths	Birth and place of residence
Folk language	Nationality
Customs and traditions	Sovereignty
Religion	Legal system
Native history	Political system
	Social culture

Source: Pitkänen, 2017

Civic identity focuses on a particular territory – the state – within which a community has formed as a political and geographical unit that is subject to the laws of the state, i.e. individuals identify themselves through their nationality and the political and legal structures of the state. Their identity is defined by their allegiance to the institutions and rules of the state rather than by tradition, language or religion. The opposite is true of ethnic identity, which emphasises tradition, culture, language and history.

Smith (1988) argues that national identity is shaped by myths and cultural elements that create a connection to the nation. Modernists argue that

myths can change and be created by elites based on their values, but Smith (1988) argues that myths can be created by elites based on their values. Smith (1988) disagrees with this view, arguing that myths are a construct of the past, with fixed symbols and frames that are established in people's collective memory. According to Gellner (1996), national identity is a contemporary construct, meaning that economic and social progress develops national communities accompanied by a shared political concept of the state. Anderson (1991) takes a different approach, arguing that the nation is an imagined community that conceives of national identity through the shared experiences of communities, a construction bound together by symbols and rituals and linked to territorial and administrative categories. Although the majority in the community do not know each other, they are united by a shared image in their minds of their idea of community.

The preservation of cultural memory is one of the key aspects of how the dissemination of cultural heritage affects national identity. Cultural memory is a form of collective memory whereby a group of people transmit memories of significant national events in everyday communication (Smith, 1999). Cultural memory is stored in cultural elements and objects that help people remember historical events. Researchers argue that the dissemination of cultural heritage helps to preserve these memories and ensure that they are passed on from one generation to the next, thus reinforcing a sense of continuity and maintaining national identity (Assmann, 2021). In addition, cultural heritage helps to strengthen a nation's distinctiveness. Researchers point out that every country has a distinct national identity and a rich heritage that has evolved over the years. Sharing cultural heritage is one way to showcase this uniqueness on a global scale (Frawley *et al.,* 2020). Sharing cultural heritage, for example through museums and other cultural institutions, provides visitors with a tangible link to their national identity. Museums and other cultural institutions act as an educational tool, providing insights into a nation's history, values and unique characteristics, and helping a nation understand why it is different from other nations in some way (Xie and Zhu, 2016; Chukwu and Ogunboyowa, 2022).

Both economic prosperity and cultural tourism can promote cultural heritage. According to researchers, tourism and creative industries can help stimulate economic growth by promoting cultural heritage. Tourists flock to a place to learn about the history, art and traditions of a country with

a rich cultural heritage. This not only boosts the local economy, but also fosters a sense of national pride among the population, who are aware of the importance of their cultural heritage on a global scale, and this sense of pride contributes to the formation of national identity.

Cultural heritage creates a sense of togetherness. A nation celebrates its various cultural festivals, customs, values, and traditions, bringing people from different backgrounds together under a common cultural umbrella (Nilson and Thorell, 2018). Sharing cultural heritage fosters attachment and a sense of belonging to one's nation, as cultural heritage connects individuals to their shared traditions, symbols, language and historical narratives, thus helping individuals to feel a sense of belonging to the national community (Rouhi, 2017).

In summary, the diffusion of cultural heritage has a significant impact on national identity. By sharing elements of cultural heritage, a nation preserves its cultural memory, thus ensuring its continuity and relevance in the modern world.

Research methodology

In order to answer the research objective, a qualitative content analysis of Lithuanian online media, in-depth interviews with members of the national minority community and a comparative analysis of qualitative research were conducted. In order to find out the media's attitude towards the peculiarities of the cultural heritage and national identity of national minorities, the articles of 5 different Lithuanian online media news portals (15min.lt; Delfi.lt; LRT.lt; Žmonės.lt; Bernardinai.lt) from 2017 to 2023 were analysed using the method of filtering search results, where the articles were selected according to the "keywords" entered in the search request.

20 articles were analysed. In order to process and analyse the data collected for the qualitative study, the data were divided into categories, subcategories and statements so that recurring themes, ideas and concepts could be identified and properly interpreted (Zaveri, 2023). In order to process and analyze the data collected for the qualitative study, the data were divided into categories, subcategories, statements so that recurring themes, ideas, and concepts could be noticed and properly interpreted

(Zaveri, 2023). In other words, separate but similar statements were given a generalizing label called a category. To conduct the first study, 20 articles from 2017 to 2023 were selected using a filtering method of search results. The articles were searched for statements that reflected an external view of the Karaites. The research was conducted in an ethical manner. Only publicly available information was analyzed. The study did not analyze specific individuals or sensitive content, and therefore adheres to standards of etiquette and privacy.

In-depth interviews were conducted to find out what shapes the national identity of national minorities and the importance of cultural heritage. 9 Lithuanian Karaims were interviewed. Interviews were conducted until sufficient information was obtained to answer the main questions. As the information became repetitive, data saturation was reached and the study was discontinued. In order to process and analyze the data collected for the qualitative study, the data were divided into categories, subcategories and statements.

The qualitative research instrument was a semi-structured interview, consisting of six main questions and follow-up questions. The pre-planned questions provided a framework for the interview process (Kardelis, 2017), but there were no strict time and response constraints for the informants. Questions 1-2 aimed to find out what objects were important in defining one's national identity, without trying to impose any preconceptions. Question 3 asked about the stories shared (to find out what stories are associated with national identity). Question 4 asked about relationships with members of the ethnic minority community. Question 5 sought to identify the factors that have helped the communities to survive to the present day. According to Riaupšienė (2007), the semi-structured interview gives the researcher flexibility, although the questions are pre-planned and numbered, but this type of interview allows the researcher to ask additional questions and draw attention to the interviewee's answers. In order to find out what shapes national identity and how community members relate to cultural heritage, community members were interviewed regardless of age, social status and education. Finally, a comparative analysis of the qualitative studies was carried out, as Zaveri (2023) argues that this helps to understand the relationship between the two qualitative studies.

Research results

Based on scientific sources, it has been established that heritage is divided into tangible and intangible heritage, and the study aimed to assess which elements of heritage of national minorities are identified in the media, and how national minorities themselves perceive and identify themselves through heritage elements. The content analysis of the Lithuanian media revealed that heritage is perceived through geographical and psychological aspects, while the content analysis of the interviews revealed that in addition to heritage, psychological and geographical aspects, national minorities associate their national identity with community activities. It is also important to underline that although both groups (media and minorities) identify national identity through heritage, geographical and psychological aspects, the content itself and the importance of the elements highlighted in it do not coincide in all respects.

The content analysis of the media most often emphasises the cultural heritage and geographical commonalities of the national minorities (see Figure 1), while the national identity of the Karaites is defined in the media by Karaite traditional pastries, the story of Vytautas the Great and Trakai, and the national identity of the Tatars is associated with their culinary heritage – Hundred leave pie – and with their combativeness and loyalty to Prince Vytautas of Lithuania.

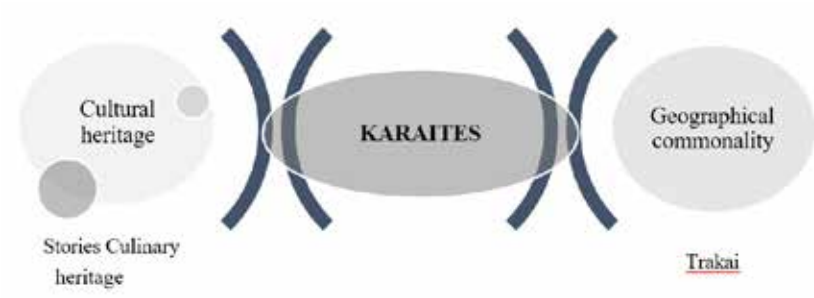

Figure 1. Key elements describing the national identity of Karaites and Tatars in the media (compiled by the authors, based on the survey data)

It cannot be avoided to point out that without these elements little would be known about national minorities in Lithuania. This attitude of the

journalists frames the national identity in 3 main frames and narrows the general public's perception of the national minority culture itself. Further analysis of the content of the articles presented reveals other aspects that describe who the Karaites are, but it is important to note that they are not given special attention.

It was found that the media highlight the material heritage of Karaite and Tatar culture, especially the culinary heritage. The most frequent focus is on Karaite traditional pastries, due to their popularity in Lithuania, but it is also mentioned that the Karaite culinary heritage does not only consist of Karaite traditional pastries, but no greater attention is paid to the presentation of other dishes. It is also important to emphasise that the media position Karaite cuisine in a positive context, describing it as delicious, thus arousing the interest of readers. The study shows that one of the elements of the intangible heritage is the story of Vytautas the Great, which stands out because it is close to Lithuania and is linked not only to the Karaims, the Tatars, but also to the Lithuanian national identity, because Vytautas the Great is a historical figure close to Lithuanians and his mention helps to draw attention to him and position Karaites in a positive context. Vytautas the Great is a respected historical figure in Lithuania. In addition to the historical narrative of Vytautas the Great, the stories of cucumbers and wooden three- window houses are sometimes mentioned in the media, but these stories are not highlighted in all articles, so we cannot say that they define the national identity of the Karaites. In a religious and linguistic context, the Karaites are described as a people with a very unique religion and language, but it is stressed that religion is in decline among the Karaites and that the language has virtually disappeared. The Tatars, on the other hand, emphasise their religion, Islam, through wedding and funeral traditions. However, there is a noticeable loss of their language. In addition to religion and language, traditions and national dress are a unique feature. Thus, when the Karaite heritage is mentioned, the communication message tends to emphasise the Karaite traditional pastries and Vytautas the Great. Other cultural heritage items, such as religion, language, traditions and national costume, are placed in a positive context, described as unique, but not given enough attention or interest. In addition to cultural heritage, Karaite national identity is also reflected in the media in terms of geography. Karaites are associated with

Thrace because of the historical context of Vytautas the Great, and Thrace is perceived as a centre of attraction for Karaites.

The media do not hesitate to describe the Karaites in various ways. They emphasise their militancy, honesty and loyalty, based on the historical story of Vytautas the Great. More recently, articles have portrayed the Karaites in a positive light, describing them as a hospitable and tolerant people. It is important to note that these characteristics are not framed as the main communicative messages. It is noted that comparisons are sometimes used to show the similarity of Karaites to Jews, but such framing may offend the nation or create stereotypes that are not associated with the Karaite people.

When Karaites were asked what things were important to them in defining themselves as Karaites, culinary heritage, community, geographical commonality and psychological aspects were most emphasised (see Figure 2).

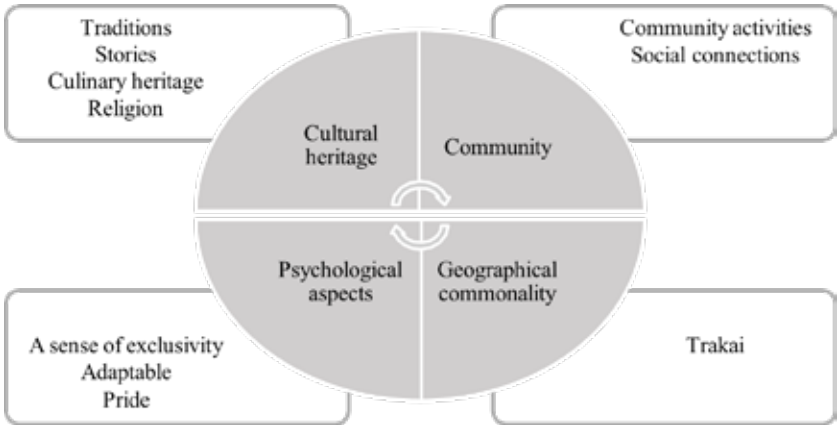

Figure 2: Key elements describing the Karaites' national identity (compiled by the authors based on the survey data)

The activities and social ties of the Karaite community were highlighted. It was emphasised that without the activities of the community, it would be more difficult to maintain the Karaite people, as it is in the community that cultural knowledge, language learning and observance of traditions are promoted. It also strengthens the sense of belonging to the Karaite people in the community. The Karaites spend a lot of time

together, celebrating festivals, participating in summer gatherings and various events, thus forming and consolidating the Karaite national identity through community activities.

In addition to community activities, the Karaites pay great attention to their cultural heritage, especially their culinary heritage, traditions, stories and religion, and it is therefore striking that not all elements of cultural heritage are important to the Karaites in defining their national identity. With regard to culinary heritage, the Karaites emphasise that their culture is much deeper than a single dish. The various vegetable, meat and pasta dishes that bring the whole family or community together are important to them. They also value preserving traditions and passing them on to future generations. Karaites often point out that people in Lithuania celebrate Christmas, but Karaites do not have and do not practise this tradition and therefore associate their identity only with Karaites traditions. It is also important to stress that there is more innovation in mixed marriages of Karaites, and that families celebrate Karaim and Lithuanian traditions. Karaites hear different stories in the family and in the community. Stories that the Karaites associate themselves with include Vytautas the Great, the story of cucumber growing, and stories about old ways of preserving the nation, but an important difference that has been noted between the media and the Karaims' narratives is that in the media the Karaites are associated with the story of the wooden houses with three windows, but according to the Karaites themselves, the wooden houses of the Karaites have more than three windows, and so the story does not represent the Karaites.

The religious and linguistic context is defined by the Karaites in the same way as by the media, acknowledging that they are not strongly religious and that they rarely know the language, but stressing that they try to use the language at festivals and to include a word in their communication, and that they are religiously associated with the Karaite religion.

Both the Karaites themselves and the media express the Karaite national identity in a geographical context, linking the Karaite people to Thrace. Both groups point to Trakai as the centre of Karaite attraction. The Karaites describe Trakai as a homeland to which it is always good to return. The Karaites describe Lithuania itself as a country that has invited and welcomed them, and they are happy that there is respect for Karaite culture

in Lithuania. In addition to Lithuania and Trakai, the Karaites also refer to Crimea, from where the Karaites were brought to Lithuania, and to the continuing friendship between the Crimean Karaites and the Lithuanian Karaites, but emphasise the differences in their cultural heritage today.

The analysis of the psychological aspects shows that the media describe the Karaites somewhat differently than the Karaites describe themselves. The Karaites associate themselves with a sense of uniqueness, adaptability to their environment and pride in their nation. Both groups acknowledge that Karaites are tolerant of other cultures, and therefore the media's position on tolerance is correctly perceived in relation to Karaite national identity. It is also important to add that while the media sometimes refers to the similarity of Karaites to Jews, Karaites claim that comparisons of their culture to Jews and Muslims are disappointing, as they see their nation as unique and authentic.

To sum up, the key features that define the national identity of the Karaites in the media are Karaite traditional pastries, Trakai, Vytautas the Great, and it is with these communicative frames that the media define the national identity of the Karaims. The Karaims themselves define their national identity through their community activities, through various historical stories heard in the family and in the community, through Thracians, through their culinary heritage consisting of various dishes, through the traditions cherished in the family and in the community, and through their religion.

The differences that emerged between the two groups are due to the fact that journalists choose a communicative frame, which can be influenced by personal beliefs, experiences and values. Journalists often focus on what will attract attention and interest, so the articles chose to mention Vytautas the Great, Trakai and the Karaite traditional pastries (hereafter "3 main communicative frames") because these frames are familiar to Lithuanians and therefore it is easier for journalists to draw attention to them and introduce the Karaites to Lithuanians. In addition, Lithuanians also associate themselves with Vytautas the Great, and since he brought the Karaites to Lithuania, this historical aspect creates a positive attitude towards the Karaites. In online media, articles always start with one of these three frames. This means that although other aspects of the Karaite cultural heritage are mentioned, they are placed at the end of the articles,

with less emphasis or less frequent mention. In addition to the three main frames, some cultural aspects are more prominent in some articles and others in others, but it was not observed that anything else is more prominent in addition to the three main frames, because other cultural aspects of Karaites are not relevant, known or assimilated by Lithuanians.

Conclusions

The analysis of the scientific literature has shown that the concept of cultural heritage is dynamic and constantly evolving, but that it is most clearly expressed through the tangible and intangible cultural heritage inherited from the past in all its forms and types. The essence of cultural heritage is the stories, knowledge, traditions and other cultural elements that have been passed down from generation to generation and that play a role in shaping national identity. An analysis of the literature has shown that the national identity of national communities is shaped not only by their relationship with cultural heritage, but also by economic and social progress and political structure. It also includes an understanding of how individuals emotionally connect and identify with their nation, and the shared idea of nation they form in their minds.

The online media research showed that the Karaite and Tatar people and their cultural heritage are positively positioned in the media. The Karaites are described as a national community characterised by hospitality and tolerance towards Lithuanian culture, and the Karaims' cultural heritage is described as interesting and unique.

The interviews revealed that the national identity of Lithuanian Karaims is defined not only by their cultural heritage, but also by three other key elements, such as geographical commonality, community and psychological aspects. The study revealed that the Karaites have a positive attitude towards their nation, describing it as one that is able to adapt to its environment while preserving its national identity, tolerant of other cultures, and proud of its origins and authentic cultural heritage. These psychological aspects strengthen the national identity by giving the Karaites a positive feeling of being part of something big and important. Based on the results of the study, it can be argued that the national identity of the Karaites is composed of more elements than are revealed in the media. Thus, it can

be said that the national identity of Lithuania's minorities (Karaites and Tatars) is deepened and promoted through community activities, cultural heritage, traditions and historical narratives. The media emphasise certain communicative frames, such as Karaite traditional pastries, Hundred leave pie, Trakai or Vytautas the Great, which arouse interest and help to familiarise Lithuanians with the minorities (Karaites and Tatars). Despite this difference in the way journalists and Karaites define themselves, both groups share the common goal of preserving and promoting their cultural heritage and national identity.

The aim of the study was to investigate which elements of cultural heritage are most important for Karaites in defining their national identity in the multicultural environment of Lithuania, and to compare whether Karaite national identity is reflected in the media. Based on the results of the study, the overall conclusion is that Karaite national identity consists of more elements than the media reveals. Therefore, it can be argued that the aim of the study has been successfully achieved and the results obtained are significant as they can be used to improve the media reporting strategy in order to raise public awareness of national minorities living in Lithuania.

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ZNAČAJ ŠIRENJA KULTURNE BAŠTINE U OBLIKOVANJU ODRŽIVOG NACIONALNOG IDENTITETA: STUDIJA O LITAVSKIM MANJINAMA

Sažetak

Nacionalni identitet može se definirati načinom na koji pojedinci doživljavaju sebe i što smatraju važnim pri predstavljanju drugima. U Litvi nacionalne zajednice suočavaju se s različitim stavovima prema svom nacionalnom identitetu. Kako bi se očuvao održivi nacionalni identitet, ključno je prenositi svjedočanstva o njegovom svakodnevnom postojanju, a to je njegova kulturna baština. Kulturna baština služi kao banka sjećanja koja utjelovljuje bit kulturnog identiteta i igra značajnu ulogu u izgradnji nacije.

Ovo istraživanje ima za cilj istražiti elemente kulturne baštine koji su ključni za litvanske manjinske kulture (Karaimi i Tatari) u definiranju njihovog nacionalnog identiteta u multikulturalnom okruženju i usporediti ih s okvirima koje stvara medij. Istraživanje koristi metode kvalitativne analize sadržaja uz pristup mješovitih instrumenata. Analizirani su podaci iz online medija kako bi se identificirale karakteristike kulturne baštine i pozicija medija. Teorija uokvirivanja (framing theory) korištena je za ispitivanje rezultata analize sadržaja, usredotočujući se na sheme interpretacije koje koriste pojedinci ili mediji.

Analiza pokazuje da litvanski mediji prikazuju kulturnu baštinu nacionalnih manjina u pozitivnom svjetlu. Međutim, nacionalni identitet nacionalnih manjina primarno je predstavljen kroz tri okvira: tradicionalnu kuhinju, jezik i tradiciju, kolektivno sjećanje i zajedničku povijest. Polustrukturirani intervjui provedeni su s pripadnicima nacionalnih manjina kako bi se istražili faktori koji pridonose održivom nacionalnom identitetu. Intervjui su otkrili da identitet nacionalnih manjina utječu i faktori izvan tri okvira koja ističu mediji.

Kroz komparativnu analizu postalo je jasno da mediji ne prikazuju točno nacionalni identitet nacionalnih manjina (Karaima i Tatara) u Litvi. Umjesto toga, selektivno naglašavaju specifične kulturne elemente dok umanjuju važnost drugih.

Ključne riječi: kulturna baština, masovni mediji, nacionalna zajednica, nacionalne manjine, održivi nacionalni identitet

Anita Dremel[12]

THE SPECTRES OF FEMINISM AND MULTICULTURALISM

Original Paper
https://doi.org/1059014/UHSU1350

Abstract

Through a critical analysis of feminist and multicultural discourses, this paper aims to analyse the tensions between universal ethical demands and the recognition of cultural specificity. Feminism and multiculturalism are here understood as belonging to leading discourses on minority rights. However, the myriad positions that can be taken within each of these contingent socio-political constructions contribute to their spectre-like quality. The research method used in this study synthesizes theoretical insights and engages with contemporary debates revolving around inter alia postcolonial feminism and liberal arguments for and against multiculturalism, thus contributing to a deeper understanding of the complexities inherent in navigating the realms of gender and diverse strategies to cope with cultural diversity. The empirical material includes case studies from seminal literature on the subject (by Kymlicka, Barry, Bhabha, Okin, Kuriyama, Hall, and others) as well as examples from the Croatian context, which are analysed through the lens of tensions and productive intersections between feminism and multiculturalism, which both seek recognition of difference in the context of norms that are universal in theory but not in practice. Gender equality namely often clashes with the interest of minority cultures and individual rights, as the fundamental position of the feminist movement cannot be sacrificed in the name of group rights, which can reinforce existing hierarchies. The perspective and analytical strategy applied in this paper result in revealing a gradual shift from an obvious conflict of interests between feminism and multiculturalism, towards a more nuanced and complex understanding of the meaning and purpose of the ethical norms they advocate in research, social and cultural policy, international relations and everyday lives.

Keywords: cultural specificity, feminism, liberalism, multiculturalism, universal ethical norms

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Introduction

The question of the relationship between feminism and multiculturalism has become one of the key topics within cultural sociology, particularly given the growing diversity of modern societies. Feminism advocates for gender equality and the empowerment of women, while multiculturalism strives to recognize and protect cultural diversity. However, these two ideologies sometimes come into conflict, especially when cultural practices within minority communities challenge women's rights (cf. Okin, 1999; Volpp, 2001).

Through an in-depth critical examination of feminist and multicultural theory discourses, this paper aims to explore the tensions between universal ethical standards and the recognition of cultural specificity. Feminism and multiculturalism are approached as prominent discourses within the field of minority rights, with awareness of great variety within them. The varied positions that can be assumed within these socio-political constructs contribute to their elusive nature. Feminism is not a unitary concept (cf. hooks, 2000) but shares a common interest in that it can be seen as a socio-political movement that advocates for gender equality and the empowerment of women and other marginalized groups. Multiculturalism is a philosophical and political approach that promotes the coexistence of diverse cultures within a society, emphasizing the recognition, respect, or celebration of differences (Taylor, 1994). Feminist universalism argues that certain rights and values, such as gender equality, should apply universally, transcending cultural differences. However, multiculturalism emphasizes cultural relativism, suggesting that concepts of equality and justice vary between cultures and should be understood within specific cultural contexts. This dichotomy fuels debates about the universality of feminist principles and the need to respect cultural autonomy.

Early feminist movements were predominantly represented by middle-class white women, marginalizing the experiences of women from diverse cultural backgrounds (Mohanty, 1984). Critics argue that mainstream feminism often overlooks the unique challenges faced by non- white women, LGBTQ+ individuals, immigrant women, and other marginalized groups. This tendency toward exclusion has led to debates about whose voices are prioritized within feminist discourse and activism.

Multiculturalism offers a platform to address the limitations of mainstream feminism (cf. Volpp, 2001). It emphasizes the importance of intersectionality, acknowledging that individuals possess multiple identities shaped by factors such as race, ethnicity, religion, sexuality, and socioeconomic status. By recognizing and valuing different perspectives, multiculturalism aims to enrich feminist discourse and foster inclusivity. Negotiations between human rights and cultural practices may conflict with feminist ideals, such as traditional gender roles, arranged marriages, or religious dress codes. Striking a balance between respecting cultural diversity and promoting gender equality requires nuanced approaches. Collaborative efforts include engaging communities in dialogue, promoting education and awareness, and supporting initiatives that challenge harmful practices while preserving cultural identity.

According to Stuart Hall, the 'multicultural question' addresses 'how we are to envisage the futures of those many different societies now composed of peoples from very different backgrounds, cultures, contexts, experiences and positions in the ranking order of the world; societies where difference refuses to disappear' (Hall, 2000, 209). Multiculturalism as a concept always intersects with the politics of inclusion and exclusion of multiple cultural forms within nation-states. Stuart Hall distinguishes the concept of 'the multicultural' as expressed by the adjective 'multicultural' from that of 'multiculturalism' as a noun. The term multicultural as adjective addresses problems of society and of governance which stem from different cultural communities coexisting within the same nation-state while at the same time retaining and protecting something of their 'original' culture and identities. In contrast, 'multiculturalism', as a noun, refers to 'strategies and policies adopted to govern or manage the problems of diversity and multiplicity which multi-cultural societies throw up' (Hall, 2000, 209). Thus, 'the multicultural' is a theoretical and contested discourse whereas 'multiculturalism' is a governing policy of specific nation-states.

It is the purpose of this article to sketch the various relations of multiculturalism to feminist theory, their tensions and productive intersections, by offering an overview of some relevant publications on the subject during the last decade. This general overview will show a gradual shift from an obvious conflict of interests between feminism, intended as a Western liberal project, and multiculturalism, towards a more nuanced and complex understanding of multicultural feminism intended not as a self-contained

and descriptive concept, but as an analytical and discriminatory tool to be applied within a transnational perspective.

The used research methodology synthesizes theoretical insights and engages with contemporary debates, including postcolonial feminism and liberal and conservative arguments for and against multiculturalism, thus contributing to a deeper understanding of the complexities inherent in gender and the diverse strategies for addressing cultural diversity. The empirical material encompasses case studies from seminal literature (e.g., Bhabha, Okin) alongside examples from the Croatian context. These are analyzed through the lens of tensions and productive intersections between feminism and multiculturalism, both of which seek recognition of difference within norms that are theoretically universal but practically uneven. Gender equality frequently clashes with the interests of minority cultures and individual rights, as the core stance of the feminist movement cannot be compromised in favour of group rights that may reinforce existing hierarchies.

The perspective and analytical approach taken in this paper reveal a gradual shift from a straightforward conflict of interests between feminism and multiculturalism to a more nuanced and complex understanding of the ethical norms they advocate in research, social and cultural policy, international relations, and daily life.

A note on the title, why spectres? There is a reference to how Marx is theorized by Derrida (2002), who wishes to discuss the lingering presence of unresolved or contested ideas, with the "spectre" metaphor embodying the notion of ideas that haunt contemporary thought—concepts that are neither fully present nor entirely absent but continue to exert an influence. Just as Marxism haunts political and economic structures with the question of equity and power, feminism and multiculturalism cast shadows on current debates around identity, justice, and inclusivity. In this context, the spectres of feminism are seen as reminders of the continuous struggle for gender equality and the ways in which patriarchal norms still permeate societal structures. Similarly, the spectres of multiculturalism symbolize the ongoing challenge of accommodating diverse cultural identities within frameworks that often favour dominant norms. Both concepts may seem at times elusive or fragmented—shaping policies and public discourse, yet not fully actualized in practice.

The metaphor points to the tensions that arise when the universal ideals of feminism (such as gender equality) intersect with the particularist nature of multiculturalism (which seeks to protect and celebrate distinct cultural identities). These "spectres" are present as reminders that while these movements aim for justice and inclusivity, they sometimes conflict or lead to difficult questions about whose rights take precedence and how universal ethical standards should be applied across different cultural contexts.

Thus, by invoking Derrida's spectres, the article could emphasize that feminism and multiculturalism are not merely historical movements but active, albeit unsettled, presences that continue to influence and shape contemporary debates. They remind us of the unfinished work in negotiating the intersections between gender, culture, and rights within contemporary societies.

Multiculturalism: varieties and critiques

Multiculturalism in its milder form involves promoting dialogue between cultures, encouraging cultural sensitivity, and fostering awareness of other cultures, often referred to as interculturalism (Meer and Modood, 2012). In its stronger form, multiculturalism advocates for the active protection and encouragement of minority cultures (Parekh, 2000). It posits that no culture is more significant than another and that each individual needs their culture as a framework for life. This form of multiculturalism asserts collective rights, with cultures enjoying special protection from the state, which can include exemptions from certain laws.

A postmodern society marks the end of grand ideologies and denies any ideology or culture the right to universal validity (Rorty, 1989). The relativization of knowledge and the global awareness of the relativity of one's values and norms have contributed to the rise of multiculturalism.

To discuss conservative and liberal view of multiculturalism we can ask (cf. Modood, 2007): Why is the wearing of coverings banned in public spaces in many countries? Why do Christian conservatives and nationalists oppose Muslim religious attire? Conservatives advocate for assimilation, believing that the nation-state protects only the majority culture—the majority culture is perceived as the "owner" of the state. Conservatives equate the political and cultural community, asserting that only one

(public) culture should exist in a state. Liberals seek assimilation based on the belief that the state must be culturally neutral. In other words, the political community in which individuals participate as equals is paramount. The official language is maintained for functionality rather than as a means of protecting the majority culture and only individual rights are recognized.

The liberal version of multiculturalism is most notably championed by Will Kymlicka (1995), who seeks to demonstrate that multiculturalism is compatible with individual rights and that the protection of individual rights requires multiculturalism. This perspective allows members of minority cultures to have an equal range of life choices compared to members of the majority culture. Kymlicka bases his argument on the fundamental liberal idea that self-respect is a primary good. Self-respect is acquired through the ability to choose one's values and way of life. Only values and ways of life that have been chosen after considering various alternatives can instil confidence in having made the right choice. Without state encouragement and protection, minority cultures would likely face extinction. For instance, minority languages and literature would probably disappear. Culture provides the context for choice—without protecting different cultures, choices become limited. Members of minority cultures would only have formal rights to practice their culture without state protection, not substantive ones. This undermines the principle of equality. Exemptions from laws may be justified when they conflict with the cultural practices of minority groups. The underlying idea is that cultural belonging is not a choice, and factors that are not chosen should not restrict one's life choices. For example, in Britain, Sikhs are granted an exemption from the law requiring protective helmets. If such laws were enforced, Sikhs would be unable to work in construction, ride motorcycles, etc., limiting their life opportunities due to their cultural identity, which is inherited and not chosen.

The protection of collective cultural rights as discussed by Kymlicka (1995) can be pursued through internal restrictions and external protections. Internal restrictions involve limiting individual choices, such as prohibiting girls from continuing their education. Most liberals find internal restrictions unacceptable. However, some liberals argue that these can be defended by the possibility of leaving the community (Kukathas, 2003). For example, a woman dissatisfied with her status within her community

could choose to leave. Critics counter this argument, stating that the theoretical possibility of leaving masks practical difficulties, such as threats, material dependence, and other barriers (Spinner-Halev, 2000). For instance, communities that believe women should only hold traditional roles may steer the education of girls in that direction, making leaving the community in adulthood merely theoretical. Therefore, such practices are deemed unacceptable, and communities should be compelled to provide equal access to education for both boys and girls. According to Kymlicka (1995), internal restrictions are never acceptable. Liberal multiculturalism is based on the principle that a good life is one that is freely chosen, with real and achievable alternatives available when making choices. External protection, on the other hand, refers to limiting the influence of broader society through mechanisms such as federalism, polyethnic rights (including funding for ethnic communities and their media), and special representation (such as political quotas and affirmative action).

The debate over whether multiculturalism aligns with liberalism involves assessing the balance between collective rights and individual freedoms. Liberalism is fundamentally based on respecting individual rights, with each person having the right to decide what constitutes a proper way of life, what values to uphold, and what goals to pursue. The state should provide a framework for these choices without imposing specific values or culture. In contrast, multiculturalism emphasizes collective rights and the obligation of the state to protect the specific cultural norms of individual communities. This raises important questions: What happens if these norms conflict with individual rights or oppose the law?

Examples of conflicts between collective and individual rights include cases such as the refusal of blood transfusions by Jehovah's Witnesses, arranged marriages involving minors, and the enforced schooling of children in specific languages, as seen with francophone parents in Canada. Other examples include neglecting the education of girls or children in general, as in some Romani communities, and severe punishments like stoning for adultery. Conflicts between collective rights and civic values also arise in issues like refusing military service, wearing religious clothing or publicly displaying religious affiliation, using intoxicants in religious rituals, breaking environmental laws for practices like whale hunting by indigenous communities, and the nomadic lifestyles of some Romani groups.

The state's approach to collective rights sometimes allows behaviour that is part of someone's culture but not permitted as a matter of personal choice. For example, conscientious objection might be allowed only as part of religious belief in some countries, and drug use may be permitted in religious rituals but not for individual recreational use. This approach raises the question of when collective rights should take precedence over individual rights or civic values. Levey (2009) argues that collective rights can be prioritized if the individual makes an informed, autonomous decision to accept them, especially when the consequences are self- chosen by adults or are not significant and irreversible, such as sending children to minority schools or refusing military service.

However, critics point out that these criteria are culturally conditioned and stem from European values (Parekh, 2000). In some cultures, tradition (collective rights) takes precedence over individual rights, and autonomous choice is not always permitted. Universalism and individual equality, also products of Western values, are not inherent to all cultures—Hinduism being an example of a non-universalistic culture. The question of whether it is permissible to criticize other cultures becomes particularly relevant in the context of reactions to criticisms of Islam or acts seen as offensive, such as caricatures of Muhammad or the burning of the Quran. This tension underscores the conflict between the right to freedom of expression and the need to respect other cultures.

Conversely, conservative critiques of multiculturalism are based on the belief that a unified culture is essential for social cohesion (Scruton, 2017; Huntington, 2004). Culturally plural societies, conservatives argue, often experience reduced social solidarity, which can lead to negative outcomes such as political conflict, lower social rights, and higher crime rates. From this perspective, a unified national culture is preferable, but this leads to questions about defining an "authentic" national culture and can result in cultural essentialism. There is a notion of permissive tolerance, where minority cultures are tolerated for pragmatic reasons but are expected to remain within the private sphere, maintaining the dominant position of the majority culture. A notable example of this position is the argument for the presence of religious symbols in public institutions, where minority demands for their removal are seen as forms of intolerance by the minority towards the majority. Minorities may practice their culture privately, but public culture is expected to reflect the majority. Conservatives argue that

multiculturalism rests on the flawed assumption of the equality of all cultures, which can lead to selective arguments, distorted facts, and a denial of the significant contributions of Western culture to human civilization.

Liberal critiques, such as those presented by Brian Barry (2001), argue that multiculturalism negates universal human rights and prioritizes cultural relativism, thus departing from the principles of classical liberalism. Barry suggests that postmodernism and the decline of Marxist ideology have influenced the rise of multiculturalism, which relies on the relativization of knowledge and values. He advocates for a return to classical liberalism, which emphasizes individual rights and the concept of citizenship. According to Barry, everyone should enjoy the same fundamental human rights, and special rights based on cultural affiliation are unjust. He rejects the idea that cultural context should justify exemptions from laws, as it undermines the principle of equal treatment. Barry's argument assumes that cultural choices are equivalent to any other personal preference, such as not wearing a helmet for thrill-seeking being comparable to not wearing one for religious reasons. He contends that cultural exemptions from laws are unjustified and that the state should allocate resources based on universal needs, not individual cultural preferences. Barry also critiques leftist intellectuals who have embraced multiculturalism, accusing them of betraying the Enlightenment project and modernity. He argues that addressing social inequalities and ensuring substantive equality would be more beneficial than multicultural policies.

In practice, multiculturalists believe that immigrants do not seek full assimilation but rather integration that respects their cultural identity. The urban violence and protests by immigrants in European cities are often seen as responses to discrimination and lack of opportunity, not as outright rejections of majority culture or democratic values. Preserving cultural identity can be a form of protest against systemic inequality, with multiculturalism serving as a framework for navigating these complex dynamics. Critics like Barry argue that while multiculturality is an empirical reality, state-promoted multiculturalism is problematic, as it risks undermining the integration needed for social cohesion. Assimilation, Barry contends, is essential for fostering civic culture but should not demand that individuals abandon their cultural heritage, provided they embrace the principles of democracy and tolerance. Critics of liberalism argue that its focus on the autonomous individual making rational, free choices is

not universally applicable and may not be suitable as a global principle. The concept of autonomy, rooted in Western thought, might not resonate with all cultures. Some conservatives (Scruton, 2017) propose a different liberal approach that values individuals' decisions and respects their reasoning without inviting skepticism that erodes all beliefs. In conclusion, accepting multiculturalism does not mean embracing cultural relativism or skepticism, but rather acknowledging the subjectivity of ethical principles and the challenges of balancing respect for cultural diversity with the protection of individual rights.

Challenges for Feminism

The concept of multiculturalism is well-known as we have shown for its ambiguity, encapsulating a web of confusion and uncertainties regarding the interplay of cultures, how they should interact, and the alignment of their worldviews with the broader world (Kuriyama, 1994, 337). In contrast, feminism grapples with an unstable equilibrium, navigating between a universalizing common ground and the acknowledgment of differences among women. The inherent tensions within both discourses make it apparent that the intersection of multiculturalism and feminist concerns has been characterized by numerous contradictory associations. Nevertheless, the evolving relationship between the two is gradually acquiring its own historical development.

However, as Shigehisa Kuriyama writes (1994, 337), the term multiculturalism is notoriously vague as 'it sweeps under its blanket generality a tangle of confusion and uncertainties about how cultures can or should relate to each other, and how their worldviews relate to the world'. Conversely feminism is marked by the unstable equilibrium between the universalizing common ground and the recognition of difference between women. Given the internal tensions within the two discourses it is only too obvious that questions of multiculturalism have been connected to feminist issues in many contradictory ways, though the relation between the two begins to have a genealogy of its own.

According to Stuart Hall, multiculturalism deals with the question of how multiple cultures can coexist within a single society (Hall, 2000). However, feminism faces the challenge of criticizing oppressive cultural practices

without imposing Western norms as universal. Susan Moller Okin (1999) in her essay Is Multiculturalism Bad for Women?, discusses the tensions between the demands for the protection of minority cultural rights and the feminist ideals of gender equality. Okin (1999) argues that multiculturalism can be harmful to women because some forms of cultural practices perpetuate patriarchal structures. This stance has been criticized for overlooking the potentially empowering aspects within cultural communities. Leti Volpp (2001) warns that merely positioning feminism and multiculturalism as opposites can produce a discourse that marginalizes women from minority communities and overlooks their agency.

The original essay by Okin (1999, 131) argued that feminism and multiculturalism both seek "the recognition of difference in the context of norms that are universal in theory but not in practice". Gender equality often clashes with the interest of minority cultures and individual rights, as the fundamental position of the feminist movement cannot be sacrificed in the name of group rights, which do often reinforce existing hierarchies. Okin's major take is on Will Kymlicka's defence of cultural group rights that should provide members with a meaningful way of life, that include both the public and the private sphere and therefore encompass social, religious, educational and recreational aspects of life.

Okin states (1999, 20):

> Cultural minorities need special rights, then, because their cultures may otherwise be threatened with extinction, and cultural extinction would be likely to undermine the self-respect and freedom of group members. Special rights, in short, put minorities on an equal footing with the majorities.

According to Okin there are two major downsides for group rights. First, they treat cultural groups as monolithic and do not pay attention to differences among and within groups; they accord little or no recognition to the fact that minority cultural groups are themselves gendered, with substantial differences in power and advantages between men and women. Second, the advocates of group rights disregard the private sphere which is essential for the definition of any culture as it revolves around crucial issues such as family, sexuality and reproduction. In other words the private domain, that is the sphere where women realize the most visible contribution to culture understood in traditional terms, gets erased in the name

of an abstract definition of cultural identity, which does not take into account the different roles that cultural groups impose on their members. Therefore, group rights are blind to gender inequalities and at times even illiberal as they 'violate their individual members' rights, requiring them to conform to group beliefs or norms' (Okin, 1999, 11). Okin goes into a list of ad hoc examples from completely disparate cultural settings to prove her point on gender inequalities within group rights such as clitoridoctomy, polygamy, divorce systems biased against women, the marriage of children, purdah, abortion, the practice common in Latin America of requiring a rape victim to marry her rapist, the offence of *zina* in Pakistan, or sex outside marriage, for which the law allows the whipping or imprisonment of such women. While she accounts for the sexual discrimination present in Western society Okin stills proclaims that women in more liberal cultures are at the same time legally guaranteed many of the same freedoms and opportunities as men (1999, 16–18). The impasse is, according to Okin, in the international arena where Okin's appeal to look at gender inequalities within group rights is responded to by critics such as Kymlicka (2002) himself and postcolonial view of hybridity by Homi Bhabha (2002).

Kymlicka (2002) takes on Okin's critique of looking more carefully at intra-group dynamics, in particular pertaining to gender. Bhabha, in a response entitled 'Liberalism's Sacred Cow', also welcomes Okin's voicing of the tension between feminism and multiculturalism as it is a useful corrective to the prevailing orthodoxy that establishes "equivalences" between disadvantaged groups, aggregating "communities of interest" without doing the hard work of specifying rights and interests, shying away from conflicts within, and between, minorities (2002, 79). However, Bhabha is in a postcolonial tone very critical of Okin's restricted understanding of the liberal ground on which feminism and multiculturalism might negotiate their differences about rights and representations. According to Bhabha, Okin's view of the interface between feminism and multiculturalism is too focused on the conflict generated by the anti-feminist and patriarchal effects of criminal cultural defence which make her produce, against her best intentions, monolithic descriptions of minority, migrant cultures, though gender differentiated. Bhabha (2002) argues that minorities are too frequently imaged as the abject "subjects" of their cultures of origin huddled in the gazebo of group rights, preserving the orthodoxy of their

distinctive cultures in the midst of the great storm of Western progress. To mention another worthy postcolonial contribution, feminist theorists like Patricia Hill Collins (2006) have emphasized the importance of intersectionality for understanding how different identities, such as race, ethnicity, and class, shape women's experiences. Also critical multiculturalism, as explained by McDowell and Fang (2007), offers an opportunity to promote equality by acknowledging intersectional identities.

Examples from Croatia

In Croatia, the Ombudsperson for Gender Equality and the Croatian Bureau of Statistics collect data on the representation of women in various sectors, showing how cultural practices change over time. In the Croatian context, the intersection of feminism and multiculturalism presents unique challenges that highlight tensions between advocating for gender equality and respecting cultural diversity. These challenges are particularly pronounced when cultural practices conflict with feminist principles, leading to what some scholars describe as "false multiculturalism" (Bogdanić, 2004).

One prominent example is the situation of Romani women in Croatia. The concept of "false multiculturalism" emerges when cultural practices within minority groups are acknowledged or even celebrated by the majority, but without critical engagement with how these practices may perpetuate gender-based inequalities. Romani communities, for instance, often face systemic marginalization, and within these communities, traditional gender roles can restrict the rights and autonomy of women (Bogdanić, 2021). Feminist scholars argue that while it is important to recognize and support cultural identity, it must not come at the expense of basic human rights, particularly those of women (Mesić, 2006a). The tension lies in the fact that policies promoting multiculturalism may inadvertently reinforce patriarchal structures by failing to challenge harmful gender norms embedded within certain cultural practices (Vukoja, 2021; Mesić, 2006).

This dynamic was particularly evident during the 2015 migrant crisis when Croatia, like many other European countries, experienced an influx of refugees. Migrant women often faced double marginalization: as members of ethnic minorities and as women within their cultural groups. The

integration process highlighted the difficulties of balancing cultural sensitivity with the promotion of gender equality. While multicultural policies aimed to support the cultural practices of migrant communities, feminist critiques emphasized that such policies must also address the specific needs of women within these communities (Vukoja, 2021). This includes ensuring that cultural accommodations do not come at the cost of perpetuating gender-based discrimination.

The clash between feminism and multiculturalism in Croatia is further exemplified in the debates surrounding educational opportunities for girls in minority communities. Traditional cultural practices within some groups, such as the Roma, often prioritize boys' education over that of girls. This leads to significant disparities in educational attainment, limiting the future opportunities available to women within these communities (Bogdanić, 2004). Feminist critiques point out that while cultural integration policies may acknowledge the broader rights of the Roma, they often do not address the specific barriers faced by women, such as early marriage and limited access to education (Vukoja, 2021). These issues highlight the need for policies that consider both cultural and gender perspectives, ensuring that women are not doubly marginalized. Feminist perspectives argue that while cultural rights are important, they must be balanced against the principle of gender equality (Mesić, 2006a; Vukoja, 2021). Policies that permit cultural practices detrimental to women's rights can reinforce systemic inequalities and hinder the progress of gender equality initiatives.

Moreover, the feminist critique of multiculturalism often points out the risk of endorsing collective cultural rights that conflict with individual rights. For example, practices such as arranged marriages or gender-based restrictions on freedom can be protected under the guise of cultural preservation. Feminist scholars argue that such practices should be critically examined to ensure that they do not infringe upon women's autonomy or fundamental rights. The debate extends to whether it is permissible to challenge these cultural norms without appearing to impose Western ideals, which is a central issue in postcolonial feminist theory (Bogdanić, 2004).

The Croatian context also shows the complexity of multiculturalism through the lens of state policies. While the government has made strides in protecting minority rights, these efforts sometimes fall short of

addressing gender-specific issues. Feminist theorists highlight that state policies should go beyond mere cultural recognition to incorporate gender-sensitive approaches that protect women's rights within all cultural groups (Vukoja, 2021). This approach advocates for what is often termed "multicultural feminism," which seeks to harmonize cultural diversity with gender equality by recognizing the multifaceted identities of women and addressing their unique challenges (Mesić, 2006; Bogdanić, 2004).

In summary, the intersection of feminism and multiculturalism in Croatia underscores the challenges of balancing cultural recognition with the promotion of gender equality. Feminist critiques emphasize that while multicultural policies are important for protecting minority rights, they must be designed in a way that does not perpetuate gender-based discrimination. The examples of Romani women and migrant integration illustrate that multiculturalism must incorporate a gender-sensitive approach that acknowledges and addresses the unique struggles faced by women. Only then can multicultural policies fulfil their promise of promoting both cultural diversity and gender equality.

Conclusion

This paper has critically examined the complex relationship between feminism and multiculturalism, emphasizing both the tensions and opportunities for fostering inclusivity in diverse societies. Feminism, with its focus on gender equality and empowerment, often clashes with multiculturalism's emphasis on recognizing and protecting cultural diversity. These conflicts are particularly pronounced when cultural practices within minority groups challenge feminist ideals of individual autonomy and gender equity.

The discussion began with an exploration of the foundational concepts of feminism and multiculturalism, establishing their theoretical underpinnings and highlighting their shared but often divergent aims in advocating for minority rights. The paper then delved into the debates between feminist universalism and cultural relativism, addressing how universal ethical standards intersect with the recognition of cultural specificity.

Subsequently, the analysis focused on critiques of ideologies, including liberal and conservative perspectives on multiculturalism, and feminist

concerns, especially postcolonial, regarding the limitations of traditional multicultural approaches. Particular attention was paid to the intersectionality framework, which enriches feminist discourse by acknowledging the overlapping identities and experiences of marginalized individuals.

The examples from the Croatian context served to illustrate the practical challenges at the intersection of feminism and multiculturalism. These included the experiences of Romani women and the impact of multicultural policies during the 2015 migrant crisis, highlighting systemic issues such as gender-based inequalities in education and cultural preservation practices.

The concluding analysis revealed a shift from perceiving feminism and multiculturalism as inherently conflicting to recognizing their potential for productive intersection. The notion of "false multiculturalism" and the importance of gender-sensitive approaches were emphasized as essential for developing equitable multicultural policies that do not perpetuate patriarchal structures.

Ultimately, this paper argues for the necessity of ongoing dialogue and critical reflection to reconcile these two ideologies. A nuanced and context-sensitive approach, informed by both theory and practice, is essential to balance respect for cultural diversity with the imperatives of gender equality. This endeavour is crucial for fostering more equitable, inclusive, and sustainable societies.

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SABLASTI FEMINIZMA I MULTIKULTURALIZMA

Sažetak

Kroz kritičku analizu feminističkih i multikulturalnih diskursa, ovaj rad ima za cilj analizirati napetosti između univerzalnih etičkih zahtjeva i priznavanja kulturne specifičnosti. Feminizam i multikulturalizam ovdje se shvaćaju kao vodeći diskursi o pravima manjina. Međutim, mnoštvo pozicija koje se mogu zauzeti unutar svake od ovih uvjetnih društveno-političkih konstrukcija pridonosi njihovoj sablasnoj kvaliteti. Istraživačka metoda korištena u ovoj studiji sintetizira teorijske uvide i uključuje se u suvremene rasprave koje se, između ostalog, odnose na postkolonijalni feminizam i liberalne argumente za i protiv multikulturalizma, čime se doprinosi dubljem razumijevanju složenosti inherentnih u navigaciji područja roda i raznolikih strategija za suočavanje s kulturnom raznolikošću. Empirijski materijal uključuje studije slučaja iz temeljne literature na tu temu (Kymlicka, Barry, Bhabha, Okin, Kuriyama, Hall i drugi) kao i primjere iz hrvatskog konteksta, koji su analizirani kroz prizmu napetosti i produktivnih presjeka između feminizma i multikulturalizma, koji oboje traže priznavanje različitosti u kontekstu normi koje su u teoriji univerzalne, ali ne i u praksi. Naime, rodna ravnopravnost često dolazi u sukob s interesima manjinskih kultura i individualnih prava, jer se temeljna pozicija feminističkog pokreta ne može žrtvovati u ime grupnih prava koja mogu učvrstiti postojeće hijerarhije. Perspektiva i analitička strategija primijenjena u ovom radu otkriva postupan pomak od očitog sukoba interesa između feminizma i multikulturalizma prema nijansiranijem i složenijem razumijevanju značenja i svrhe etičkih normi koje zastupaju u istraživanju, društvenoj i kulturnoj politici, međunarodnim odnosima i svakodnevnom životu.

Ključne riječi: feminizam, kulturna specifičnost,liberalizam, multikulturalizam, univerzalne etičke norme

Jasminka Najcer Sabljak[13]

REVIEW OF THE ARCHITECTURAL HERITAGE OF SLAVONIAN NOBILITY – THE SUSTAINABLE DEVELOPMENT OF CULTURAL TOURISM

Review Article
https://doi.org/1059014/FXXJ2671

Abstract

The paper examines the heritage of noble families in the three counties of Eastern Croatia, including castles, manor houses, curies, mausoleums and chapels, which constitute immovable material cultural heritage and represent an important economic resource. The aim of the paper is to provide a brief overview of restored, unrestored, and lost noble complexes, their functions, and their valorization. Communicating architectural heritage through cultural-historical collections and heritage interpretation enables a contemporary sustainability concept through cultural tourism. The largest number of restored cultural heritage sites is in Virovitica-Podravina County, followed by Vukovar- Srijem County. However, the highest concentration of noble heritage is found in Osijek-Baranja County, where most sites remain unrestored and/or outside a museum function. The research indicates that restored noble properties used as museums and/or sacred spaces represent a significant potential for cultural tourism, an essential segment of sustainability and heritage utilization aimed at societal transformation and fostering economic growth. By revitalizing noble properties and repurposing them, they become centers for promoting cultural heritage and tourism. Properties repurposed for local community administration (e.g., Donji Miholjac, Tenja, Špišić Bukovica) demonstrate the inability to publicly communicate cultural heritage. Examples of revitalized properties housing museum institutions (e.g., Ilok, Našice, Virovitica, Vukovar) and heritage hotels (e.g., Feričanci, Kapela Dvor/Lukač, Suhopolje) showcase heritage presentation, contributing to sustainable economic growth and local community development. In contrast, properties not used for museum purposes or heritage promotion result in stagnation and/or deterioration (e.g., Bilje, Čepin, Darda, Erdut, Kneževo, Nuštar, Orahovica, Retfala).

Keywords: Cultural Tourism, Heritage, Nobility, Sustainability

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Introduction

After the end of the wars with the Ottoman Empire, in the late 17th and early 18th centuries, the Royal House of Habsburg brought a series of noble families to the area of Eastern Croatia, predominantly of foreign origin. They had the task of economically, socially, and politically improving this underdeveloped region. At that time, this was a wetland plain covered with forests, very sparsely populated. These noble families came to this area from different parts of Europe.

As the new owners of their estates, they introduced contemporary methods of management and built more or less luxurious residential buildings. Over time, these buildings contained various works of art. They were brought by their owners from their foreign estates, as part of the family legacy, and later they were purchased in the centres of European art production and from domestic artists. The heritage of Slavonian nobility holds a special place in Croatia's cultural- historical and artistic legacy, within the context of European artistic and cultural achievements spanning from the 18th to the mid-20th century. Particularly significant is the lifestyle culture of noble families in their castles and manor houses, which served as spaces for representation and self-promotion. In Eastern Croatia, approximately thirty castles and manor houses, along with some restored and unrestored mausoleums, represent a significant potential for the sustainable development of cultural tourism. Over the past decade, some have been revitalized and repurposed for promoting cultural heritage, while others remain in a dilapidated state or await thorough restoration.

Notable families that owned castles and manor houses in the region until World War II and the nationalization process include: Adamović (Čepin, Aljmaš, Erdut, Tenja), Eltz (Vukovar), Esterházy (Darda), Hilleprand von Prandau and Normann-Ehrenfels (Bizovac, Donji Miholjac, Jelengrad, Valpovo), Janković Voćinski (Cabuna, Kapela Dvor, Terezovac/Suhopolje, Voćin), Khuen Belasi (Nuštar), Mihalović (Feričanci, Orahovica), Mailáth (Donji Miholjac), Odescalchi (Ilok), Pejačević (Našice, Podgorač, Retfala/Osijek, Špišić Bukovica, Virovitica), and Savoy (Bilje), among others. These families left a profound impact on the region's economy, as well as on the development of art and culture.

Within their castles, manor houses, curies and palaces, these families assembled valuable art collections, including fine furniture, applied art objects, libraries, and archival materials. While parts of these collections are preserved in Croatian museum institutions and integrated into museum exhibitions, other portions have been entirely destroyed or lost, making reconstruction and restoration efforts for noble collections particularly challenging today. The revitalization of noble complexes and the preservation of materials—safeguarded within national museum institutions through confiscation—have been crucial in shaping the function and further development of this cultural heritage. This text highlights the most significant examples of preserved, restored, and unrestored noble properties in the three counties, showcasing their potential for sustainable cultural development and revitalization of the region.[14]

List of Locations by County:

1. Osijek-Baranja County – Aljmaš, Bilje, Bizovac, Čepin, Darda, Donji Miholjac, Erdut, Feričanci, Jelengrad, Kneževo, Našice, Podgorač, Retfala/Osijek, Tenje, Valpovo
2. Virovitica-Podravina County – Cabuna, Kapela Dvor/Lukač, Orahovica, Suhopolje, Špišić Bukovica, Virovitica
3. Vukovar-Srijem County – Ilok, Nuštar, Vukovar

Revitalized Noble Properties for the Promotion of Cultural Heritage

Bizovac, Normann-Ehrenfels Curia

The Normann-Ehrenfels Curia in Bizovac, near Valpovo, was built in the first half of the 19th century to accommodate the estate officials from the nearby Hilleprand von Prandau property in Valpovo. In the renovated and expanded curia, members of the Normann-Ehrenfels family lived from the mid-19th century until World War II, including Marijana, the daughter of Gustav Hilleprand von Prandau, and her husband, Count Konstantin Normann-Ehrenfels.

14 The list of properties has been taken from a book that provides a comprehensive overview of noble heritage (Obad Šćitaroci, 2001).

The single-story building, shaped like the letter "L," was constructed using the *Fachwerk*

technique, with wooden beams between which masonry material fills the gaps. Built in the style of a Swiss house, it resembles Alpine architecture, featuring a richly carved wooden, glazed porch in the tradition of Slavonian construction (Damjanović, 2018).

Although it has been altered several times, the curia has preserved the characteristics of the style and period in which it was built. For many years, it served as a primary school. Since 2008, it has undergone restoration for nearly a decade with funds from the Municipality of Bizovac, the Ministry of Culture of the Republic of Croatia, and Osijek-Baranja County. Today, the curia functions as an integrated cultural space for the presentation and interpretation of the local cultural heritage, housing the Antun Ulrich Gallery (*Restoration and Renovation*…, 2008).

Donji Miholjac, Hilleprand von Prandau Curia / Mailáth Manor

In Donji Miholjac, near the Drava River and the border with Hungary, are the Hilleprand von Prandau Curia and Mailáth Manor, two buildings connected by a portico. The older, single- story, long late-Baroque curia was built in 1818. As the seat of the Donji Miholjac estate, the curia was commissioned by Ana Marija, Baroness Hilleprand von Prandau, née Countess Pejačević. The manor was constructed by Count Ladislav Mailáth with his wife, Stefania, née Baroness Hilleprand von Prandau. It represents one of the last manors built during the rule of the Austro-Hungarian Monarchy. The manor was designed by the Budapest architect István Möller and built between 1904 and 1914. Its cylindrical towers, high roofs, decorative chimneys, terraces with balustrades, wrought iron fences, and other architectural details with various historicist features create the impression of a manor built in the neo-Gothic English Tudor style (Šćitaroci, 2001).

The interior of the castle was decorated with wooden decorative joinery, wall and ceiling cladding, hand-carved window shutters, and stair railings. The manor has more than fifty rooms on four levels, grouped around a central hallway, which leads to the vestibule with a staircase and gallery. Today, the manor houses offices of local government and state institutions,

and while it is not open to the public, it serves the purpose of promoting cultural heritage (*Manor Mailáth*, 2020).

Photo 1, Mailáth Manor, Donji Miholjac, 2020, photo by Marin Topić

Feričanci, Mihalović Curia

In Feričanci, there is a one-story late Baroque-Classical curia of the Mihalović family, built in 1793/1794 and renovated and extended after 1845. The Mihalović curia was erected by Ivan Karlo Mihalović, the grandson of Dimitrij Mihalović, who purchased the estate of Orahovica- Feričanci from the Pejačević family in 1742 and was granted noble status by the Habsburgs in 1716 (Cvetnić and Vučić Šneperger, 2010). For many years, the curia was abandoned and changed owners. Currently, the renovated Mihalović curia, which is privately owned, houses a *heritage* hotel.[15] The hotel display includes artwork as well as part of the original furnishings from the Feričanci curia (*New Life of the Mihalović Curia*…, 2024). It is interesting to note that until a few years ago, part of the Mihalović family's legacy from the Slavonian curias was housed in the palace of the family's heirs in Demetrova Street in Zagreb (Najcer Sabljak and Lučevnjak,

15 Heritage hotels are structures or locations that hold historical or cultural significance of the place in which they are found. Maybe they were built centuries ago and are still standing or maybe they were once a temple or castle, converted into a friendly and wondrous place for guests to vacation. Historical hotels hold importance to the area in which they are stationed. That makes staying at one a bit of a "bonus" for guests, whose very lodgings are part of the story of the city in which they find themselves.

2021b). Unfortunately, the potential of preserving the collection *in situ* from the time of the Second World War in the Upper Town of Zagreb was not recognized, and the palace was sold, with the collection dispersed across various institutions and private ownership.

Ilok, Odescalchi Castle

The easternmost part of present-day Croatia (the Srijem region), with its seat in Ilok, was part of the large estate of the Odescalchi family from Italy from the late 17th century until the Second World War. The Odescalchi family was one of the most prominent Italian noble families, many of whose members made significant contributions to the Catholic Church, including Pope Innocent XI (Benedict Odescalchi). The family built a two-story castle in Ilok, positioned above the Danube River, designed in the shape of the letter U. Later renovations in the neo- Renaissance style were entrusted to Viennese architects, initially in 1839 to Karl Rösner, and later in 1889 to Hermann Müller (Damjanović, 2021). The Ilok manor became home to an art collection featuring works transported from Italy, spanning from the 16th to the 20th century. The oldest artworks that were housed in the castle before the Second World War can be linked to the collection of Prince Livio Odescalchi, one of the most renowned Italian and European collectors and patrons of the arts (Najcer Sabljak, 2015a). Research has shown that, before the Second World War, there were over 130 pieces of art in the Ilok castle (Najcer Sabljak, 2015b). Unfortunately, after the Second World War and the Croatian War of Independence, most of the artworks disappeared. Today, only about twenty works remain, displayed in the permanent collection of the *Ilok Municipal Museum*. The museum was renovated in 2009 as part of the European project *Ilok-Vukovar-Vučedol*, and is now functioning as a cultural heritage promotion center (Šulc, 2024).

Photo 4, Odescalchi Castle, Ilok Municipal Museum, Permanent Exhibition, 2024, Photo Archive of Museum

Kapela Dvor/Lukač, Janković Curia

The Janković Curia, located near Virovitica by the Drava River in Lukač, was built around 1880 by Geza Janković-Beszan, the son of Josip II Janković, a nobleman from Suhopolje. Geza, along with his older brother Elemer, separated from the Voćin branch of the Janković family and allied with the Hungarian noble family Beszan de Szekcseo, adopting the name Janković- Beszan de Pribert et Vuchin. The location acquired the name *Kapela Dvor* due to the tower of the manor, which suggests the presence of a chapel. The one-story manor was designed in a historicist style with an irregular square floor plan. The design features a playful layout with a portico at the entrance, a terrace above it, a series of projecting risalites, a bay window, stairs on the façade, and a tower at the southwest corner. The manor and its surrounding buildings were surrounded by a landscape park. Until the 1980s, the manor was well-maintained, and for some time, it served as a school. However, after that, it fell into disrepair and became almost a ruin. In 2012, the Virovitica-Podravina County purchased the manor and, with funding from EU grants, carried out its restoration between 2013 and 2020. It has since been converted into a *heritage* hotel (*Janković Curia*, 2024).

Našice, the Pejačević Large Manor

The Pejačević family played an important role in the history of eastern Croatia, having owned several estates from the western (Virovitica, Špišić Bukovica) to the central (Našice, Podgorač) and eastern (Retfala) parts of Slavonia and Syrmia (Ruma) since the early 18th century. The Pejačević family settled in eastern Croatia at the beginning of the 18th century from Bulgaria, where they had led a major uprising against the Ottoman Empire in 1688. For these merits, the Habsburgs rewarded them with a baronial title and, in 1772, a countship. Over time, the family acquired large estates and social prestige. By the end of the 18th century, the family had split into three branches: the Virovitica, Našice, and Ruma-Retfala branches. The Našice branch of the Pejačević family produced many prominent members, including two Croatian viceroys, Ladislav and Teodor Pejačević, as well as the Croatian composer Dora Pejačević.

The Pejačević family manor in Našice, known as the large manor, was built between 1811 and 1812 by Count Vincencije Pejačević. The manor was later renovated between 1862 and 1873, with the renovation overseen by the Hungarian architect Ferenc Storno Sr. (Najcer Sabljak and Lučevnjak, 2013). In this renovation, the manor acquired characteristics enriched with eclectic details from classical and baroque styles. For many years, it was painted in shades of yellow, until the last renovation, which returned it to its original monochrome light color. The development of the family's art collection began in Sopron, a city near Vienna, where the family lived from the late 18th century. To date, about 200 artworks from their collections have been identified, most of which are housed in Croatian museums, with some displayed in the renovated Našice manor. (Najcer Sabljak and Lučevnjak, 2013). In addition to the preserved art collection in Croatian museums, some furniture, art craft items, and books are also kept, part of which is exhibited in the permanent collection of the newly renovated manor. The manor, which opened to the public in 2024, allows access to all five floors, and the interiors have been restored. The ground floor contains the salons of the Pejačević family, with original items from the manor, while part of the basement is dedicated to the manor's display, which includes the Pejačević family library and the music salon of Dora Pejačević. The manor was restored as part of the "Reconstruction of the Pejačević Manors – Large and Small" project, co-financed by the

European Union from the Regional Development Fund. It has been almost entirely repurposed for the promotion of cultural heritage and houses the Našice Local History Museum (Lučevnjak, 2019).

Photo 2, The Pejačević Large Manor, Našice Local History Museum, 2024, photo by Jasna Jurković

Našice, the Pejačević Small Manor

Near the large Pejačević Manor, in the park, which is unique for its size and rare plantings, the so-called The Small Pejačević Manor was built between 1904 and 1907, surrounded by a French-style park inspired by the German *Sanssouci Palace*. The manor was built by Marko Count Pejačević, the son of Teodor Count Pejačević. Although it is still unknown who designed it, it is important to note that the famous scientist Milutin Milanković (1879–1958) worked as an engineer on its construction (Damjanović, 2021). The manor is built in the neoclassical style, with a complex form consisting of a central section and side risalits in the shape of the letter H, with many details and a mansard roof. The manor is integrated into the park with several terraces decorated with geometrically arranged plantings, which descend and connect with the large landscape park. The restored manor now houses the Našice Music School *Dora Pejačević*.

Photo 3, The Pejačević Small Manor, Našice, 2024, photo by Jasna Jurković

Našice, The Pejačević Chapel/Mausoleum

The Chapel of the Ascension of the Lord, serving as the family mausoleum in Našice, was designed by architect Herman Bollé, one of the most prominent architects in Croatia during the last decades of the nineteenth century. Built in the neo-Gothic style in 1881, during the tenure of Ladislav Count Pejačević as the Ban of Croatia, the chapel is located next to the local cemetery in Našice. This monument is associated with the premature death of Marko Count Pejačević, a member of the noble family, and stands as one of the most important architectural achievements of that period in Slavonia. The chapel, with its neo-Gothic elements, reflects the spirit of the era, showcasing the wealth and iconographic content favored by noble families at the turn of the 19th century. (Zec, 2007) For many decades, the chapel was out of use and in a state of deterioration. It is currently undergoing restoration, which will return it to its function as a sacred funeral site.

Orahovica, Mihalović Curia

The Mihalović Curia in the town of Orahovica, at the foot of Mount Papuk, was built by Demetar Mihalović on the Orahovica-Feričanci estate, which he purchased in 1742. The curia remained in the family's ownership until World War I. The building is a one-story structure with an entrance portico in the central part of an elongated layout and a double-pitched roof (Šćitaroci, 2001). Classical elements decorated the façade of the curia, but they disappeared during later adaptations. However, the preserved massive columns with simple profiling that support the portico still point to the stylistic characteristics. In the most recent renovation, the appearance of the curia was completely altered. The roof was extended to the eaves, changing the building's dimensions, and it received roof windows and inappropriate plastic windows. The form of the entrance was also entirely modified. The curia now houses the Center for Prevention, Diagnosis, Treatment, and Rehabilitation of Cardiovascular Patients, part of the Faculty of Dental Medicine and Health at the J.J. Strossmayer University of Osijek. This example demonstrates how a cultural heritage building, not functioning as a museum or in the promotion of cultural heritage, was entirely degraded by the latest renovation (*Mihalović Curia*, 2024).

Suhopolje, Janković Manor

The Janković family played a key role in shaping the cultural heritage and history of Suhopolje, which was part of the family estate along with Voćin. The estate consisted of two parts: the flatland area in the Slavonian Podravina with the seat in Suhopolje, and the southern, hilly part on Papuk with the seat in Voćin. The estate was owned by Ivan Nepomuk Janković, who added the noble title "Janković of Bribir and Voćin – de Priberd et Vuchin" to his surname. The neo- Gothic manor in Suhopolje dates back to the late 18th century and is part of a complex of buildings. The central building has two floors and a mansard roof. The complex is characterized by its division and the Gothic elements at the entrance, which connect the two wings of the manor and create a wealth of intricate forms. The manor was renovated by Elemir Janković, who also built a chapel/mausoleum in the manor's park (Šćitaroci, 2001). After Elemir's death, his son Andrija

took over the estate but decided to sell it in 1931.[16] For many years, the manor was used for various purposes, at one point being severely neglected until the restoration process of the manor and its surrounding park, which began in 2017 through the implementation of the project "Visitor Center – Janković Manor." The restoration of the manor was co-financed with EU grants. The reconstruction of the manor has created modern, contemporary multimedia exhibition spaces that combine the natural, cultural, and artistic heritage of the Virovitica- Podravina County (*Janković Manor*, 2024).

Špišić Bukovica, Špišić and Pejačević Manor

The village of Bukovica, located near Virovitica, was a military estate under the Habsburg Monarchy during the 18th century. In 1748, Maria Theresa granted the estate to Antun de Špišić Japranski, the deputy prefect of the Virovitica County. From that time, the place became known as Špišić Bukovica. Antun's son, Ladislav, built a single-story manor and several farm buildings around 1785. In 1812, the estate with the manor was purchased by Count Stjepan Pejačević and his wife Maria, née Kiss, the daughter of Antun I. Pejačević of Virovitica. The single-story manor with seven windows on the ground and upper floors was renovated in the Classical style, with a terrace at the entrance and a shallow, risalite finish on the southern façade. After Maria's death in 1844, a chapel was built at the cemetery, and the manor briefly served as a school until 1861, when it was purchased by Count Adolf Juraj Schaumburg-Lippe (Obad Šćitaroci, 2001). The Špišić Manor, also known as the "Small Manor," was restored in 2020 with co-financing from the Environmental Protection Fund. The cultural heritage site, which is not open to the public, is now used as the municipal center (*History of* Špišić *Bukovica*…, 2024).

Tenje, Adamović Manor

Tenje is a settlement located northeast of Osijek, and the noble estate was owned by Ivan Kapistran I. pl. Adamović from 1785, later passing into the hands of the Bartolović family at the end of the 19th century. The

16 The Janković family also owned manors in Hungary in the places of Somogyyeszti, Öreglak, Berencsepuszta, Szőlősgyörök and Gic.

single-story baroque-classical manor was built at the end of the 18th and the beginning of the 19th century. Originally, the manor was a two-wing building with an L-shaped floor plan, but after shortening the side wing, it took on a rectangular layout with an incomplete southeast wing. The main facade features two risalits that end in pediments, while the interior has baroque vaults and a late baroque-classical wooden railing on the staircase (Šćitaroci, 2001). In 1928, the manor was repurposed into a school, and it was subsequently restored in the 1970s. The most recent renovation took place in 2005, preserving the manor's appearance, and it is now functioning as part of the Tenje settlement.

Virovitica, Pejačević Manor

The Virovitica branch of the Pejačević family was founded by Antun III. Count Pejačević, who began the construction of the manor in 1800 on the ruins of the medieval Virovitica fortress, situated on a gentle hill, according to plans by the Vienna architect Roth. However, Antun III. passed away before the construction was completed, and his son, Antun IV., along with his wife Marija Sidonia, Countess Janković of Voćin, finished the manor quickly by 1804. The representative late Baroque-Classical manor, with a mansard roof, features a central part of the facade with a prominent classicist design and an emphasized colonnade of Tuscan columns (Lučevnjak, 2016). As the Virovitica branch of the Pejačević family became extinct by the mid- 19th century, the manor was owned by other families until the Second World War. Almost nothing from the manor's original inventory has been preserved, except for several works of art now kept in Croatian museums, some of which are on display at the Virovitica Museum (Najcer Sabljak and Lučevnjak, 2013). The manor was restored with EU funds as part of the project "Restoration of the Pejačević Manor and Revitalization of the City Park for Cultural Heritage in Tourism" under the name "5 to 12 for the Manor." The Virovitica City Museum, located within the manor, was opened in 2019 with a permanent exhibit on the relationship between humans and trees, alongside cultural-historical museum collections. The entire manor is now dedicated to the promotion of cultural heritage (*City Museum Virovitica*, 2024).

Vukovar, Eltz Manor

The Eltz family purchased a large estate in Vukovar at the beginning of the 18th century, and they also owned properties along the Rhine (Eltville, Burg Eltz). Several members of the Eltz family played important roles in the ecclesiastical, social, and political life of the Holy Roman Empire, serving as prince electors, archbishops, chancellors, canons, high-ranking military officials, and members of chivalric orders. From the second half of the 19th century, the Vukovar estate became the main seat of the Eltz family. They built a representative manor along the Danube, expanding the existing baroque building by adding to it between 1891 and 1895 based on the design by the Vienna architect Viktor Siedek, and then fully transforming it in 1904/06 with neobaroque characteristics. The Vukovar manor had valuable furniture, items of artistic craftsmanship, an archive, and a library. It is believed that before the start of World War II, the manor's collection of art in Vukovar contained about 500 works of art (Najcer Sabljak and Lučevnjak, 2021a). After the devastation during World War II, the items that were not lost from Croatia became part of the permanent exhibition at the Vukovar Museum and inventory in various state institutions across Croatia. After the destruction of Eltz Manor during the Homeland War and its thorough restoration, the Vukovar Municipal Museum now operates there, with part of the former art collection of the Eltz family in the permanent exhibition, as well as exhibitions dedicated to the museum collections and the Homeland War (*Vukovar Municipal Museum*, 2024).[17] The restoration of the manor complex and the museum exhibition was implemented as part of the *Ilok-Vukovar-Vučedol* project and is now in function for the promotion of cultural heritage.

17 The Vukovar Municipal Museum won the 2nd place among 38 award-winning museums from Europe, America, Japan, China, India, Australia, New Zealand, Canada and Russia – award of The Best in Heritage Association within Europa Nostra and Creative Europe, 2017.

Photo 5, Eltz Manor, Vukovar Municipal Museum, photo by Marin Topić, 2020.

Photo 6, Eltz Manor, Vukovar Municipal Museum, permanent exhibition photo by Marin Topić, 2020.

Vukovar, the Chapel od the Ascension of Christ

The neobaroque Chapel of *The Ascension of Christ*, mausoleum of the Eltz family, was built according to the design of the Viennese architect Viktor Siedek, between 1907 and 1909. It is a single-nave building located in the cemetery in New Vukovar (Damjanović, 2021). Surrounding the central sacred space, there is a series of arcades on the exterior, which were intended to house tombs. The mausoleum was completely devastated during the Homeland War, but in recent years, it has been restored in line with the revitalization of the manor and has been put into function as a sacred funeral object and for the promotion of cultural heritage.

Photo 7, Mausoleum of the Eltz Family, Vukovar, 2023,
Photo by Jasminka Najcer Sabljak

Unrestored Nobleman's Buildings – Potentials and Challenges

Aljmaš, Adamović Curia

Aljmaš is a place at the confluence of the Drava River into the Danube, where Ivan Kapistran I, Baron Adamović, the landowner of Tenja and Erdut, had his estate. The single-story curia with nine window openings, in the shape of the letter "U," was built in the Classical style, with a raised portico on the façade, supported by four columns and a gable finish, along with Classical details throughout the entire façade (Šćitaroci, 2001). Surrounding the curia was a landscaped park. Throughout the 20th century, it served as a school and is now privately owned. Around ten years ago, restoration projects were developed, with the addition of a new part of the building, ensuring that the old section retains its distinctiveness in the function of promoting cultural heritage and its conversion into a *heritage* hotel (*Adamović Curia*, 2015).

Bilje, Eugen of Savoy Manor

The manor in Bilje was built by Prince Eugene of Savoy between 1707 and 1712, north of the Drava River, on a estate in Baranja, which he acquired through an imperial grant for his military merits. It is a quadrangular one-story manor with a central courtyard, a one-story central zone, and a tower, located within a defensive ring with four corner bastions (Horvat Levaj et. al., 2024).

The enclosed architectural design of the manor resembles a fortress, which is believed to have served as a headquarters for the famous military commander during his campaigns against the Ottomans. The manor was designed by Austrian architect Johann Lucas von Hildebrandt, who also designed the famous Belvedere Palace in Vienna for Prince Eugene of Savoy. The manor is now in a dilapidated state, owned by the Municipality of Bilje and the Osijek-Baranja County, while the park surrounding it is neglected. The manor and the park need to be restored and repurposed for the promotion of cultural heritage.

Photo 8, Eugene of Savoy Manor, Bilje, 2024, photo by Martina Jezidžić

Cabuna, Janković Manor

In the small settlement of Cabuna, southeast of Virovitica, stands the Janković family manor. In 1817, the Voćin estate was divided into Voćin and Suhopolje, with Cabuna remaining part of the Voćin estate. Aladar I. pl. Janković, an imperial and royal chamberlain and state advisor, son of Rosalija and Ladislava pl. Janković of Bribir and Voćin, owned Cabuna from the late 19th century until 1919. He built the manor around 1880.

Historical photographs offer insight into the appearance of the former Janković Castle, which was built in a historicist style, with parts of the facade reflecting neoclassical elements. The manor complex consists of a central rectangular building with a basement, ground floor, and upper floor, to which two single-story wings were added: a northeast wing in an L-shape and a southeast wing in a U-shape (Šćitaroci, 2001). The surrounding grounds featured a landscaped park. The manor has been out of use for many years and began deteriorating in the mid-20th century, now being in an extremely poor and dilapidated condition. Virovitičko-podravska County, in partnership with the Municipality of Suhopolje and the

County Tourist Board, plans to restore the manor as part of a project to create a Center for Health Culture – Janković Manor Cabuna (*Janković Manor in Cabuna*, 2019).

Čepin, Adamović Mansion

Čepin is a settlement near Osijek that has been owned by Ivan Kapistran I. Count Adamović since 1765. Based on his estates and military achievements, he carried the title Čepinski (de Csepin) (Najcer Sabljak and Lučevnjak, 2021c). The noble family built a single-story classicist mansion in the shape of the letter L at the beginning of the 19th century in the center of the village. The facade is articulated with a risalit feature with a gable finish, and on the rear side, there is a porch with three window openings above it.

By the late 19th century and in the early 20th century, the estate was owned by other noble families, and after World War II, the mansion functioned as a school, later as a home for the elderly and disabled, and also for adults with mental illnesses (Šćitaroci, 2001). The mansion is now in a dilapidated condition and owned by the Republic of Croatia, with plans for restoration and transfer of ownership to the Municipality of Čepin. The planned restoration aims to turn the mansion into an interpretive center to promote the cultural heritage of the Adamović family and Bela pl. Adamović Čepinski, the composer of the first Croatian ballet *Jela*, which had its premiere in 1898 at the Croatian National Theater in Zagreb.

Darda, Esterházy Manor

The first owner of the Darda estate was the Veterani family after the liberation of the region from the Ottomans. Later, the estate passed into the ownership of the Esterházy family, who owned it until 1842, when it was sold to the Schaumburg-Lippe family. In addition to their prestige, political, and economic power, the Esterházy family owned several estates and manors within the Monarchy (Šćitaroci, 2001). They were notable as collectors and music enthusiasts. Count Ivan Kazimir Esterházy had a three-winged manor built in 1813 in the baroque-classical style, shaped like the letter U, open toward the inner courtyard, on the site of an existing 18th- century building (Horvat-Levaj and Vučetić and Haničar Buljan,

2012). The manor is registered in the Registry of Cultural Monuments, and today it is owned by the Municipality of Darda, which has had an open call for investors since 2009 (Horvatek, 2020).

Photo 9, Esterházy Manor, Darda, 2024, photo Martina Jezidžić

Erdut, Adamović/Chéh Manor

The Erdut estate rises above the Danube in the meander of the river, between Aljmaš and Dalj, and has been in the ownership of Ivan Kapistran Baron Adamović since 1785, who also owned estates in Aljmaš, Tenje, Erdut, and Sarvaš. From the second half of the 19th century until 1973, it was originally owned by Erwin de Cséha and later his successors (Šćitaroci, 2001). The family built a manor at the end of the 18th and the beginning of the 19th century, which served as the center of the estate. The single-story manor, in an elongated shape, was built in the spirit of historicism, with a polygonal tower and a small turret, featuring a high wooden porch at the main entrance. In addition to the residential part, it had utility buildings and large cellars that are still in use today. The manor is in poor condition, owned by the Erdut vineyards, and awaits thorough restoration.

Jelengrad, Normann-Ehrenfels Hunting Lodge

The Normann-Ehrenfels family, noble landowners from Valpovo, owned a hunting lodge in Jelengrad on the Drava River near Petrijevci. The lodge was an exquisite example of a neo- Renaissance historicist country residence, built according to the design of Osijek architect Wilhelm Carl Hofbauer. It was completely destroyed by fire in the 1930s (Damjanović, 2018).

Kneževo, Management of the Belje Estate

The late Baroque-Classical manor in the center of Kneževo, near Beli Manastir, was built in 1828 as a single-story building designed to serve as the economic headquarters of the Belje estate. The western facade, with its central two-story section, rises from the main structure and faces the settlement, while the eastern facade faces the park (Obad Šćitaroci, 2001). The 19th- century park adjacent to the manor is protected as a horticultural monument. Until the early 20th century, the building served economic and partially administrative functions for the expansive Belje estate. It remains in use but awaits thorough restoration (*Castle in Kneževo*, 2024).

Nuštar, Khuen-Belassy Manor

After the wars with the Ottomans and the redistribution of estates, the Nuštar estate eventually came into the possession of Maximilian Count Gosseau d'Henefe. Between 1729 and 1737, the west wing of the manor was constructed, along with a chapel positioned opposite it, and a series of farm buildings.

In 1751, the estate passed to the Sándor family, and further construction work took place. However, significant changes occurred from 1811 onwards, during the time of the last owners, the Khuen-Belassy family. The most notable member of this family was Karlo Khuen- Héderváry, the Croatian-Slavonian-Dalmatian Ban from 1883 to 1903 and later the Hungarian Prime Minister. Under his guidance, the family hired István Möller, a student of Friedrich von Schmidt, to renovate the manor and chapel, connecting all the parts into a unified structure. The manor consists of several one-story buildings with high roofs (the west and south wings, as well as the central building) aligned along the street, with a

wooden porch and arcade on the ground floor, facing the garden and park (Vučetić and Haničar Buljan, 2012). Some of the preserved artifacts from the manor, after nationalization, are now housed in museums and libraries in Zagreb. Additionally, several artworks (mostly graphics) of smaller dimensions and varying quality have been found in the Pfetten and Khuen-Belassy collections in Salzburg and Grundlsee, Austria (Najcer Sabljak and Lučevnjak, 2023). Both the manor and the chapel are now owned by the Municipality of Nuštar, but are in a dilapidated state. Restoration plans are underway for the entire complex, which aims to convert the smaller manor into a hotel and the larger one into a museum. (Obad Šćitaroci and Bojanić Obad Šćitaroci and Magdić, 2017).

Photo 12, Khuen-Belassy Manor, Nuštar, 2020, photo by Jasminka Najcer Sabljak

Nuštar, the Chapel of the Assumption of the Holy Cross

The Chapel of the *Assumption of the Holy Cross* was built as part of the manor complex. It features a rectangular floor plan with an apse and served as the parish church of Nuštar from 1737 to 1860. After the

construction of a new church, the chapel continued to function as a family sacred space (Šćitaroci, 2001).

Podgorač, Pejačević Curia

The Ruma-Retfala branch of the Pejačević family owned a curia in Podgorač, a village near Osijek, built by Count Pavle Pejačević and his wife, Countess Alvina Hilleprand von Prandau.

The Neo-Renaissance single-story curia, surrounded by a park on a slope, once housed a rich collection of artworks, most of which were preserved in Osijek museums. This was made possible by their transfer to the Valpovo castle before Second World War, during which the curia was completely destroyed. A primary school was later built on the site (Najcer Sabljak, 2011).

Retfala/Osijek, Pejačević Manor

The Pejačević Manor in Retfala, now almost in the center of Osijek, served as the seat of the Ruma-Retfala branch of the Pejačević family. This representative single-story Baroque- Classical manor was constructed in its first phase from 1796 to 1801 in a U-shaped layout, surrounded by a landscaped park that has since been significantly reduced to a neglected surrounding area.

This branch of the Pejačević family became extinct in the early 20th century, and the heirs, the Clary-Aldringen family, sold the manor. By 1924 at the latest, the manor's inventory was moved to Herrnau Manor in Salzburg's southern suburbs, where it remains in the family's possession. The Retfala collection, comprising around one hundred artworks, including paintings, graphics, valuable furniture, porcelain, decorative arts, a library, archival materials, and photographs, is almost entirely preserved there (Najcer Sabljak and Lučevnjak, 2013).

This preservation represents a rare example of a manor collection that has survived intact in another country, as it avoided the confiscations of Second World War II. Today, the manor is privately owned by the Medikol Polyclinic. Part of the complex is in a dilapidated state, and the other part has been inadequately restored. Since the property is not used for cultural

heritage promotion or museum purposes, the manor complex and park are considered neglected and degraded (Najcer Sabljak and Bošković, 2018).

Photo 10, Pejačević Manor, Retfala, 2024, photo by Jasminka Najcer Sabljak

Retfala/Osijek, Pejačević Mausoleum

Near the Pejačević Manor in Osijek, the Pejačević family constructed a lavish mausoleum in 1891. Designed by architect Viktor Siedek, this neo-Baroque structure features a central elliptical floor plan topped with a dome. It is considered one of the finest examples of neo- Baroque architecture in Croatia (Damjanović, 2021). Currently privately owned, the mausoleum is entirely neglected and deteriorating. Restoration is urgently needed, similar to the example of the Eltz family mausoleum in Vukovar, also designed by Siedek. Once restored, it could be repurposed for a sacred function and serve to promote cultural heritage.

Photo 11, Pejačević Family Mausoleum, Retfala, 2024, photo by Jasminka Najcer Sabljak

Valpovo, Hilleprand von Prandau and Normann-Ehrenfels Castle

In the early 18th century, Valpovo became the seat of the Austrian baronial family Hilleprand von Prandau. The castle complex includes a medieval tower, baroque side wings attached to medieval outer walls, the Holy Trinity Chapel, an inner courtyard, and a late Baroque-classical palace on the main facade. The facade palace is a two-story rectangular building with a prominent tower crowned by a circular lantern. The entire complex, surrounded by an English- style park, underwent continual development until the late 19th century. With the arrival of the Hilleprand von Prandau family in Slavonia, first-rate materials from Viennese Baroque painting were introduced to the region. By the mid-19th century, through marital ties, the Valpovo estate passed to the German-origin Normann-Ehrenfels family, who further enriched the family's art collection. Thanks to the efforts of Countess Julijana Normann-Ehrenfels, the collection survived

World War II intact. Today, it is the most comprehensively preserved noble collection in eastern Croatia, comprising around 200 artworks, furniture, decorative art objects, and a library. These items are now housed in museums in Osijek, with a portion displayed in the Museum of Valpovština, which operates within the castle along with other institutions (Najcer Sabljak, 2019; Najcer Sabljak and Lučevnjak, 2018). However, unresolved property issues have left the castle in a deteriorated state. Despite this, it serves as a museum and a venue for showcasing the cultural and historical heritage of Valpovo and its surroundings.

Valpovo, the Chapel of St. Roch

The Chapel of St. Roch, built in 1796 in the late Baroque style, originally served as the mausoleum for the Hilleprand von Prandau family and later for the Normann-Ehrenfels family. The chapel features a raised bell-gable above the entrance and flat decorative elements, reflecting its function as a funerary cemetery structure and family mausoleum. It underwent significant restoration in 1860. The most recent restoration was carried out in 2008 by the German National Community – the State Association of Danube Swabians in Croatia. This effort repurposed the chapel as a Memorial Center (Lacković, 2018).

Conclusion

The review of castles, manors, curies and mausoleums in the area of the three counties of Eastern Croatia provides insight into the state of both restored and unrestored cultural heritage and its functions. As can be seen, some of the cultural heritage has been restored and represents a strong potential for cultural tourism, which is one of the important segments of sustainability and the use of heritage to transform society and stimulate economic growth. It is a form of tourism that protects local culture and heritage, neutralize negative effects of traditional mass tourism, contribute to growth of employment and local economy. Culture and heritage have been increasingly recognised as means of sustainable social and economic development and an important element of tourist motivation. However, the recent development of cultural tourism indicates the problem of massification, offering conventional products based on serial reproductions

of culture (Jelinčić and Glivetić and Tišma, 2022). Due to factors such as globalisation and the importance of cultural diversity and identity creation in postmodern society, it is essential to place the recognizable and unique cultural heritage and identity of destination in the centre of contemporary touristic strategies.

The largest number of restored cultural heritage sites can be found in Virovitičko-podravska County, followed by Vukovarsko-srijemska County, while the greatest number of unrestored sites are located in Osječko-baranjska County, which leads in terms of the number of noble heritage objects. Examples of revitalized sites intended for museum presentations or repurposed into heritage hotels reflect the presentation of heritage in the service of local communities, contributing to sustainable economic growth and development, because cultural tourism has been described as a sustainable alternative to mass tourism and the best model for local tourism development or the tourism that brings financial and social benefits for local community.

Today we are witnessing a growing number of professional and scientific papers on the heritage of noble families, important aristocratic buildings in the eastern part of Croatia are being renovated, and interesting museum projects have been realized on this topic. All of these efforts are funded not only by local, but also by national and international sources, suggesting a shift in the social and political context in which this heritage is being researched and presented – heritage that should be considered one of the most important segments of our cultural tourism. For restored manors and castles, it is crucial to combine restored architecture with preserved movable heritage, which is kept in national museums in the Republic of Croatia. After World War II, the museum profession and KOMZA (Commission for the Collection and Preservation of Cultural Monuments and Antiquities) played a key role in collecting and preserving this material, leaving an indelible mark on our cultural history. The consequences of their work are still felt today and are visible in the museum displays of Eastern Croatia, where part of the material was returned and displayed in situ, as opposed to the material that ended up in the Republic of Serbia and is still being sought today. The museum function promotes sustainability in the circular process of protecting architectural heritage, preserving cultural and historical collections, telling stories about museum objects, and creating resources for the economic development of the area and

its surroundings. Therefore, it is important to continue investing in the preservation, promotion, and interpretation of cultural heritage to ensure the creation of cultural identity and tourist destinations as an important segment of sustainability (Babić, 2023). It is the social responsibility to preserve, research, and communicate the cultural heritage of Eastern Croatia as an economic and cultural potential that transcends national and even European significance.

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PREGLED ARHITEKTONSKE BAŠTINE SLAVONSKOG PLEMSTVA – ODRŽIV RAZVOJ KULTURNOG TURIZMA

Sažetak

U radu se razmatra baština plemićkih obitelji na području triju županija istočne Hrvatske, dvorci, kurije, mauzoleji, kapele koje čine nepokretnu, materijalnu kulturnu baštinu i predstavljaju važan gospodarski resurs. Cilj je rada kroz kratki pregled predstaviti obnovljene, neobnovljene i nestale plemićke komplekse te njihovu funkciju i valorizaciju. Komuniciranje graditeljske baštine kroz kulturno- povijesne zbirke i interpretaciju baštine omogućava suvremeni koncept održivosti kroz kulturni turizam. Najveći broj obnovljenih objekata kulturne baštine je na području Virovitičko-podravske županije, potom na području Vukovarsko-srijemske županije, dok po brojnosti plemićku baštinu najviše nalazimo na prostoru Osječko-baranjska županija, no ona je najvećim brojem neobnovljena i/ili stavljena izvan muzejske funkcije. Istraživanje pokazuje da obnovljeni plemićki objekti u muzejskoj funkciji i/ili u funkciji sakralnih prostora predstavljaju jak potencijal kulturnog turizma, koji je jedan od važnih segmenata održivosti i korištenja baštine u cilju transformacije društva i poticanju gospodarskog rasta. Revitalizacijom plemićkih objekata i stavljanjem u funkciju oni postaju centri promocije kulturne baštine i turizma. Objekti stavljeni u funkciju uprave lokalne zajednice (Donji Miholjac, Tenje, Špišić Bukovica) pokazuju nemogućnost javnog komuniciranja kulturne baštine. Primjeri revitaliziranih objekata s muzejskim ustanovama (Ilok, Našice, Virovitica Vukovar) kao i heritage hoteli (Feričanci, Kapela Dvor/Lukač, Suhopolje) odražavaju prezentaciju baštine te na taj način pridonose održivom gospodarskom rastu i razvoju lokalne zajednice, dok objekti koji nisu u muzejskoj funkciji, ili u funkciji promocije kulturne baštine rezultiraju njihovim stagniranjem i/ili propadanjem (Bilje, Čepin, Darda, Erdut, Kneževo, Nuštar, Orahovica, Retfala,).

Ključne riječi: baština, kulturni turizam, plemstvo, održivost

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APPROACHING CULTURAL HERITAGE REVITALIZATION THROUGH THE CONCEPT OF SUSTAINABILITY IN VISUAL ARTS EDUCATION

Review Article
https://doi.org/1059014/PCCT8015

Abstract

Visual arts education serves as a dynamic platform for raising awareness about the importance of preserving cultural heritage by fostering a deeper understanding of the past and encouraging creative expression in revitalization efforts. Sustainable revitalization of cultural heritage represents a holistic approach considering heritage preservation's environmental, social, and economic dimensions. By integrating sustainable practices into cultural heritage revitalization, we ensure the continued existence and creation of new values while preserving the planet and its resources for future generations. Sustainable revitalization practices reduce negative ecological impacts through environmentally friendly materials and ensure the long-term survival of cultural landscapes by controlling visitor numbers to protect the cultural and natural integrity of the site. Economic sustainability of cultural heritage sites is achieved through repurposing their original roles, with the choice of revitalization methods depending on the site's condition, significance, and national cultural policies. Education and awareness of the importance of cultural heritage include educating students and local communities about the site's significance, its history, and the importance of sustainable revitalization practices for long-term preservation. This research explores the potential of visual arts education in raising awareness about sustainable practices in cultural heritage preservation. The objectives of the study are:

(1) to investigate how visual arts education can raise awareness of sustainable practices and the value of cultural heritage revitalization, (2) to analyze the integration of sustainable development principles in the Visual Arts Curriculum in the context of cultural heritage revitalization, and (3) to explore how the issue of cultural heritage revitalization can contribute to the pillars of sustainability by connecting with the cross-curricular theme of Sustainable Development. Through qualitative content analysis, the research reveals that the Croatian Visual Arts Curriculum par-

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tially addresses sustainability challenges in cultural heritage through revitalization. However, it highlights the lack of detailed methodological guidelines for effective implementation.

Keywords: cultural heritage, revitalization, sustainable development, visual arts, visual art education

Introduction

Visual arts education encompasses all aspects of art appreciation, from creative production to critical thinking. The main goal is to appreciate art and cultural heritage, such as paintings, sculptures, architecture, and urban landscapes. Art appreciation involves understanding, interpreting, and valuing art in various forms. It encourages individuals to look beyond the surface and explore the deeper meanings, techniques, and historical contexts behind the artwork.

Visual arts education became a dynamic platform for highlighting the importance of preserving cultural heritage. Like other fields, it is influenced by the concept of sustainability, where the revitalization of cultural heritage holds a significant place. Until recently, the Croatian *Curriculum for Visual Art in Elementary and Grammar schools* (VAC) focused on understanding preservation methods and recognizing heritage's stylistic and historical value. However, there is now a greater emphasis on understanding revitalization as a model of sustainability.

The role of visual arts education in fostering appreciation of sustainable cultural heritage revitalization remains underexplored, and there is a lack of clear methodological guidelines for effectively integrating these principles into the curriculum. One of the goals of this paper is to examine how visual arts education can raise awareness of sustainable practices and appreciation of cultural heritage revitalization. Another is to analyze the integration of sustainable development principles of cultural heritage revitalization in the Croatian VAC. Furthermore, the learning outcomes of the VAC will be compared with the expectations of the *Curriculum of the Cross-Curricular Theme of Sustainable Development* (CSD).

The Council of Europe (1998) outlined that heritage education must incorporate active educational methods and cross-curricular approaches and should be promoted in different school subjects at all levels and in all types

of teaching. Therefore, establishing a connection between the VAC and the CSD is of utmost importance for understanding the pillars of sustainability and the role of cultural heritage revitalization.

Theory of heritage interpretation and appreciation

Heritage typically refers to the legacy that ancestors leave to their descendants, which suggests that heritage should be understood as a construct of culture. Marasović (2001, 9) defines cultural heritage as "a broad concept of inherited cultural assets, relating to achievements left to us by our ancestors in language and literature, architecture and fine arts, including folk art, music, theater, film, science, and other areas that together form the entirety of culture." This close connection between heritage and culture indicates its importance in human life and identity.

Graham (2002) stated that objects are chosen to be cultural heritage for contemporary purposes by their economic, cultural, political, or social value. Šola (2014, 118) approaches heritage through a system of values, considering heritage "a part of a culture that consists of a set of values, recognized, researched, protected, and mediated as identity." Thus, our relationship with heritage in everyday life can also be interpreted as a relationship with our identity. Identity is seen as the core of heritage and an established system of values that recognizes our distinctiveness from other cultures and nations.

The role of heritage in contemporary life has not only scientific but also educational value, arising from the realization "of the message that heritage can provide to today's generations, often related to patriotism and other ethical qualities" (Marasović, 2001, 11). According to Šola (2014, 51), heritage operates in two aspects of quality: one is static, supporting traditional inherited values through research and protection, while the other is dynamic, fostering the creation of new values based on heritage and identity. This dynamic quality aspect is essential for actively considering heritage in educational systems, which will remain a lasting value for future citizens. Awareness of its vulnerability can stimulate development in the long term because only those small communities and cultures survive whose past is preserved (Šola, 2014).

Today, the value of creating new perspectives on heritage arising in the present rather than solely based on the past is recognized. It is crucial to fight against destruction and raise understanding and approach through education, schooling, and public action (Maroević, 1986). For education and public opinion, cultural heritage interpretation is crucial for developing appreciation and critical thinking about revitalizing interventions.

Through interpretation, students can understand a place's character better and explore and acquire knowledge about heritage independently (Nowacki, 2012). Interpretation's practical aim is to raise awareness about the significance of the natural and cultural environment and instill friendly behavior models toward these resources. It encourages attitudes and behaviors supporting sustainable resource management and heritage protection and effectively communicates information to a broad audience. Nowacki (2012) emphasized that interpreting cultural heritage is not a neutral presentation of facts but a communication process to stimulate new perceptions and understanding.

Tilden (1997) viewed interpretation as an educational activity aimed at helping participants discover meaning and create personal significance, as interpretation is a revelation based on information. He quoted a message from the National Park Service administrative manual that has remained a guiding principle to this day: "Through interpretation, understanding; through understanding, appreciation; through appreciation, protection" (Tilden, 1997, 38). Interpreting heritage is essential for fostering understanding, appreciation, and protection, as these form a continuous cycle. Quality interpretation helps us recognize the value of heritage for local identity, leading to greater appreciation and acknowledgment of its sustainable economic, environmental, and social benefits.

To understand and appreciate cultural heritage, literacy had to be developed. Heritage literacy affirms that every community has the right to define and manage its heritage to support its progress best and contribute to the common good (Babić *et al.*, 2019). The three-dimensional model of heritage literacy includes a critical approach to heritage, eco-museological experiences, and heritage interpretation. Heritage management should be democratic and participatory, with expertise focused on benefiting the local community. Eco-museums serve as tools for sustainable heritage management, empowering communities to shape their development. Practical

heritage interpretation is vital to implementing community-driven activities (Babić *et al.*, 2019).

Appreciation of cultural heritage in education

Interest in protecting cultural heritage increased in the 20th century due to the loss of identity in small communities caused by globalization. UNESCO played a key role by protecting numerous world heritage sites. Education on heritage values from an early age is now recognized as a crucial way to raise awareness about its vulnerability and shape conscious citizens.

Involving young people in world heritage preservation and promotion came as a response to the World Heritage Convention (UNESCO, 1972). The convention highlights the need to preserve cultural and natural heritage of exceptional importance as part of humanity's world heritage. Article 27 in Educational Programmes states that countries should use educational and informational programs to promote public appreciation and respect for heritage and inform the public about threats and preservation efforts (UNESCO, 1972).

In the *European Framework for Action on Cultural Heritage* (EC, 2019), cultural heritage is vital for increasing social capital, driving economic growth, and ensuring environmental sustainability under the Cultural Heritage for a Sustainable Europe pillar. To harness this potential, three sets of measures are proposed: (a) urban and regional regeneration through cultural heritage, (b) promoting adaptive reuse of heritage buildings, and (c) aligning cultural heritage with sustainable tourism and natural heritage. The fifth set of measures also emphasizes supporting heritage buildings' brilliant restoration and adaptive reuse. *The Leeuwarden Declaration* (ACE, 2018) highlights the benefits of adaptive reuse and presents quality principles for balancing heritage values with modern architecture.

Cultural heritage is emphasized as a fifth goal of the Croatian Visual Arts Curriculum (MZO, 2019), along with participation in artistic activities and fostering a responsible attitude toward heritage. Students are encouraged to develop a critical stance on heritage preservation through fieldwork and school projects aligned with UNESCO guidelines. Fieldwork *in situ* is recommended for examples of local heritage and modern teaching

strategies to explore the subject through small school projects that could engage the broader local community.

Heritage has gained an essential place in Education for Sustainable Development (ESD), defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development aims to enhance the quality of life for all community members and citizens of a nation and the world while safeguarding the essential life-support systems that sustain human and non-human life (UNESCO, 2010).

ESD emphasizes knowledge, skills, values, and actions for balancing the pillars of sustainable development: society, environment, economy, and culture. Society is concerned with understanding social institutions, democratic systems, social justice, and inclusion. Environment includes respect for ecological systems, resource sustainability, and integrating environmental issues into policies. Economy encompasses skills for a sustainable economy with awareness of the impact of growth on society and the environment. Culture improves understanding of the values that shape societies, including religions, philosophies, and relationships with nature (UNESCO, 2010).

Some of the cognitive learning objectives of ESD include that the learner understands the historical reasons for settlement patterns and recognizes the need for compromises to develop better sustainable systems, as well as that the learner knows the basic principles of sustainable planning and building and can identify opportunities to make their area more sustainable and inclusive (UNESCO, 2017). Two socio-emotional learning objectives relate to the appreciation of built heritage. They state that the learner can reflect on their region in the context of developing their own identity, understanding the roles that natural, social, and technical environments have played in shaping their identity and culture and that the learner can contextualize their needs within the needs of the broader surrounding ecosystem for more sustainable human settlements. From the behavioral learning objectives, it is highlighted that the learner can co-create an inclusive, safe, resilient, and sustainable community and can promote low-carbon approaches at the local level (UNESCO, 2017).

Importance of cultural heritage revitalization

The adaptive reuse of cultural heritage fosters cultural and social innovation, creating productive networks and contributing to sustainable development. Architectural practices increasingly prioritize reusing existing buildings due to sustainability, cost-effectiveness, and heritage preservation. Adaptive reuse, which involves changing a building's function and adapting it to new needs while preserving old structures, has become increasingly important (Maha Shree *et al.*, 2024).

Adaptive reuse of cultural heritage refers to repurposing historic or culturally significant buildings, sites, or structures for contemporary uses while maintaining cultural, historical, or architectural value. This approach balances the preservation of cultural heritage with sustainable development, ensuring that historical landmarks remain relevant and functional in the present-day context. It is often seen as a solution for urban regeneration, sustainable architecture, and cultural preservation, allowing communities to retain their identity while evolving with modern demands. Key benefits of this approach are the preservation of cultural identity, sustainability (reducing the need for new construction materials and contributing to environmental sustainability by reusing existing structures), economic revitalization, and community engagement.

There is a worldwide recognition of the need for repurposing heritage. Thus, several documents highlight the value of revitalizing cultural heritage and provide guidelines for enabling economic, social, and environmental sustainability. *The Paris Declaration on Heritage as a Driver of Development* (ICOMOS, 2011) recommends integrating heritage into sustainable regional development plans, tourism, and the economy.

Heritage urbanism (HERU), a new paradigm for revitalizing and enhancing cultural heritage, was explained in the book *Cultural Urban Heritage: Development, learning and Landscape Strategies* (Obad Šćitaroci *et al.*, 2019). The goals for enhancing built and other types of heritage include: Identifying heritage's value and potential as a driver of social, cultural, economic, and tourism development; Assessing its condition, causes of deterioration, and improvement opportunities; Promoting heritage continuity and excellence in modern interventions that may become future

heritage; Proposing criteria for the creative use of heritage; Viewing heritage as an active part of contemporary life.

Heritage is not isolated but part of a broader living space and local community. The environment shapes heritage revitalization, while new uses of heritage stimulate development in the surroundings. If heritage is seen only through preservation, it becomes static, but the goal is to make it dynamic and active. This includes living within the heritage and repurposing abandoned sites as resources for community sustainability (Obad Šćitaroci *et al.*, 2019).

New interventions for enhancement or revitalization are based on the heritage's identity and value. Enhancement is applied when heritage is in good condition, preserving its core features while adapting it to modern needs. Revitalization occurs when heritage is deteriorating and needs a fresh purpose, ideally balancing authenticity with contemporary interventions that revive and reinterpret the past (Obad Šćitaroci *et al.*, 2019). The main difference between enhancement and revitalization is that enhancement is a static model that turns the heritage element into a passive object. In contrast, revitalization is a dynamic process in which heritage becomes an active subject, open to change and interpretation (Obad Šćitaroci *et al.*, 2019).

Research

Research Methodology

Research methodology employs qualitative methodology to explore how visual arts education can promote sustainable cultural heritage revitalization and how sustainability principles are integrated into the curriculum. A content analysis of the Croatian *Visual Arts Curriculum for Elementary and Grammar Schools* (VAC) *and Curriculum of the Cross-Curricular Topic of Sustainable Development* (CSD) is conducted to examine how it addresses the themes of cultural heritage revitalization as a part of the sustainability concept. This method would involve reviewing curriculum documents to identify relevant content and gaps related to sustainable development.

The research problem is that the role of visual arts education in fostering an appreciation of sustainable cultural heritage revitalization remains

underexplored. There is a lack of clear methodological guidelines for effectively integrating principles and expectations of CSD into visual arts education to promote the sustainable revitalization of cultural heritage.

The following objectives are set based on the stated research problem:

1. To examine how visual arts education can raise awareness of sustainable practices and appreciation of cultural heritage revitalization
2. To analyze the integration of sustainable development principles in the Croatian VAC, specifically in the context of cultural heritage revitalization.
3. To determine whether the CSD recognizes the potential of visual arts education in fostering the pillars of sustainability.

Research Questions

1. How can visual arts education raise awareness about the importance of cultural heritage preservation and sustainable revitalization practices?
2. Does the current Croatian VAC address sustainability's social, environmental, cultural and economic dimensions in cultural heritage revitalization?
3. Do the methodological recommendations of CSD consider connections with the subject Visual Arts??

Results

Content analysis of the Croatian VAC (MZOb, 2019) revealed that cultural heritage appreciation is significant in grammar school visual arts education. In the section on Educational Goals, goal 5 is dedicated to developing an appreciation of cultural heritage:

"5. Student will participate in artistic events and activities organized by cultural and scientific institutions; develop a responsible attitude towards the contemporary cultural environment and artistic heritage."(MZOb, 2019, section B)

The document pointed out that teaching visual arts significantly contributes to students' holistic development through three main areas:

psychomotor (activity), affective (emotions), and cognitive (understanding). These areas are reflected in the three domains (MZOb, 2019, section C):

1. *Creativity and Productivity* encompasses the development of sensory, expressive, and intellectual abilities through artistic expression and exploration of creative processes. The goal is to foster creative thinking and innovation.
2. *Appreciation and Critical Attitude* develops students' analytical and critical thinking, encouraging them to observe and discuss artworks while being open to different ideas and artistic approaches. Students form well-argued opinions about artworks, the visual environment, artistic creation, and cultural heritage, which serve as a foundation for forming value judgments. They are encouraged to participate actively in cultural and artistic events.
3. *Art in Context* teaches students to understand visual arts as an essential part of human history and cultures, encouraging them to connect artworks with their own creative and life experiences.

The content is organized by themes that change each year and become more complex. The themes for the first grade include the appreciation of cultural heritage but are unsuitable for revitalizing architectural and urban heritage activities. The second-grade theme, *Man and Space*, is much more open to revitalization issues and an active approach to protecting and presenting cultural heritage. Table 1 highlights the outcomes and sub-outcomes from each grade that are open to the issue of cultural heritage revitalization and indicates the sustainability pillars with which they can be associated.

Table 1. Connection of Visual Arts Curriculum (VAC) learning outcomes with sustainability pillars

Second grade theme: *Man and Space*		
LEARNING OUTCOMES	LEARNING SUB OUTCOMES	SUSTAINABILITY PILLARS
SŠ LU B.2.2. "The student discusses the content and issues of contemporary housing and urban design."	"The student discusses the issue of interpolation in urban space."	ENVIRONMENTAL CULTURAL
SŠ LU B.2.3. "The student explains the importance and social responsibility of preserving national residential and urban heritage and sculptures in public spaces."	"The student identifies and explains contemporary forms of protection and criteria for evaluating national architectural heritage."	ENVIRONMENTAL SOCIAL CULTURAL
	"The student assesses the importance and level of national architectural and urban heritage preservation and presents their ideas for protecting and/or promoting it."	ECONOMIC
SŠ LU C.2.1. "The student assesses the relationship between context and the artwork/style."	"The student connects and explains the impact of new technologies on forms, construction, and new uses in architecture and urban design from prehistory to the present."	ECONOMIC ENVIRONMENTAL
Third grade themes: *Art and Spirituality and Art and Science.*		
SŠ LU B.3.1. "The student analyzes an artwork that fits into the themes of "Art and Spirituality" and "Art and Science".	"The student analyzes the materials, techniques, and processes that enable new constructive and design solutions (architecture, urbanism, painting, sculpture, photography, film, and new media)."	ENVIRONMENTAL ECONOMIC

SŠ LU B.3.3. "The student explains the importance and social responsibility of preserving artistic national heritage through the themes of "Art and Spirituality" and "Art and Science".	"The student critically observes the relationship between the individual and the community regarding national heritage."	SOCIAL CULTURAL
	"The students explain the value and level of heritage preservation and present their ideas for protecting and/or promoting it."	ENVIRONMENTAL ECONOMIC
SŠ LU B.3.3. "The student explains the importance and social responsibility of preserving the national artistic heritage, according to themes "Art and Spirituality" and "Art and Science".	"The student critically observes the relationship between the individual and the community toward national heritage."	SOCIAL CULTURAL
	"The student explains the heritage's value and preservation status and presents their ideas for protecting and/or presenting/ promoting it."	ENVIRONMENTAL ECONOMIC
Fourth grade themes: *Art and Power and Art and the Creative Process*		
SŠ LU B.4.3. "The student evaluates the importance and social responsibility of preserving national cultural/artistic heritage, according to themes "Art and Power" and "Art and the Creative Process".	"The student explains the importance of national urban, architectural, and artistic heritage."	CULTURAL SOCIAL
	"The student critically evaluates the relationship between the individual and society toward specific works of artistic heritage."	SOCIAL CULTURAL
	"The student critically assesses the promotional and economic role of monumental and artistic heritage and proposes solutions for the presentation and cultural promotion of specific works of art."	ECONOMIC ENVIRONMENTAL

The research also explored how cultural heritage revitalization can contribute to the pillars of sustainability by connecting with the educational expectations of CSD.The CSD (MZO, 2019a) contributes to developing personal identity, recognition, and respect for national natural and cultural heritage while appreciating diversity and different ways of thinking and living. Three domains are set to organize knowledge and skills: Connection, Action, and Well-being (MZO, 2019a, SectionC). Connection (What?) encompasses the fundamental principles of sustainability and ecosystem interdependence. Action (How?) involves actively disseminating and applying appropriate knowledge and skills for sustainable living. Well-being (Why?) involves the responsibilities and rights in achieving the desired goal: well-being for all people, the environment, and future generations.

Learning expectations encourage creativity and social responsibility and foster the development of critical and creative thinking in problem-solving. These expectations are elaborated through corresponding knowledge, skills, and attitudes (MZO, 2019a, Section D). Table 2 represents only the learning outcomes relevant to the sustainable practice of revitalizing cultural heritage.

Table 2. Educational Outcomes and Recommendations within the Curriculum of the Cross-Curricular Theme Sustainable Development (CSD)

CONNECTION		
A.4.1:The student distinguishes between personal and collective identities and has a sense of belonging to humanity.		
knowledge	**skills**	**attitudes**
"Identifies personal and collective identities and explains the interconnectedness of communities and humanity."	"Critically discusses the challenges and benefits of diversity."	"They value their own identity and respect the identity of others."
Recommendation: Politics, Economics, and History, Homeroom class, Croatian Language and Foreign Languages, Ethics		

A.5.1. The student critically reflects on the connection between one's lifestyle and its impact on the environment and people.		
knowledge	**skills**	**attitudes**
"Anticipates the effects of their lifestyle on the environment and people and understands sustainable solutions."	"Applies sustainable solutions in their own life to reduce negative impacts on the environment and people."	"Reevaluate the connection between their life and its impact on the environment and others."
Recommendation: Integrated Teaching (Politics and Economics, Croatian Language, Sociology, Geography, Biology, Homeroom, and cross-curricular themes in Civic Education and Health Education)		
A.5.2. The student analyzes the principles of sustainable production and consumption.		
knowledge	**skills**	**attitudes**
"Understands the principles of sustainable production and consumption."	"Recognizes and uses products made without harmful impacts on the environment."	"Is aware of the importance of sustainable production and consumption."
Recommendation: Integrated Teaching (Politics and Economics, Geography, Homeroom, Sociology, cross-curricular themes in Civic Education, Health, and Entrepreneurship), Chemistry, Mathematics, Physics		
A.5.3. The student analyzes power relations at different levels of governance and explains their impact on sustainable development		
knowledge	**skills**	**attitudes**
"Analyzes the roles and responsibilities of various stakeholders (politics, the business sector, and citizens) in shaping and implementing policies at both local and global levels."	"Explores opportunities for involvement in creating and implementing sustainable development policies based on an understanding of the roles and responsibilities of different stakeholders."	"Promotes the importance of citizen participation in creating and implementing public policies."
Recommendation: Integrated Teaching (Politics and Economics, Geography, Homeroom, Sociology, cross-curricular theme Civic Education)		
ACTION		
B.4.1. The student acts by the principles of sustainable development to protect nature and the environment.		
knowledge	**skills**	**attitudes**

"Explains models of active engagement for the preservation of nature and the environment."	"Applies acquired knowledge and suggests activities for protecting nature and the environment."	"Promotes the importance of active participation in protecting nature and the environment."
Recommendation: Integrated Teaching (Politics and Economics, Croatian Language, History, Geography, Homeroom, projects)		
B.5.1. The student critically reflects on the impact of our actions on the Earth and humanity.		
knowledge	**skills**	**attitudes**
"Explain and compare how we affect the planet and other people."	"Analyzes examples of the complex relationship between our actions and their effects on the Earth and others."	"Promotes actions that do not endanger the planet or other people."
Recommendation: Integrated Teaching (Politics and Economics, Geography, Homeroom, Sociology, cross-curricular themes in Civic Education and the Use of Information and Communication Technology), Chemistry		
B.5.2. The student conceives and utilizes innovative and creative action aimed at sustainability.		
knowledge	**skills**	**attitudes**
"Explains actions that contribute to sustainable development."	"Design and apply innovative and creative solutions using ICT with the goal of sustainability."	"Is convinced of the necessity of implementing solutions contributing to sustainability."
Recommendation: Integrated Teaching (Politics and Economics, Croatian Language, Sociology, Geography, Homeroom, and the cross-curricular theme of Civic Education)		
WELL-BEING		
C.4.1. The student assesses the significance of sustainable development for the common good.		
knowledge	**skills**	**attitudes**
"Analyzes the impact of sustainability's environmental, social, and economic dimensions on personal and collective well-being."	"Investigates and presents positive and negative processes in their environment that affect the environment's vulnerability and people."	"Promotes awareness of balancing economic development with environmental care for personal and collective well-being."
Recommendation: Integrated Teaching (Politics and Economics, Geography, Biology, Religious Education, Ethics, cross- curricular themes in Health, Civic Education, and Entrepreneurship)		

C.5.2. The student proposes ways to enhance personal and collective well-being.		
knowledge	**skills**	**attitudes**
"Analyzes approaches to fostering good relationships with the environment and others to achieve personal and communal well-being."	"Applies recommendations from global organizations and suggests methods for improving personal and collective well-being."	"Promotes community and societal well-being through their work on projects that are important for the community."
Recommendation: Projects, Integrated Teaching (Politics and Economics, Croatian Language, Sociology, Geography, Homeroom, cross-curricular themes in Civic Education, Personal and Social Development, Health, and Entrepreneurship):		

Discussion and Conclusion

The subject of Visual Arts, taught in grammar schools, is an ideal platform for raising awareness about the importance of cultural heritage preservation and revitalization. While cultural heritage is a component of most humanities subjects, Visual Arts uniquely focuses on heritage with artistic value, covering architecture, urbanism, and cultural landscapes. The VAC for grammar schools includes a specific outcome to develop critical thinking around preserving, appreciating, and revitalizing cultural heritage. Sub-outcomes guide achieving this, suggesting that students become familiar with preservation and presentation methods and actively propose solutions for various revitalization challenges. Teachers are encouraged to introduce heritage topics through small local projects, allowing students to observe firsthand the impact of revitalization on their community.

Content analysis has determined that the VAC has responded to the challenges of cultural heritage's social, environmental, cultural and economic sustainability through heritage revitalization to a certain extent. It addresses the social, cultural, environmental, and economic dimensions of sustainability in cultural heritage revitalization through various learning outcomes across grades, focusing on fostering critical thinking, social responsibility, and practical engagement in heritage preservation.

In the second grade, students are encouraged to explore the social responsibility of preserving architectural and urban heritage (MZO, 2019a,

Section D). Learning outcomes emphasize understanding the role of heritage in the community and promoting civic engagement. For instance, students analyze the impact of heritage on local identity and reflect on the relationship between individuals and the community, fostering a sense of shared responsibility for cultural preservation (MZO, 2019a, Section D). Visual arts can promote social inclusion through heritage themes that engage local communities and create a sense of identity and belonging. This pillar connects students with cultural heritage and encourages them to preserve collective memory.

Environmental awareness is integrated through discussions on sustainable urban design and preservation. For example, second-grade outcomes prompt students to discuss urban spaces and contemporary housing while considering environmental impacts. Furthermore, students analyze architectural forms, construction, and materials, emphasizing the environmental benefits of revitalizing existing structures instead of new developments (MZO, 2019a, Section D). This approach encourages students to recognize the environmental advantages of adaptive reuse in architecture. Revitalizing cultural heritage contributes to environmental sustainability by promoting adaptive reuse, energy efficiency, preservation of green spaces, adoption of sustainable practices, reduction of urban sprawl, preservation of cultural landscapes, and promotion of sustainable mobility options.

Economic aspects could be addressed by helping students understand the economic value of heritage in tourism and community development. For example, students can evaluate the economic role of public sculptures and national architectural heritage. By proposing methods for promoting heritage and recognizing its value as an economic asset, the curriculum aims to instill an understanding of how cultural heritage can contribute to sustainable economic growth. This integrated approach ensures that students learn about cultural heritage and engage with it as a multidimensional asset that can drive social, environmental, and economic sustainability through informed revitalization practices.

A comparison of the VAC outcomes with the expectations of the CSD revealed a lack of CSD didactic guidelines for connecting. Although the learning expectations are broadly defined and can include activities to foster appreciation for cultural heritage revitalization, the methodological recommendations do not mention the possibility of correlating with the

subject of Visual Arts. From this, we can conclude that from the standpoint of the CSD, the importance and role of Visual Arts and the issue of cultural heritage revitalization are not recognized as drivers of critical thinking about sustainability.

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PRISTUP REVITALIZACIJI KULTURNE BAŠTINE KROZ KONCEPT ODRŽIVOSTI U OBRAZOVANJU VIZUALNIH UMJETNOSTI

Sažetak

Vizualno umjetničko obrazovanje je dinamična platforma za razvijanje svjesnosti o važnosti očuvanja kulturne baštine poticanjem dubljeg razumijevanja prošlosti te stvaralačkog izraza u revitalizaciji. Održiva revitalizacija kulturne baštine predstavlja holistički pristup koji uzima u obzir okolišne, društvene i ekonomske dimenzije očuvanja baštine. Integriranjem održivih praksi u revitalizaciju kulturne baštine osiguravamo kontinuirano postojanje i stvaranje novih vrijednosti čuvajući planet i njegove resurse za budućnost. Održive prakse revitalizacije smanjuju negativni ekološki utjecaj korištenjem ekološki prihvatljivih materijala te osiguravaju dugoročni opstanak kulturnog krajolika kontrolom broja posjetitelja koji ne ugrožava kulturnu i prirodnu cjelovitost mjesta. Ekonomska održivost objekta kulturne baštine postiže se prenamjenom izvorne uloge, a odabir metoda revitalizacije ovisi o stanju i važnosti lokaliteta, ali i o nacionalnim kulturnim politikama. Obrazovanje i svijest o važnosti kulturne baštine uključuju educiranje učenika i lokalnih zajednica o značaju lokaliteta, njegove povijesti te o važnosti održivih praksi revitalizacije za dugoročno preživljavanje. Istraživanje se bavi ispitivanjem potencijala vizualnog umjetničkog obrazovanja u podizanju svijesti o održivim praksama očuvanja kulturne baštine. Ciljevi istraživanja su: (1) istražiti kako vizualno umjetničko obrazovanje može podići svijest o održivim praksama i vrijednostima revitalizacije kulturne baštine, (2) analizirati integraciju principa održivog razvoja u Kurikulum nastavnog predmeta Likovna kultura za osnovne škole i Likovna umjetnost za gimnazije u kontekstu revitalizacije kulturne baštine, te (3) istražiti kako problem revitalizacije kulturne baštine može doprinijeti stupovima održivosti povezivanjem s međupredmetnom temom Održivi razvoj. Istraživanje kvalitativnom sadržajnom analizom pokazuje da hrvatski Kurikulum nastavnog predmeta Likovna kultura za osnovne škole i Likovna umjetnost za gimnazije (Visual Arts Curriculum for Elementary and Grammar Schools) djelomično odgovara na izazove održivosti u kulturnoj baštini kroz temu revitalizacije, ali nedostaje metodoloških smjernica za učinkovito povezivanje s Kurikulumom međupredmetne teme Održivi razvoj za osnovne i srednje škole (Curriculum for the Cross-Curricular Topic of Sustainable Development for Primary and Secondary Schools).

Ključne riječi: kulturna baština, likovna umjetnost, likovna kultura, održivi razvoj, revitalizacija

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BOARDGAMING, RPGS, AND SERIOUS GAMES IN CULTURAL SUSTAINABILITY

Preliminary Communication
https://doi.org/1059014/BQNW3257

Abstract

Nowadays, and notably after the pandemic period, the tangible and physical games, as boardgames, role play games (RPG) or what somebody can call as serious games are expanding as social, cultural and educational tools and constitute a very efficient way to promote dynamics of socialization and increase the cultural knowledge of several kinds of publics. These publics belong to a broad range from, children from early stages of learning, to young adults or even up to the more ageing populations, in a diversity and transcultural perspective.

At the same time, the concept of Cultural Sustainability referring to the ability of a culture to maintain and perpetuate its cultural diversity and heritage for the well-being of the present and future generations has been increasing of importance. With it the necessity of encouraging cultural practices that are environmentally, socially, and economically sustainable while preserving their core cultural elements. With this research paper is intended to show that Board Games, RPG and Serious Games can play significant roles in promoting cultural sustainability. This means that this concept can be seen under its economic, social and cultural purposes.

In order to achieve these observations a questionnaire will be implemented among the Quebra Dados association participants which will permit to conclude that those games are not only produced for entertainment purposes, but also to foment cultural sustainability.

At the end will be concluded that their implementation in the context of cultural sustainability has the following key results:

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a) Under its economic purposes they encourage innovation and adaptation both they promote tourism and economic benefits;

b) Under its social purposes they increase awareness and engagement; shape community building and collaboration; develop cultural sensitivity and respect both foment policy and decision- making support; and

c) Under its cultural purposes they transfer education and knowledge and preserve the Intangible Cultural Heritage.

Keywords: Board Games, Cultural Sustainability, RPGs, Serious Games.

Introduction

In recent years, particularly following the COVID-19 pandemic, there has been a noticeable resurgence in the popularity of tangible and physical games, such as board games, role-playing games (RPGs), and serious games. These games have proven to be more than just entertainment; they serve as effective tools for socialization, education, and cultural transmission. Their ability to engage diverse demographics, from children to the elderly, positions them as valuable instruments in promoting cultural sustainability.

The objective of this research is then to find an understanding if the three kinds of games promote cultural sustainability and with which factors.

According to the initial revision of literature made, several hypotheses came up as the bases to an affirmative answer, namely:

a) Hypotheses 1: The Board Games, RPGs, and serious games promote cultural sustainability because they have economic purposes.

b) Hypotheses 2: The Board Games, RPGs, and serious games promote cultural sustainability because they have social purposes.

c) Hypotheses 3: The Board Games, RPGs, and serious games promote cultural sustainability because they have cultural purposes.

In the city of Porto there are organizations that are starting to appear where this type of games can be played. One of them is *Quebra Dados Association,* the core of our case study.

In order to reach this investigation objectives, a questionnaire was implemented in *Quebra Dados* Association between the 31st of January and the 31st of March of 2024.

At the end it was possible to confirm the three hypotheses initially equated, to consider that this research is not an end but the beginning of a deeper investigation and, by this way, to suggest future research problems.

Revision of literature

Initial concepts for Gaming and Cultural Sustainability

Concepts of Board Games, RPGs and Serious Games

Board gaming refers to playing games on a tabletop using physical components like boards, pieces, cards, dice, and tokens. These games range from casual to complex, emphasizing social interaction, strategy, and cooperative or competitive play. In recent decades, modern board games have introduced innovative mechanics and immersive themes (Syakur, M. A., 2020).

In the context of cultural heritage, board games serve as tools for preserving and celebrating it. By studying, adapting, and sharing these games, people ensure cultural treasures remain relevant in a rapidly changing world (Matusiewicz and Milosz, 2021). Moreover, integrating technology into game-based instruction enhances students' learning and promotes cultural heritage understanding (Lin *et al*., 2024).

Role-playing games (RPGs) differ from traditional board games by emphasizing imagination, storytelling, and improvisation. Players take on roles in fictional settings, engaging in exploration, combat, and social interaction. Outcomes are often determined by dice rolls or other mechanics (Peterson, 2012). RPGs have been successfully developed to support cultural heritage preservation through digital narratives and interactive experiences. By immersing players in historical settings and folklore, they make cultural heritage accessible and memorable (Rattanarungrot *et al*., 2024).

Serious games, also known as applied games, use gaming mechanics for education, training, and problem-solving. In cultural heritage, they simulate historical events and traditions (Backlund and Hendrix, 2013). These games engage audiences, foster emotional connections to history, and help preserve fragile heritage (Mao and Cho, 2024). However, challengesinclude balancing historical accuracy with gameplay and avoiding

oversimplification. Additionally, they require expertise, funding, and collaboration between developers, historians, and cultural experts (Plaisent *et al*., 2024).

Through board games, RPGs, and serious games, cultural heritage can be preserved and made engaging for future generations.

Concept of Cultural Sustainability

Cultural sustainability refers to the role of culture in sustainable development, emphasizing the preservation, promotion, and integration of cultural identity, values, and traditions within broader social, economic, and environmental frameworks (Hawkes, 2001). Later on, Throsby (2010) examines the interplay between culture and economics, emphasizing how cultural sustainability can contribute to long-term development goals. He highlights the need to incorporate cultural values into policymaking and economic planning. So, Cultural sustainability focuses on ensuring that cultural diversity and heritage are safeguarded while being dynamic and adaptable to the changing world. In this sense, is a fundamental pillar of sustainable development because culture shapes the identity, informs societal behaviours, and influences the interactions between the environment and economy.

The concept and framework of cultural sustainability are employed to analyse the variable interrelationships between culture and tourism in the development of cultural tourism and in overall local sustainability, from a bottom-up/destination perspective (Terkenli and Georgoula, 2022).

Duarte Alonso, *et al*. (2022) mentions also the key dimensions of this concept, namely:

a) The preservation of Cultural Heritage which includes tangible (monuments, artifacts) and intangible (languages, rituals, and traditions) cultural elements;

b) The integration of Cultural Perspectives in Development (which includes policies and practices that reflect and respect the diversity of cultural traditions, promoting inclusivity and fostering creativity in solutions to global challenges);

c) The Cultural Rights and Participation (ensuring communities have the agency to protect their cultural expressions and traditions, balancing modernization with cultural continuity); and

d) The Dynamic and Evolving Nature (this means cultural sustainability supports the evolution of traditions and identities to reflect contemporary contexts while maintaining their core values).

Cultural sustainability promoted by Board Games, RPGs, and Serious Games

According to Soini and Birkeland (2014) both Fernández and Hamari (2021) cultural sustainability integrates cultural, social, environmental, and economic dimensions, ensuring that cultural heritage and diversity are maintained and valued within sustainable development frameworks.

Next will be defined how Boardgames, RPG's and Serious Games contribute to the economic, social and cultural dimensions of Cultural Sustainability.

Economic proposes of Boardgames, RPG's and Serious Games

Board games, RPGs, and serious games may serve as cultural mediators, enhancing tourism and generating economic benefits by making cultural heritage interactive and accessible (Zhang *et al*., 2024). At the same time, it strengthens local economies while reinforcing cultural sustainability through engagement, education, and appreciation of historical and cultural narratives (Lalicic *et al*., 2022).

These games contribute to the economic dimension of cultural sustainability by:

a) Drawing inspiration from historical events, cultural narratives, and local traditions (Liu and Zhang, 2024);

b) Encouraging visits to historical sites, museums, and re-enactment events (Musichina, 2021);

c) Bringing players to destinations they might not otherwise visit (e Sousa, 2023);

d) Enhancing engagement through Augmented Reality (AR) and Digital RPG Experiences (Istrate and Hamel, 2023);

e) Educating players on responsible travel, aligning with cultural sustainability goals (Baptista *et al*., 2024);

f) Creating jobs and fostering local business growth (White *et al*., 2022).

Additionally, these games drive cultural entrepreneurship by fostering innovation and adaptation in creative industries, supporting sustainable economic models (Cecchetto, 2024). They act as cultural incubators, merging storytelling, artistic craftsmanship, and gamified heritage to fuel sustainable development while promoting innovation and cross-sector collaboration (White *et al*., 2022).

Social proposes of Boardgames, RPG's and Serious Games

The social dimension of cultural sustainability is evident in how board games, RPGs, and serious games foster awareness, engagement, and participation in cultural heritage, diversity, and social issues (Mochocki, 2021). These games immerse players in cultural narratives, traditions, and ethical dilemmas through storytelling and world-building, incorporating historical settings and cultural myths.

Additionally, they strengthen social bonds by encouraging face-to-face interaction and fostering community building. Players engage in cooperation, negotiation, and collective problem- solving, reinforcing cultural empathy (Goodall, 2021; Galindo, 2024).

These games also promote intergenerational and cross-cultural engagement. They create shared experiences between generations, allowing discussions on history, identity, and values while making cultural traditions accessible to new audiences (Akhnaf and Ayu, 2024).

Moreover, the nature of these games—requiring negotiation and teamwork—encourages dialogue and conflict resolution (Haarman, 2023).

Another significant aspect is their role in fostering cultural sensitivity and respect. By immersing players in diverse perspectives, narratives, and ethical dilemmas, they enhance understanding of different worldviews (Pálsson, 2024). Players step into historical and cultural roles, confronting moral dilemmas that challenge biases and promote respect for cultural diversity. This, in turn, encourages demand for more inclusive games (Goodall, 2021).

Cultural proposes of Boardgames, RPG's and Serious Games

According to Pope (2023), board games, RPGs, and serious games play a significant role in cultural sustainability by transferring education and knowledge. Many games integrate historical settings, folklore, and traditional narratives, ensuring intangible cultural heritage is passed to future generations. These games incorporate historical elements, allowing players to experience and learn about cultural stories and traditions. By engaging players in immersive experiences, they help keep cultural heritage alive (Peterson, 2012).

By re-enacting historical scenarios and incorporating real-life figures, these games convey historical facts while fostering a deeper understanding of past events. Players take on the roles of historical figures, gaining insight into their motivations, challenges, and achievements. Additionally, players navigate geographical and logistical challenges faced by historical explorers, providing an immersive way to learn about exploration and discovery.

Historical board games, RPGs, and serious games often include background information to enhance education. Rulebooks, game cards, and supplemental materials provide historical notes, biographies, and timelines, helping players understand broader historical narratives.

The educational impact of these games extends beyond fact retention. By engaging in decision- making processes and strategic considerations, players develop critical thinking and empathy. They explore historical complexities and uncertainties, fostering deeper appreciation for past challenges. The interactive nature of these games makes history accessible and engaging, serving as valuable educational tools in classrooms, museums, and home settings. They also inspire further interest and research into historical topics, encouraging players to deepen their understanding.

Empirical study

The *Quebra Dados* Association was used as a case study, as it is one of the main non-profit cultural spaces in the city of Porto, dedicated to Board games, RPGs and Serious Games which, in addition to being playful and educational, has an inclusive, cultural and social purpose. Next will be explained the empirical study developed there.

Case study, aim of the investigation and research hypothesis

Quebra Dados is a cultural association created in the beginning of 2020 after two friends (Carolina Dias and Sara Gonçalves) have travelled to Denmark where they met the "Bastard" board game café. The experience was so good that they decided to implement something similar but with the aim to promote and disseminate the social, psychological and emotional benefits of recreational and cultural activities for people of all ages. Unfortunately, two weeks later the COVID-19 was installed and the association had to close its door until the middle of April of 2021.

Nowadays it has 1007 associates but in average only 300 attends regularly the place and play their gaming and instructive activities.

In connection with this research is intended to show that Board games, RPG's and serious games can play significant roles in promoting cultural sustainability.

Like this, several hypotheses came up as the bases to an affirmative answer, namely:

a) Hypotheses 1: The Board Games, RPGs, and serious games promote cultural sustainability because they have economic purposes (such as they boost the growth of tourism and consequent economic benefits or they promote cultural entrepreneurship since they encourage innovation and adaptation).

b) Hypotheses 2: The Board Games, RPGs, and serious games promote cultural sustainability because they have social purposes (like this, they increase awareness and

engagement or they shape community building and collaboration or they develop cultural sensitivity and respect or they foment policy and decision-making support).

c) Hypotheses 3: the serious games promote cultural sustainability because they have cultural purposes (such as they transfer Education and Knowledge or they preserve the intangible cultural heritage).

Methodology

To answer to the research question of finding an understanding if the three kinds of games promote cultural sustainability and which/what

factors contribute to it, there was an option for a quantitative methodology. In fact, authors like Clark *et al*. (2021) and Creswell (2021) defend that when the research questions are of the Which? Or What? kind a quantitative methodology should be followed, namely applying a questionnaire.

Like this, a questionnaire composed by two parts was the decision taken.

On the first part, a study of the sociodemographic characterization of the sample was carried out. Factors such as: age; sex; geographic literary abilities or socio-professional category were considered here. Furthermore, an attempt was made to confirm whether the participants were members of the *Quebra Dados*; the type of games they usually play; how regularly they do it and what reactions they have to interact using games.

On the second part, the idea was to understand the role of the Board Games, RPGs, and Serious Games in Cultural Sustainability and here there was a concern by looking into economic reasons, social reasons and cultural reasons.

The questionnaire was implemented among the 300 participants that regularly attend *Quebra Dados* association between the 31st of January and the 31st of March of 2024.

It was not possible to perform data inference, as this is preliminary work intended for completion in future exercises. However, a range of elements were identified that support linking games to Cultural Sustainability, namely economic, social and cultural elements. At the end 220 answers were obtained.

Analysis and discussion of results

In the sociodemographic characterization of this study, it is possible to see that around 91% of respondents are aged between 26 and 65 years old, distributed in 54.5% between 36 and 50 years old; 18.2% between 26 and 35 years old and the same 18.2% between 51 and 65 years old. Thus, contrary to what the literature review said in *Quebra Dados* they do not work with school-age audiences at the basic education level, nor with the elderly classes. Likewise, these participants are mostly female (63.6%).

In terms of geographic origin, it is essentially from municipalities in the Porto Metropolitan Area, namely: Ermesinde; Vila Nova de Gaia,

Matosinhos or Santa Maria da Feira. As for the distribution of these participants, it is very even among municipalities, highlighting, however, the municipalities of Santa Maria da Feira with 23.8% of participants and Matosinhos with 9.5%. The other municipalities have a representation equal to 4.8% each. It should be noted that from the universe of players, and as respondents to this questionnaire, there are still individuals from the Azores (4.8%) and Viana do Castelo (4,8%).

In terms of educational qualifications, it is clear that the study is dealing with individuals who have a higher education level, mostly represented by the bachelor's degree (50%), followed by the master's degree (22.7%) and secondary education (22.7%). Professional education occupies a space of little volume (4.6%), with the other levels (Primary Education and Doctorate) not having any type of representation.

Also, in the socio-professional category it can be found a great diversity of professions. Thus, these vary between the administrative, the student, the shift manager, the cultural heritage professional, the self-employed or the massage technician, all representing a range of 5%. But the category that stands out among these are teachers with a representation equal to 15%, which leads us to conclude that these professionals recognize that the 3 types of games have an educational impact, therefore in terms of cultural sustainability, as they serve as an effective tool for socialization, education and cultural transmission, since they are a vehicle for the transfer of education and knowledge.

In the same way, when a teacher admits that he/she plays games, he/she is recognizing that he/she uses them as important educational tools in the classroom or on study visits to cultural facilities (such as museums, theatres, among others). It also recognizes that games can become a vehicle for educational and cultural transmission than traditional teaching methods and that they can have cultural uses, far beyond entertainment.

Regarding the type of games, they usually play, 86.4% say they are board games; 59.1% say they are educational games, which is in line with the level of teachers who use this cultural transmission methodology in a sustainable way; 31.8% report preferring role-playing games (RPGs) and simulation games, while 27.3% prefer games linked to culture such as Cultural Heritage, with a smaller range for skill games (9.1 %) and health and well-being (4.5%). From the analysis of these data, the importance of

games in cultural transmission is once again recognized, regardless of the chosen modality (that is, whether they are board games; RPG's or serious games).

This analysis becomes even more interesting when one realizes that only 4.6% of respondents play daily, while the majority (40.9%) admit doing it so rarely or at most monthly (31.8%) or weekly (22 .7%). This fact, is easily interpretable if one considers that individuals are absorbed daily by professional and family life, which does not prevent them from recognizing that the few times they played provided them with a sustainable cultural good as the transfer of education and knowledge, the shape of community building, the increase awareness and engagement, the encouragement of innovation and creativity and for those who mention playing cultural heritage games, the encouragement to preserve the intangible cultural heritage.

Finally, with regard to the reasons that individuals evoke for playing, these are related, firstly, to reasons related to entertainment (86.4%); with mental stimulation (63.6%); with learning and education (59.1%). Secondly, they are related with creativity (31.8%); with evasion (31.8%); with collaboration (22.7%), with game practice (18.2%) and with behavioural development (18.2%). And in the last ranked factor is mentioned the competition one (13.6%).

From this analysis, it is possible to conclude again the importance of the 3 types of games in acquiring cultural knowledge in a sustainable way, not concluding whether this acquisition is done in a playful way, at the same time that it develops individual capabilities such as creativity, teamwork, behavioural development or ability to compete.

In another way, this research also shows that Board Games, RPG's and Serious Games promote Cultural Sustainability. According to the study participants, it happens because those kinds of Games have Economic, Social and Cultural Purposes. Economic purposes are justified in two ways: on the one hand, because the three types of games encourage innovation and adaptation and, on the other hand, because they promote Tourism and Economic Benefits. Social purposes are justified with four reasons, namely because they: a) increase awareness and engagement; b) shape community building and collaboration; c) develop cultural sensitivity and respect and d) foment policy and support decision-making. Finally, cultural purposes

are justified on the facts that the Board Games, RPG's and Serious Games transfer education and knowledge and also because they preserve the Intangible Cultural Heritage.

In a more in-depth way, the arguments evoked by the participants in the study that lead to these statements are presented below.

Thus, the reason for the cultural sustainability of games to be based on their "economic purpose" of encouraging innovation and adaptation emerges from the vast majority of responses based on arguments such as:

a) the three types of games encourage an adaptive thinking and innovative problem- solving;

b) the three game types encourage players to think outside the box and consider alternative points of view;

c) the three types of games include direct interaction requiring to negotiate, collaborate and sometimes compete;

d) the three types of games lead to innovative ideas and solutions since the games apply to an interdisciplinary approach;

e) the three types of games foster a mindset geared towards innovation since players must think critically and creatively;

f) the three game types contain unexpected challenges that require quick thinking; and

g) the three types of games involve co-creating narratives.

The first two arguments are used by more than 95% of the answers. The arguments three, four and five are used by 90,9% of the answers and the arguments number six and seven are used by more than 81,8% of the answers.

Still on the fact that the three kinds of games have an "economic propose" conductor to cultural sustainability is the justifying reason that they promote Tourism and Economic Benefits. Although this argument is not as statistically significant as the previous one, it is possible to see some evidence (with 77,3% of the answers) in aspects such as:

a) That they lead to merchandising opportunities; or

b) That they incorporate local myths, legends and history.

With a lower argument but also with a number of positive answers higher than 54,5% are the aspects that the three kinds of games:

a) Inspire travel and tourism;

b) Foment greater tourist traffic to museums, landmarks and cultural festivals; and

c) Offer virtual tours of destination.

Cumulative to these arguments are three others for which the questionnaire participants expressed some division in their response. In fact, the majority (54.5%) preferred to respond that they did not know there was a cause-effect between the argument and the result, while a number of responses between 31.8% and 40.9% responded affirmatively regarding the existence of this relationship and less than 9.1% said there was no relationship.

The premises highlighted there are that:

a) The three kinds of games generate substantial economic activity for local businesses;

b) The three kinds of games create jobs and stimulate local businesses; and

c) The three kinds of games promote sustainable tourism.

As another reason why Board Games, RPG's and Serious Games have a significant role in cultural sustainability are "social purposes" which are demonstrated in table 1, 2, 3 and 4.

In table 1 are shown the topics that sustain the argument one or the fact that those games increase awareness and engagement.

Table 1. Reasons and opinions why Board Games, RPG and Serious Games increase awareness and engagement

Reasons	%			
	Totally agree	Agree	Neither agree or disagree	Partially Disagree
- Require players to actively participate.	47,8%	39,1%	8,7%	4,3%
- Simulate real- world scenarios providing players a safe space to explore complex issues.	36,4%	54,5%	9,1%	0%
- Have clear goals and rewards motivating players to persist in their efforts.	36,4%	45,5%	13,6%	0%
- Require players to think critically.	59,1%	27,3%	13,6%	0%
- Encourage social interaction, team work and communication.	50%	40.9%	9,1%	0%
- Provide a personalized learning.	31,8%	45,5%	22,7%	0%

Source. Own systematization

From the analysis of this table, it is possible to observe that all the topics listed are in agreement with the study participants, as it presents positive and very positive responses above 86.4%. The only exception was the point regarding games "provide personalized learning" (a topic that, despite being quite positive, only has 77.3%). At the root of this difference is the fact that 22.7% of individuals say they are unaware of it. This aspect may be due both to ignorance of the potential that the use of games has and to the fact that they have never actually encountered such a situation while playing.

The same reasoning applies to the topic that games "require players to actively participate", as it is the only one in which 4.3% of respondents partially disagree with the idea. This result can also be explained either by

the fact that those individuals, as players, have never been involved or have never been confronted with such a situation while playing. In any case, it becomes a not very relevant aspect for the analysis not only because of its insignificant value (4.3%), but mainly because the number of individuals who completely agree with this aspect amounts to 47.8%.

In table 2 are shown the topics that sustain argument two or the fact that those games shape community building and collaboration.

Table 2. Reasons and opinions why Board Games, RPG and Serious Games shape community building and collaboration

Reasons	%			
	Totally agree	Agree	Neither agree or disagree	Partially Disagree
- Foster teamwork and helps building a sense of community among players.	45,5%	50%	0%	4,5%
- Teach players the value of mutual support.	47,6%	47,6%	4,8%	0%
- Promote a collaborative environment since the interdependence of the tasks.	40,9%	50%	4,5%	4,5%
- Encourage strategic thinking and mutual support.	47,8%	47,8%	4,3%	0%

Source. Own systematization

Also, in this table the participating individuals completely agree or simply agree with the topics that argue the fact that Board Games, RPG and Serious Games shape community building and collaboration. This is so significant when we observe that these responses are close to 100% (respectively, values between 90.9% and 95.6%). Likewise, at the level of these games "foster teamwork and helps building a sense of community among players" or "promote a collaborative environment since the interdependence of the tasks" there is a small disagreement rate (4.5%). However, those figures

become irrelevant if it is understood that there is a small fringe of members of the *Quebra Dados* Association who play only for the recreational or social aspect and less for the educational and cultural aspect, which leads them to get less involved.

In table 3 are shown the topics that sustain argument three or the fact that those games develop cultural sensitivity and respect.

Table 3. Reasons and opinions why Board Games, RPG and Serious Games develop cultural sensitivity and respect

Reasons	%			
	Totally agree	Agree	Neither agree or disagree	Partially Disagree
- Help players experience cultural differences thereby enhancing empathy and respect for those cultures.	18,2%	68,2%	9,1%	4,5%
- Highlight cultural sensitivity and mutual respect.	28,6%	52,4%	19%	0%
- Expose players to diverse cultural contexts and spark interest in learning more about them.	36,4%	45,5%	13,6%	4,5%

Source. Own systematization

From the analysis of this table, it is clear that some respondents lack knowledge on the subject. In other words, and despite the majority agreeing with the arguments pointed out to the fact that games develop cultural sensitivity and respect, it appears that a percentage between 15% and 19% who have no opinion or who partially disagree.

When comparing these values with the socio-professional categories of the study participants, it appears that they coincide with the number of teachers and agents qualified for the area of culture, realizing once again that despite all players valuing the importance of the educational part

and cultural aspects of the game for cultural sustainability, understand that this is more aimed at those professionals.

In table 4 are shown the topics that sustain argument four or the fact that those games foment policy and support decision-making.

Table 4. Reasons and opinions why Board Games, RPG and Serious Games foment policy and support decision-making

Reasons	%			
	Totally agree	Agree	Neither agree or disagree	Partially Disagree
- Engage multiple stakeholders in a participatory process ensuring diverse perspectives are considered.	18,2%	59,1%	18,2%	4,5%
- Can be used by policymakers and public administrators to improve decision making skills and to understand complex issues.	9,5%	52,4%	38,1%	0%
- Create detailed and hypothetical scenarios helping policymakers to explore consequences of different decisions.	14.,3%	47,6%	38,1%	
- Provide a safe environment to test out policies without real world consequences.	13,6%	50%	27,3%	9,1%
- Permit policymakers to refine strategies	19%	42,9%	33,3%	4,8%

Source. Own systematization

Of the four factors stated as responsible for the social argument of the concept of cultural sustainability, the one relating to Board Games, RPG and

Serious Games fomentation policy and support decision-making is the one that gathers the least consensus among the individuals who responded to the questionnaire. In fact, only between 61.9% and 77.3% of individuals agree or completely agree with this cause, compared to a number between 22.7% and 38.1% who either have no opinion or partially disagree.

Once again, what has been observed leads us to think that the type of games that participants tend to use do not have much of a cultural objective or that the way in which they are played are more focused on the playful aspect than on developing their real potential for developing skills.

The analysis and discussion of this research in view of that the three kinds of games contribute to the cultural sustainability still needs to be justify with its "cultural purposes.

Attending to this, the participants on this study justify it on the aspect that those games transfer Education and knowledge. This particular idea is visible when 95,4% strongly agree (40,9%) or just agree (54,5%) that this happens because the games provide feedback on players action helping them to learn from mistakes and improve their performance.

They also argue that those games:

a) promote active learning (45,5% totally agree and just 40,9% agree);

b) improve memory retention (38,1% totally agree and just 42,9% agree);

c) permit players to adjust their strategies and leading to deepen learning (45,5% totally agree and just 36,4% agree);

d) apply to players knowledge within the game context (27,3% totally agree and just 54,1% agree).

Besides this, the cultural purposes are also justified with the fact that those games preserve the Intangible Cultural Heritage. This fact is confirmed when they mention that boardgames, role- playing games and serious games:

a) teach players about specific cultural practices, languages and traditions (90,9%);

b) ensure that cultural stories, histories and narratives are passed down to future generations (72,7%);

c) help players keeping relevant and alive historical events, myths and folklore (81%);

d) reinforce cultural knowledge and values (76,2%);

e) make cultural learning a part of the gaming experience (86,4%);

f) facilitate the transfer of cultural knowledge from older to younger players in a natural an enjoyable setting (86,4%);

g) raise appreciation for different cultural heritages, encouraging players to explore and respect cultural diversity (77,3%); and

h) make cultural heritage accessible to people who might not have the opportunity to experience it otherwise (78,2%.).

When comparing all the partial conclusions regarding the economic, social and cultural purposes of boardgames, RPG's and Serious Games, it is possible to understand that the participants in this study know and understand the potential of each type of game, but not everyone had the opportunity to play in an educational and cultural sustainable context that allow them to develop these recognized skills.

Conclusion

With the development of this research, it was possible to prove the 3 hypotheses initially defined, namely:

a)Board Games, RPGs, and serious games promote cultural sustainability because they have economic purposes (such as they boost the growth of tourism and consequent economic benefits or they promote cultural entrepreneurship since they encourage innovation and adaptation).

b) Board Games, RPGs, and serious games promote cultural sustainability because they have social purposes (like this, they increase awareness and engagement or they shape community building and collaboration or they develop cultural sensitivity and respect or they foment policy and decision-making support).

c) Board Games, RPGs, and serious games promote cultural sustainability because they have cultural purposes (such as they transfer Education and Knowledge or they preserve the intangible cultural heritage).

Furthermore, it is concluded that games currently have not only an entertainment role, but also an educational one and a protagonist in preserving Cultural Heritage. Also, the research into Cultural Sustainability must

be carried out in an interdisciplinary manner, involving collaboration between game designers, cultural experts, educators, and social scientists.

Some questions arose throughout the work that need to be answered. However, since they are not its purpose are now suggested to be analysed in future work, respectively:

a) What are the most effective game design principles for promoting cultural sustainability?

b) How can games be used to bridge generational gaps in cultural knowledge?

c) What metrics can be developed to measure the impact of games on cultural heritage preservation?

d) How do different cultural groups perceive and engage with games?

e) What are the ethical implications of using cultural artifacts and narratives in serious games?

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Expected Outcomes

Board games, RPGs, and serious games offer valuable tools for promoting cultural sustainability. By engaging diverse audiences and fostering a deeper understanding of cultural heritage and sustainability issues, these games can play a pivotal role in preserving cultural diversity and promoting the well-being of present and future generations. The research conducted through the *Quebra Dados* association will further elucidate the impact of these games, providing insights into their potential to foster cultural sustainability in various contexts.

DRUŠTVENE IGRE, RPG-OVI I OZBILJNE IGRE U KULTURNOJ ODRŽIVOSTI

Sažetak

U današnje vrijeme, a posebno nakon pandemijskog razdoblja, opipljive i fizičke igre poput društvenih igara, igara uloga (RPG-ova) i tzv. ozbiljnih igara sve više se koriste kao društveni, kulturni i obrazovni alati. One predstavljaju učinkovit način za poticanje dinamike socijalizacije i povećanje kulturnog znanja kod različitih publika – od djece u ranim fazama učenja, mladih odraslih, pa sve do starijih generacija, u širokom i transkulturalnom kontekstu.

Istodobno, koncept kulturne održivosti, koji se odnosi na sposobnost kulture da očuva i prenese svoju kulturnu raznolikost i baštinu za dobrobit sadašnjih i budućih generacija, postaje sve važniji. S njim raste i potreba za poticanjem kulturnih praksi koje su ekološki, društveno i ekonomski održive, uz očuvanje njihovih temeljnih kulturnih elemenata.

Ovim se istraživanjem nastoji pokazati da društvene igre, RPG-ovi i ozbiljne igre mogu imati značajnu ulogu u promicanju kulturne održivosti. To znači da se ovaj koncept može analizirati kroz ekonomske, društvene i kulturne aspekte.

Kako bi se to potvrdilo, provest će se anketno istraživanje među sudionicima udruge Quebra Dados, čiji će rezultati pokazati da ove igre nisu samo sredstva zabave, već i snažan alat za promicanje kulturne održivosti.

Na kraju istraživanja doći će se do sljedećih ključnih zaključaka:

a) Ekonomski aspekt – poticanje inovacija i prilagodbi, promicanje turizma i ekonomskih koristi;

b) Društveni aspekt – podizanje svijesti i angažmana, oblikovanje zajednice i suradnje, razvoj kulturne osjetljivosti i poštovanja te podrška donošenju politika i odluka;

c) Kulturni aspekt – prijenos obrazovanja i znanja te očuvanje nematerijalne kulturne baštine.

Ključne riječi: društvene igre, kulturna održivost, RPG-ovi, ozbiljne igre

II. Economic (ecological) sustainability

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ANALYSIS OF THE INFLUENCE OF THE SUPPLY CHAIN MANAGEMENT CONCEPT ON USER SATISFACTION IN THE DENTAL INDUSTRY OF THE REPUBLIC OF CROATIA

Original Paper
https://doi.org/1059014/NAZF9524

Abstract

This paper analyzes the influence of supply chain management factors on patient satisfaction in the dental supply chain of the Republic of Croatia. 102 dental polyclinics and 915 users of dental services participated in the research. The data were collected using a questionnaire, and were statistically processed first by factor and then by regression analysis in order to determine the influence of the researched factors. After the analysis was carried out, it was determined that the supply chain management factors include flexibility, integration, responsiveness, supplier performance, quality of relationships between partners and customer satisfaction. Regression analysis found that only the quality of the relationship between partners contributes to user satisfaction, which partially confirmed the research hypothesis. The contribution of the conducted research is manifested in the realization that the concept of supply chain management has been successfully implemented in the dental industry of the Republic of Croatia, but unlike the cases in developed countries in Europe (Germany, Switzerland, France), it is necessary to more intensively include other factors of supply chain management in the work, such as would contribute more strongly to patient satisfaction.

Key words: strategic alliances, supply chain management, vertical integration

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Introduction

Supply chain management today represents one of the most current business strategies in modern business, which is based on the application of a unique approach to flow management within strategic alliances. Successful application refers to a view of the supply chain in which the business processes of all involved entities are successfully integrated, including producers of raw materials, suppliers of goods, producers, distributors (intermediaries) and end consumers. Examples of successfully integrated business systems (global corporations) add great importance to the concept of supply chain management, primarily because it positively affects user satisfaction and consequently contributes to better positioning of own products and services on the market.

By including in the work of modern supply chains, companies willingly participate in the work of strategic alliances by developing long-term relationships with partners (suppliers and customers), continuously improving the quality of their own processes, products and services, developing human resources and regularly modernizing their operations, which enables new, more efficient, integration opportunities with members of the strategic alliance, which ultimately leads to an increase in customer satisfaction. Supply chain management has found its successful application in a whole range of different industries such as automotive, wood, food, and more recently research has intensified in the dental industry as well.

Current research in the dental industry (Jaggaer, 2021) confirm that supply chain management plays a crucial role in ensuring the efficient and seamless delivery of products, materials, and services needed to support dental practices, clinics, and laboratories. From dental tools and consumables to high-tech diagnostic equipment and specialized materials, the dental supply chain is complex and requires careful coordination among manufacturers, distributors, suppliers, and end-users.

Furter more effective supply chain management is vital not only for maintaining a steady flow of essential products but also for ensuring that those products meet stringent regulatory standards, are delivered on time, and align with the evolving needs of dental professionals. As patient care and safety are directly impacted by the quality and reliability of dental

supplies, SCM in this field must prioritize consistency, quality assurance, and responsiveness to demand fluctuations.

An optimized supply chain not only helps dental providers deliver high-quality care but also ensures that dental professionals can rely on a steady and responsive flow of products, enabling them to focus on their primary mission—delivering excellent patient outcomes.

Throughout the long history, until recently, providers of dental care services were small private or public practices whose activity was limited mainly to the repair and extraction of teeth and limited dental structures. The supply chain, from the reception of patients, through X-ray imaging services and procurement of materials to the final service, was procedurally fragmented and formally disjointed. However, nowadays, especially in the countries of the European Union and the United States of America, supply chains are managed much more efficiently, which is a consequence of their modernization of operations and reengineering of business processes. With the reorganization of business operations, new organizational entities (corporate dentistry) were established that operate in one or more countries and are managed by investment companies (CED, 2018).

In Croatia, as in most other European countries, dental care has been organized for many years in smaller clinics within the public health network, but also traditionally in small private practices. Therefore, it can be concluded that for many years dental care was extremely fragmented and relied mainly on small dental entities (Crnjak, 2022). Until recently, there were no large private dental clinics. In the last fifteen years, ten significant private trading companies have been founded in Croatia, which represent more complex organizations in terms of covering most of the activities of the supply chain of dental medicine. Given that there are four or five public health institutions in Croatia where specialist activities are performed (HZJZ, 2022), it can be concluded that there are about fifteen more significant clinics in terms of managing the extended supply chains of dental medicine (HKDM, 2018).

This research aims to investigate how successfully the concept of supply chain management has been implemented in the Croatian dental industry and whether it contributes to the satisfaction of the end customer or patient in the Republic of Croatia. As the majority of dental organizations in Croatia are small private polyclinics, and there are only a few larger

polyclinics, we want to determine the relationship between the implemented supply chain management factors (integration, flexibility, partnership quality, supplier performance and responsiveness) and patient satisfaction.

Overview of supply chain management factors

The success of the supply chain is reflected in the way it is managed. Its management is key to achieving efficiency and effectiveness, therefore the question arises as to how supply chain management can be improved, that is, what factors need to be implemented in order to optimize its operation? As a large number of supply chain management factors positively affect the efficiency and effectiveness of the supply chain in many industries (wood, automotive, pharmaceutical), it is important to identify them first.

In the literature, larger or smaller sets of supply chain management factors are distinguished depending on the subject and research objectives. The most frequently used factors are supply chain performance and customer satisfaction (Quesada, Gazo and Sanchez, 2012, Samaržija, 2014).

The performance of the supply chain represents a set of different indicators that measure the success of the application of supply chain management in a business system. However, their definition is not unambiguous, so according to Zhang et al., (2011) they measure the degree of internal flexibility of the supply chain, while according to Soon and Udin, (2011) they measure the ability of the supply chain to quickly react to changes from external environment.

Within this research, supply chain performance consists of 5 indicators: flexibility, integration, responsiveness, supplier/partner performance and the quality of the relationship established between supply chain members.

a) Supply chain flexibility. Supply chain flexibility refers to the ability of a supply chain to adapt to changes and disruptions effectively (Ananna & Suvash, 2024). It also describes the organizational ability to adapt to the market without significant use of resources, i.e. costs, time and downtime in the development of production processes or loss of performance. Vickery et al., (1999) suggest that flexibility is viewed from the perspective of the entire supply chain, as a value-adding system from an integrative,

consumer-oriented perspective. Flexibility should be aimed at satisfying consumer needs (activities that add value to products or services) that are achieved by integrating internal (production) and external (marketing) functions.

Flexibility is also reflected in performing non-standard procedures, meeting the special needs of users, offering different products/services and quick reaction to the needs and wishes of users.

b) Supply chain integration. It defines the extent to which all supplier and customer activities within the supply chain are linked (Narasimhan & Jayaram, 1998). There are two directions of integration, the first is forward and involves the integration of the flow of goods from suppliers to manufacturers and customers. The other goes in the opposite direction, from the customer to the manufacturers and suppliers. It is no longer enough to observe the customer only through the prism of marketing, but it is necessary to establish a long-term relationship based on mutual satisfaction. The more integrated member processes are, the faster organizations will adapt to customer needs and will be more efficient than non-integrated organizations. In today's environment, it is necessary to change the business paradigm, since companies cannot survive on the market without a close relationship with customers, therefore there is a need to include as many partners as possible from all phases of the supply chain. Integration is measured through communication and coordination between supply chain participants, information sharing, collaboration with partners, and alignment of processes with supply chain partners (Zhang et al., 2011).

c) Supply chain responsiveness. Supply chain responsiveness refers to a firm's ability to react quickly to changes in demand and supply conditions (Tuna & Swinney, 2023). It is a critical capability that allows firms to minimize mismatches between supply and demand, especially in environments with high demand uncertainty. A responsive supply chain can adjust its operations to meet customer needs in a timely manner without excessive cost, while maintaining product quality and service levels.

Responsive supply chains are characterized by reduced lead times, multiple sourcing options, and quantity flexibility, enabling firms to better align resources with fluctuating demand and mitigate mismatch risks (Biçer, 2023). A responsive dental supply chain refers to a dental practice, distributor, or manufacturer's ability to quickly adapt and react to changing

needs, demand fluctuations, or unforeseen disruptions in the delivery of dental products and services. This responsiveness is critical in ensuring that dental professionals have the necessary tools, materials, and equipment when they need them to deliver quality care to patients.

Enhancing supply chain responsiveness involves strategies like lead time reduction, multiple sourcing, and quantity flexibility, which help minimize mismatches between supply and demand (Biçer, 2023). In the dental industry, specific technological and strategic solutions have been proposed to improve supply chain responsiveness and resilience.

d) Supplier performance. Supplier performance refers to how well a supplier meets the expectations and requirements of a business in delivering goods or services (Afrizal et al. 2022). It is a critical aspect of supply chain management because a supplier's ability to meet performance standards directly affects the efficiency, cost, quality, and reliability of the entire supply chain. Supplier performance is integral to lean supply chain management, sustainability, and project execution, and it involves strategic collaboration and evaluation processes. Supplier performance in the dental supply chain is a critical factor that influences the overall efficiency, cost-effectiveness, and quality of the supply chain. Evaluating supplier performance involves assessing various key performance indicators (KPIs) that reflect the supplier's ability to meet the demands of the dental industry. These KPIs include cost, quality, delivery reliability, and responsiveness, among others. The evaluation process is essential for maintaining a competitive edge in the market and ensuring that dental products meet the required standards and customer needs.

e) The quality of the relationship. It defines the extent to which the partners' expectations from the implementation of cooperation within the supply chain are met. Its measurement is cited as a common problem, as it is based on subjective assessments of the participants, and not on objective indicators that measure the intensity of established connections between all participants of the internal supply chain.

The quality of partnerships in supply chains is crucial for long-term relationships, impacting profitability and competitiveness (Ramana et al. 2014). These partnerships are built on trust, collaboration, and a shared commitment to achieving common goals such as delivering high- quality

products, improving efficiency, reducing costs, and enhancing customer satisfaction.

In a supply chain context, the quality of these partnerships can significantly impact the overall performance and resilience of the supply chain. Strong partnerships help businesses respond better to challenges, adapt to market changes, and continuously improve operations. Conversely, poor partnerships can lead to disruptions, delays, higher costs, and subpar product or service quality.

The quality of partnership in the dental supply chain is crucial for ensuring efficient operations, cost-effectiveness, and high standards of service delivery. Effective partnerships in this context are characterized by trust, communication, and mutual benefits, which are essential for navigating the complexities of the supply chain. These partnerships can lead to improved quality and reliability, cost savings, and enhanced supply chain resilience.

Close partnerships contribute to achieving high-quality standards, which are critical in the dental supply chain due to the need for precision and safety in dental products (Cooper, 2024).

f) Customer satisfaction. Refers to the degree which a company's supply chain meets or exceeds the expectations and needs of its customers. Customer satisfaction in supply chain management is influenced by several factors, all of which contribute to the overall experience of the customer when interacting with the company's products, services, and delivery processes. Proper implementation of SCM can significantly impact customer satisfaction by integrating business processes across suppliers, manufacturers, and retailers, thus aligning the supply chain with customer expectations (Fadilah et al., 2024). Customer satisfaction plays a crucial role in enhancing the overall performance of a supply chain by acting as a mediator between supply chain performance and customer satisfaction. Efficient supply chain management, characterized by quality service, timely delivery, and transparent pricing, significantly boosts customer satisfaction, which in turn positively impacts organizational performance. This relationship is evident across various industries, where customer satisfaction serves as a key performance indicator for supply chain success.

Customer satisfaction in the dental supply chain is driven by the consistent availability of high- quality products, timely deliveries, responsive

customer service, and competitive pricing. Satisfied customers are more likely to remain loyal, place repeat orders, and recommend suppliers to others. In the highly competitive dental industry, maintaining customer satisfaction through a well-managed supply chain is essential for fostering long-term relationships and growing a strong reputation.

In this research, service satisfaction is measured through several indicators (Narayanan and Greco, 2014): patient satisfaction with the organization of the service, satisfaction with the dentist's relationship with the user, satisfaction with the dentist's key competencies, and satisfaction with the outcome of the treatment and the price of the service. In order to create patient satisfaction through the aforementioned elements, it is important to point out that the entire supply chain management process needs to be at a high level.

Starting from the assumption that it does not matter whether the patient is right or wrong, it only matters how the patient felt during the treatment, although the health care provider's perception of reality may be quite different (Petersen, 1988).

Research model proposal

After the supply chain management factors have been previously elaborated, the following research model is proposed.

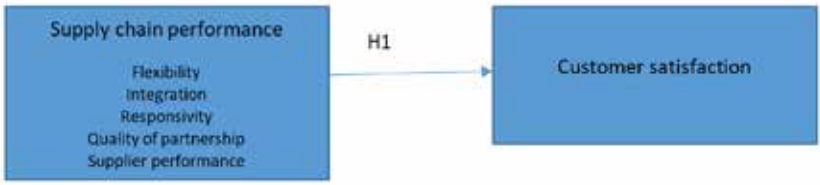

Figure 1: Research model
Source: author

Based on the proposed model, the main research hypothesis is:

Supply chain management performance strongly and positively contributes to customer satisfaction.

Along with the main hypothesis, auxiliary hypotheses of the model are also defined: H1a: Flexibility positively and strongly contributes to customer satisfaction

H1b: Integration positively and strongly contributes to customer satisfaction H1c: Responsiveness positively and strongly contributes to customer satisfaction

H1d: Partnership quality strongly and positively contributes to customer satisfaction H1e: Supplier performance positively and strongly contributes to customer satisfaction

Proving the main hypothesis is important because the ability to create higher levels of customer satisfaction is considered an important competitive differentiator and has therefore become a key element of many companies' business strategies (Ellinger et al., 2012).

Other studies can be found in the literature that have proven a positive correlation between supply chain performance and a higher level of customer satisfaction (Ellinger et.al., 2012). Furthermore, Chavez et al. (Chavez et al., 2014) proved that product quality and delivery is a direct consequence of supply chain performance and significantly affects customer satisfaction. In order to more precisely explain the impact of supply chain performance on user satisfaction, auxiliary hypotheses of the model were defined. It is assumed that, in the long term, a higher degree of flexibility of the supply chain will enable a greater ability to adapt to user requirements and changes in the environment, then improve the ability to perform non-standard services and procedures and fulfill special needs, which will have a positive impact on patient satisfaction. By testing the hypothesis, it will be determined to what extent patients are satisfied with the dentist's key competencies, the outcome of the treatment and the price of the service. A high degree of supply chain integration enables the development of strategic partnerships with suppliers, facilitates the understanding and forecasting of manufacturers' needs in order to better meet the changing demands of customers and increase their overall satisfaction (Zhang et al., 2011). The aim of the integration of the dental supply chain is to improve the internal quality of the process and optimize the available resources through the management of material, financial and information flows. By testing the hypothesis, it will be determined how much the integration of the dental supply chain contributes to patient satisfaction.

A quality relationship with partners is based on mutual trust and the fulfillment of assumed obligations, which means that ultimately the promised service will be performed in the required time, at the specified quality and at an acceptable price, which ultimately increases patient satisfaction. The functioning of the dental supply chain is contributed by various partners who provide services that are essential for creating additional value within the supply chain, such as diagnostics, prosthetics, transportation, accommodation or marketing. Successful long-term cooperation with partners within the supply chain is based on trust, communication, joint planning and mutual respect for different business goals, which enables continuous satisfaction of the growing needs of patients. By testing the hypothesis, it will be determined if the quality of the relationship positively contributes to patient satisfaction.

Customer satisfaction is an important indicator of the success of the functioning of the supply chain (Soon and Udin, 2011). At the same time, users look at different aspects of its performance. At the very center of the dental service is the focus on the end user, and the patient is put first (Narayanan and Greco, 2014). Patient satisfaction is reflected through the organization of dental service provision, the dentist's competence and the dentist's attitude towards the patient, satisfaction with the outcome of the treatment, the price of the service and the intention to return to the clinic (Narayanan and Greco, 2014). In order to analyze patient satisfaction through the above indicators, it is important to point out that it is necessary to analyze the entire service provision process, which includes all phases of supply chain management.

In order for the patient to receive adequate service, it is necessary that internal processes within the supply chain are successfully integrated, which will quickly meet the customer's requirements (Duclos et al, 2003). Also important are the performance of suppliers and the quality of relationships with partners who ensure that the supply chain is supplied with quality and adequate materials and additional services necessary for the provision of dental services.

Research results

The research was conducted in the period from March 2021 to January 2022. Owners, directors, heads of clinics and/or directors of the largest organizations of dental medicine in the Republic of Croatia were contacted personally. Given that they represent the management staff, they had the best insight into the examined performance factors of supply chain management in their organizations. Along with the request to the managers to participate in the research, a cover letter was delivered in which the basic goals and hypotheses of the research were explained, and a questionnaire for patients was also delivered, based on which their satisfaction with the service was assessed. The research population consists of dental medicine organizations in the Republic of Croatia and users of dental clinic services.

The questionnaire filled out by managers of dental organizations included questions that collected data on socio-demographic characteristics of respondents such as age, gender, professional education, total work experience and work experience in the current organization, and the position of the respondent in the observed organization. Also, the questionnaire contained constructs used to measure the performance of supply chains: flexibility, integration, responsiveness, performance of suppliers and quality of relationships between members of the supply chain. In the end, the sample consists of 102 polyclinics/dental practices from the Republic of Croatia. It was determined that the largest number of respondents had a university degree (67.65%) and were male (54.90%). Work experience ranges from 1 to 50 years of work experience with an average work experience of respondents of 19 years (χ = 19.19), while experience in the current job position ranges from 1 year to 32 years with an average experience in the current position of 12 years (χ = 11.92). The age varies from 25 to 74 years with the average age of the respondents being 45 years (χ = 45.19).

With regard to the size of the organization, observed through the number of employees, the most represented organizations in the sample are organizations with a small number of employees, that is, organizations that employ 1 to 4 people (48.04%) and dental medicine organizations with 5 to 9 employees (18.63%). , followed by dental medicine organizations with 20 to 59 employees, representing 15.69% of the sample. In most dental medicine organizations, the number of users has increased (65.69%), while 12.75% of them note that the number of users has decreased compared

to 2019. The majority of respondents were in the position of team leader (32.4%), then director (8.8%), owner (7.8%), director (4.9%), and the rest are in the position of senior professional associate (2 %). The others did not define their function in the organization of dental medicine.

The second questionnaire, which examined the patient's satisfaction with the service provided, included 915 respondents. In the first part of the questionnaire, the socio-demographic characteristics of the respondents were collected, and in the second part, the constructs used to measure patients' satisfaction with the service provided were listed. After processing the data, it was determined that the respondents were on average 45 years old (χ = 44.72). The values range from 18 to 89 years, and are female (53.6%). By education, they obtained a university degree (33%), a higher vocational degree (28.1%), a secondary vocational education (27.3%) and a postgraduate study (master's degree, doctorate) (11.6%).

In the next phase, the analysis of the results of surveys completed by managers of dental medicine institutions and users of dental services was started. In order to determine the characteristics of the sample in terms of validity and reliability for further research, an exploratory factor analysis was conducted. The principal component analysis method was applied in the SPSS program with oblimin rotation and Kaiser normalization. After the analysis, it was found that all particles have utilities above 0.5 as suggested by Field (2009) and that they describe supply chain management factors: flexibility, integration, responsiveness, supplier performance, relationship quality and customer satisfaction.

Table 1. Characteristics of measurement scales of supply chain performance factors

Factors	Number of statements n	Mean M	Standard deviations	Cronbach alpha α	% Explained variances	Eigenvalue
Flexibility	6	26,06	3,594	0,889	35,037	7,007
Integration	3	12,57	2,027	0,783	12,454	2,491
Responsiveness	4	18,78	1,596	0,792	9,439	1,888
Supplier performance	4	17,64	2,232	0,861	7,742	1,548

Quality of relationship	3	11,16	2,139	0,717	5,373	1,075
Customer satisfaction	5	22,925	2,423	0,812	5,972	1,194

Source: Research results

In the next step, a reliability analysis was performed using the Cronbach alpha coefficient. The results of that analysis are presented in table 1. All reliability coefficients for the extracted factors are above the acceptable level of 0.7 suggested by Peterson (1994), and it can be concluded that the factors are reliable for further analysis.

In order to be able to test the hypotheses, a multiple regression analysis was performed where the relationship between the dependent variable user satisfaction and the independent variable supply chain management performance was analyzed. The results of the analysis are shown in table 2.

Table 2. Multiple regression analysis with the dependent variable user satisfaction

Factors	B	b	t–value
Constant	3,918 (0,323)		12,120
Flexibility	0,009 (0,065)	0,020	0,136
Integration	-0,022 (0,057)	-0,058	-0,383
Responsiveness	0,080 (0,075)	0,123	1,071
Supplier performance	-0,089 (0,061)	-0,189	-1,454
Quality of relationship	0,131 (0,060)	0,296	2,174**
The coefficient of determination R2	0,072 (0,259)		

Source: research results

Based on the analysis, it can be concluded that not all tested independent variables have a statistically significant influence on the dependent variable. Only the relationship quality factor has a statistically significant positive influence on the dependent variable user satisfaction (β=0.296). Other variables do not significantly affect user satisfaction.

Conclusion

In the framework of this research, the application of the concept of supply management in the dental industry of the Republic of Croatia was analyzed. 102 polyclinics and 915 users of dental services participated in the research. After the survey research was conducted, the collected surveys were processed and it was determined that the concept of supply chain management was successfully applied in the dental industry. Namely, the concept of supply chain management in the dental industry can be analyzed through the implementation of supply chain performance. Supply chain performance represents a set of indicators that measure different aspects of the application of supply chain management factors. Statistical processing of the collected data determined that the following supply chain management factors were successfully implemented in the dental industry: integration, flexibility, responsiveness, partner performance, partnership quality, and customer satisfaction. The next step was to determine their impact on user satisfaction.

By testing the hypotheses of the model, it was determined that there is a statistically positive and significant influence of supply chain performance on customer satisfaction, but only on relationship quality (β=0.296). Thus, the main hypothesis of the work is partially accepted, so it can be concluded that the performance of the supply chain only partially affects user satisfaction. The aforementioned knowledge is in contrast to previously conducted research in the dental industries of developed countries (the United States of America and Switzerland). Also, Soon and Udin (2011) pointed out that customer satisfaction is an important indicator of the success of the supply chain, which is successfully influenced by all the tested factors of the supply chain.

As the results obtained by this research are in contrast to the previous ones, it remains to be further investigated the reasons why dental medicine organizations do not find a positive influence of all tested factors on user satisfaction. It is possible that it is about the specificity of the Croatian environment, the competencies of employees in dental medicine organizations or something else. Namely, in the future, it is necessary to expand the research sample to neighboring countries in order to take a closer look at all the specifics and factors of the supply chain that affect customer (patient) satisfaction.

Acknowledgment

„This paper was funded under the project line ZIP UNIRI of the University of Rijeka, for the project ZIP-UNIRI-2023-5".

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Zhang, X., Pieter van Donk, D. & van der Vaart, T. (2011). Does ICT influence supply chain management and performance? A review of survey-based research, *International Journal of Operations & Production Management*, 31(11), 1215-1247.

ANALIZA UTJECAJA KONCEPTA MENADŽMENTA OPSKRBNOG LANCA NA ZADOVOLJSTVO KORISNIKA U DENTALNOJ INDUSTRIJI REPUBLIKE HRVATSKE

Sažetak

U ovom se radu analizira utjecaj čimbenika koncepta menadžmenta opskrbnog lanca zadovoljstvo pacijenata u dentalnom opskrbnom lancu Republike Hrvatske. U istraživanju su sudjelovale 102 stomatološke poliklinike i 915 korisnika stomatoloških usluga. Podaci su prikupljeni upitnikom, te su statistički obrađeni najprije faktorskom, a zatim regresijskom analizom kako bi se utvrdio međusobni utjecaj istraživanih čimbenika. Nakon provedene analize identificirani su čimbenici menadžmenta opskrbnog lanca: fleksibilnost, integracija, responzivnost, učinak dobavljača, kvaliteta odnosa među partnerima i zadovoljstvo kupaca. Regresijskom analizom utvrđeno je da samo kvaliteta odnosa između partnera pridonosi zadovoljstvu korisnika, čime je djelomično potvrđena hipoteza istraživanja. Doprinos provedenog istraživanja očituje se u spoznaji da je koncept menadžmenta opskrbnog lanca uspješno implementiran u dentalnoj industriji Republike Hrvatske, no za razliku od slučajeva u razvijenim državama Europe (Njemačka, Švicarska, Francuska), potrebno je u rad intenzivnije uključiti i druge čimbenike upravljanja opskrbnim lancem koji bi snažnije pridonijeli zadovoljstvu pacijenata.

Ključne riječi: menadžment opskrbnog lanca, strateško povezivanje, vertikalna integracija

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MEASURING SUSTAINABILITY: A CIRCULAR ECONOMY MATURITY MODEL FOR IT SERVICE PROVIDERS

Original Paper
https://doi.org/1059014/XVKR9225

Abstract

The IT service industry faces substantial challenges in adapting to evolving economic and environmental conditions, fostering an increased interest in Circular Economy (CE) as a viable approach to achieve economic and ecological benefits. Despite its potential, the implementation of CE within the IT services sector remains complex, as the industry lacks specific, context driven guidelines. This paper addresses this challenge by developing and presenting a CE maturity model tailored for IT service providers. By identifying key areas of action within CE and outlining associated activities, the model serves as a practical framework, offering targeted recommendations to advance the CE maturity of IT service providers, thereby supporting both sustainable and economic improvement.

The model founded on a Systematic Literature Review, detailed in a separate publication, and a focus group study conducted via an expert workshop. Findings from these methodologies and the development of the maturity model highlight five key action areas: 'Ecosystem,' 'External Influences,' 'Company Management,' 'IT & Digitalization' and 'Circular Strategy.' Using a grading system, the maturity level of an IT service provider can be assessed across these action areas, assigning a CE maturity level from 'inactive' to 'proactive'. This classification enables IT service enterprises to assess their current state in ecological and economical sustainability, facilitating improved CE implementation. Consequently, the developed CE maturity model serves as a practical tool for adopting and evaluating circular business models and processes, offering a sustainable solution to the environmental and economic pressures facing the IT service industry. Furthermore, the CE maturity model is adaptable to other sectors within the service industries and the creative economy sector.

Keywords: Circular Economy, IT Services, Maturity Model, Sustainability

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Introduction

Amidst escalating environmental challenges and growing economic uncertainties, the IT service industry faces increasing pressure to adopt sustainable practices that balance ecological responsibility with economic viability (Cagno et al., 2021). Despite the evident need for sustainability, many IT service providers have yet to adopt these practices, often underestimating their long-term benefits (Lieder & Rashid, 2016). The Circular Economy (CE) has emerged as a promising framework for achieving the dual objectives of economic and ecological responsibility, emphasizing resource restoration, reuse and recycling as key pathways to sustainability (Geissdoerfer et al., 2017; Ellen MacArthur Foundation, 2012). However, the application of CE in the IT service industry remains limited due to the lack of industry-specific guidelines and operational models that address its unique challenges (Cagno et al., 2021).

Previous research has introduced a Circular Economy Maturity Model (CEMM) designed to support IT consulting firms in enhancing their clients' sustainability initiatives (Koch de Souza & Engstler, 2024). Rooted in a Systematic Literature Review (SLR) (Koch de Souza, 2023) and refined through expert insights, this model assesses CE maturity across five key action areas: 'Ecosystem', 'External Influences', 'Company Management', 'IT & Digitalization' and 'Circular Strategy' (Koch de Souza and Engstler, 2024). It provides specific recommendations and a grading system to classify organizations from ´inactive´ to ´proactive´ in their CE implementation, serving as a practical tool for enhancing sustainability. Building on this foundational work, the present research examines the effective application of the CEMM to IT service providers. While the core structure of the model remains consistent with previous research, this paper tailors the approach to address the specific challenges and opportunities faced by IT service providers. This study examines how IT service providers can leverage the CEMM to enhance their sustainability efforts, thereby extending the model's relevance and offering a scalable solution for other sectors within service industry. This approach addresses broader environmental and economic pressures, paving the way for future research.

Classification of Circular Economy for IT Service Providers

In prior research, CE has been defined through seven key characteristics: circular production flows, regeneration by design, systemic thinking, integration of economic, ecological and social aspects, innovation in circular business models, strategies for slowing/closing/narrowing resource loops and the introduction of R-strategies (Koch de Souza & Engstler, 2024). Among these, the integration of economic, ecological, and social impacts are often emphasized as the overarching goal (Upadhyay et al., 2021; Rosa et al., 2019). CE's main advantage lies in its regenerative approach, minimizing resource waste and reducing emissions (Mhatre et al., 2021), which leads to significant reductions in overconsumption, waste and emissions (Kulkarni & Pathak, 2023; Fogarassy & Finger, 2020; Ellen MacArthur Foundation, 2019). CE also enhances resilience against environmental risks, lowers energy costs, reduces dependency on suppliers and decreases environmental taxes, offering economic benefits (Antikainen et al., 2018; Korhonen et al., 2018). However, a major challenge in implementing CE is the lack of awareness among businesses about its relevance (Koch de Souza & Engstler, 2024). The dynamic and temporary nature of the regenerative and environmental aspects of CE requires a willingness to embrace social change and adaptation (Korhonen et al., 2018). External factors, including regulatory barriers, present significant challenges to the implementation of CE practices (Khan et al., 2021).

The IT service industry, in particular, faces unique challenges in adapting to these economic and environmental changes, making the application of CE principles both promising and complex. The IT service sector encompasses activities within the Information and Communication Technology industry, including services such as software development, IT consulting, data management and cloud services (Daum, 2016). Unlike traditional products, IT services are intangible, consumed simultaneously with their production, and often involve customized solutions, making them difficult to standardize (Meffert & Bruhn, 2009). These types of services within the industry, however, can serve as unique enablers for CE by leveraging technologies that, for example, promote data transparency, connectivity, and automation – all crucial for managing circular production processes (Uçar et al., 2020; Antikainen et al., 2018). Digital technologies such as blockchain, artificial intelligence (AI), cloud computing, and the Internet

of Things (IoT) are potential drivers to the implementation of CE strategies within IT services, all uniquely positioned within this sector (Koch de Souza, 2023).

In addition to technological advancements, broader organizational and structural changes are necessary to implement CE strategies within the industry. A key factor is the shift toward circular business models, such as Product-as-a-Service, where value is derived from extended service offerings rather than product ownership. This model emphasizes lifecycle management and resource efficiency, promoting reuse, refurbishing and recycling – fundamental components of a CE (Ellen MacArthur Foundation, 2019; Antikainen et al., 2018). These changes are particularly relevant to the IT services industry, which relies heavily on digital infrastructure and has significant potential to reduce environmental impacts through better resource use and service-based models. Furthermore, collaboration across an IT service provider's value chain is equally important. Companies must engage with suppliers, customers, and other stakeholders to close resource loops and align sustainability goals across the supply chain. Transparent data sharing and cooperative partnerships are essential for optimizing resource use and ensuring effective implementation of circular practices (Khan et al., 2022; Rajput & Singh, 2019).

Despite these opportunities, the implementation of CE in the IT services industry has been limited, primarily due to the absence of specific industry guidelines and operational models that address the unique challenges of this sector (Lieder & Rashid, 2016). Establishing such standards is crucial for the successful adoption of CE principles, ensuring that IT service providers can operate sustainably while navigating the complexities of modern business environments (Rosa et al., 2019; Korhonen et al., 2018). On the contrary, the IT service industry currently contributes significantly to environmental impacts due to energy-intensive data centers and electronic waste generated from hardware, highlighting the need for a sustainable approach (Bocken et al., 2023; Figge & Thorpe, 2023; Ruda & Pukas, 2022). Adopting CE practices is crucial not only for mitigating these impacts but also for ensuring long-term economic sustainability. This paper acknowledges this need and builds on the developed CEMM by Koch de Souza & Engstler (2024), offering IT service providers a structured approach to enhance sustainability efforts and contribute to a more resilient digital economy within the industry.

Methods

This research is based on the methodological framework developed in previous studies by Koch de Souza and Engstler (2024), wherein the CEMM was initially developed and examined within the context of IT consulting. This paper refines and expands this model to address the specific challenges of implementing CE principles in the IT services sector. The methodology of the research consisted of three phases: a **SLR**, an **expert focus group validation** and an **iterative maturity model development**, all designed to respond to the research question of how IT service providers can measure and enhance their maturity in implementing Circular Economy principles (see fig. 1).

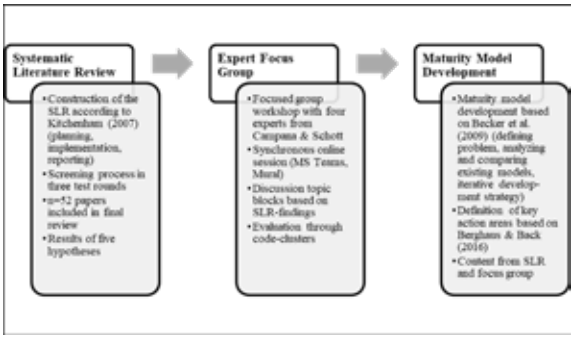

Figure 1. Research Methods Overview

The foundation of the CEMM was established through a **SLR**, as described by Koch de Souza (2023), focusing on measuring sustainability in IT service providers through CE. The SLR systematically reviewed existing research on CE and its relevance to IT services, ensuring transparency and replicability in accordance with Kitchenham's (2007) guidelines. The review aimed to address three key questions: (1) how CE is defined in the literature, (2) how CE is currently applied in IT services, and (3) the requirements and barriers to CE implementation (Koch de Souza, 2023). The literature search, conducted using databases such as Scopus, ScienceDirect, and SpringerLink, focused on articles published after 2015 to ensure the inclusion of recent developments. A rigorous inclusion and exclusion process filtered articles based on their relevance and methodological rigor. This screening process identified key factors for advancing

CE maturity in IT service providers, including strong change management and leadership commitment, financial and risk management, alignment of IT with CE strategies,external collaboration with stakeholders, and incremental implementation of CE practices (Koch de Souza, 2023).

To validate these theoretical findings, a **focus group study** was conducted, as further described in the developmental research of the CEMM for IT consulting (Koch de Souza & Engstler, 2024). The focus group method was chosen for its ability to generate in-depth insights through collective discussion, providing diverse perspectives from industry professionals (Bell et al., 2019). The focus group, conducted in collaboration with the IT consulting company *Campana & Schott*, included experts in IT sustainability, IT project management, and IT strategy consulting (Koch de Souza & Engstler, 2024). The discussions followed the structure outlined by Creswell and Creswell (2022) and Bell et al. (2019), focusing on the integration of digital technologies, the influence of external regulations, and challenges in CE strategy implementation. The sessions were recorded, transcribed, and analyzed using a consistent thematic coding framework, similar to the one applied in the SLR, to ensure consistency in interpretation. The focus group validated the key themes from the SLR, aligning them with real- world experiences and reinforcing the practical relevance of the action areas for enhancing CE in IT services (Koch de Souza & Engstler, 2024). Combining these industry perspectives with the theoretical foundations of the SLR strengthened the model's practical application, ensuring it addressed both academic and industry needs (Flick, 2018).

The third phase of the research involved the development of the **CEMM** maturity model. A maturity model is a framework that assesses the maturity level of an organization or process, charting developmental progress from an initial stage to full maturity (Becker et al., 2009). The primary objective of the CEMM is to evaluate the current state of CE implementation in IT service providers, identify areas for improvement and provide guidance for continuous enhancement. The development process followed the methodical approach by Becker et al. (2009), combined with the Digital Maturity Model (DMM) by Berghaus and Back (2016), adapted specifically for IT services. The iterative process resulted in the selection of five key action areas for the CEMM: *Ecosystem, External Influences, Company Management, IT & Digitalization,* and *Circular Strategy* (Koch de Souza & Engstler, 2024). These areas represent the critical factors that IT service

providers must address in order to enhance their circular economy practices. Additionally, the model defines five maturity dimensions (*Inactive, Reactive, Active, Established* and *Proactive*), describing the progression from basic awareness and ad-hoc practices ('inactive') to full strategic integration of CE principles ('proactive') (Koch de Souza & Engstler, 2024). The evaluation process is based on a Likert scale, allowing IT service providers to assess their maturity level across each key action area using a simple questionnaire form (Koch de Souza & Engstler, 2024). This assessment not only allows organizations to evaluate their sustainability maturity but also provides actionable recommendations for enhancing their CE maturity, positioning the CEMM as both a diagnostic and prescriptive tool (Koch de Souza & Engstler, 2024). The next chapter, presents the results regarding both the content and structure of the CEMM, along with an analysis of its practical implications for IT service providers.

Results

The CEMM is a practical tool for IT service providers to assess and improve their implementation of CE principles. This chapter presents the outcomes of the model's application, offering insights into its structure, key action areas, and maturity levels, along with the practical recommendations generated for IT service providers. The results are presented based on the refinement of the five action areas (*Ecosystem, External Influences, Company Management, IT & Digitalization,* and *Circular Strategy*), and their alignment with the maturity dimensions. The model's utility lies in its ability to provide both a comprehensive assessment framework and actionable guidance for companies to improve their CE maturity.

Figure 2. Overview of the Key Action Areas in the CE Maturity Model (Koch de Souza & Engstler, 2024)

The iterative development process led to the finalization of five key action areas (s. fig. 2). These areas reflect both the internal capabilities of IT service providers and the external pressures they face in adopting CE principles. In this context, the following summarizes the role of each key action area in measuring and managing CE for IT service providers.

The **Ecosystem** action area highlights the critical importance of collaboration across the value chain. In the context of IT services, this involves working closely with stakeholders such as suppliers, customers, and partners to develop sustainable practices across the entire service value creation processes. The goal is to create circular ecosystems that facilitate the sharing of resources, knowledge, and innovation, fostering long-term relationships that enhance sustainability efforts (Koch de Souza & Engstler, 2024). IT service providers are encouraged to engage in partnerships that support the exchange of best practices, promote resource efficiency and contribute to closing material loops. In practical terms, this can involve participating in collaborative platforms, co-creating solutions with clients, and leveraging shared infrastructures like cloud computing to reduce resource waste. While comprehensive ecosystem collaboration is vital for long-term CE implementation, companies in earlier stages are encouraged to initiate partnership-based practices as a foundation, with further ecosystem alignment reserved for later development phases.

The **External Influences** action area is divided into two distinct components: *market- based influences* and *formal influences*. This dual structure reflects the diverse pressures IT service providers face from both market dynamics and regulatory environments. *Market-based influences* focus on

the expectations and demands from clients, competitors, and industry trends. IT service providers are increasingly confronted with customer demands for more sustainable IT solutions, driven by growing environmental awareness and corporate responsibility. Companies that respond proactively to these market signals can differentiate themselves (Koch de Souza & Engstler, 2024). Additionally, market-based influences include competitive pressures, where industry leaders set benchmarks for circularity that others must follow to stay relevant. *Formal influences* refer to the regulatory and legal frameworks that govern environmental performance. IT service providers, particularly within the research field of the European Union, must navigate complex regulations that dictate waste management, energy efficiency, and resource conservation. Formal influences include both national regulations and international sustainability standards such as the European Sustainability Reporting Goals (ESRS), which set clear guidelines for compliance (Koch de Souza & Engstler, 2024).

Company Management is a pivotal action area within the CEMM, emphasizing the need for robust internal structures to support CE integration. This area evaluates how well IT service providers incorporate CE principles through the well-established practices in *change management, financial management,* and *risk management*. Key aspects include the commitment of top management to sustainability goals, the inclusion of CE objectives in strategic planning, and the ability to drive organizational change (Koch de Souza & Engstler, 2024). Effective company management involves establishing a clear circularity vision aligned with the company's long-term goals and ensuring that all departments are engaged in its implementation. Furthermore, the involvement of employees at all levels through training and awareness programs is crucial for embedding CE practices across the organization. Companies that demonstrate strong internal leadership and established change, risk and financial management are more likely to achieve higher levels of CE maturity, where circularity becomes an integral part of the corporate identity and a high level of internal adaptability to change is essential.

In the IT services sector, digital technologies are fundamental enablers of CE. The **IT & Digitalization** action area focuses on how IT service providers can leverage digital tools to optimize resource use, track sustainability metrics, and enhance the circularity of their offerings. Technologies such as AI, blockchain, IoT, and cloud computing play a crucial

role in improving efficiency and reducing waste (Koch de Souza, 2023). IT service providers that integrate these technologies into their operations can significantly reduce their environmental footprint and offer more sustainable solutions to clients (Koch de Souza & Engstler, 2024). The CEMM guides organizations through the adoption of these technologies, emphasizing the importance of digitalization not only as a tool for operational efficiency but also as a driver of circular business models. While the *Adoption of New Technology* is particularly relevant within the IT services sector, the foundational establishment of a stable *IT & Infrastructure Standardization* as well as effective *Data Management*, should not to be underestimated. Both are crucial for analyzing value chain information that enables a company to implement CE and are necessary steps before experimenting with new technologies for CE-driven business approaches (Koch de Souza & Engstler, 2024). The CEMM, therefore, guides companies through the staged adoption of these technologies, suggesting basic digital infrastructure and data management in the early stages, while advanced digital tools are integrated at higher maturity levels to enhance tracking, transparency, and CE-driven business models.

The **Circular Strategy** action area evaluates how well IT service providers align their business models with CE principles. In the context of IT services, circularity can be implemented through service models that prioritize the reuse and refurbishment of IT equipment, offering clients solutions that reduce the need for constant hardware replacement. For example, service providers can offer IT leasing models or subscription-based services, where clients pay for the functionality of the service rather than owning the hardware itself. This not only extends the lifecycle of IT products but also reduces e-waste, contributing to overall sustainability goals (Koch de Souza, 2023). The CEMM encourages IT service providers to innovate their business strategies and assist them in the transition from linear service models to those that embrace circularity.

Maturity Model Dimensions

In addition to the CEMM action areas, an evaluation form was developed to capture both desired and actual CE states across these areas, consisting of 40 Likert-scale items that assess a company's level of CE maturity proportionally across the key action areas mentioned above (Koch de Souza

& Engstler, 2024). By completing this form, an organization's CE maturity level is determined based on maturity model development theories (Glanze et al., 2021; Schaltegger et al., 2012). The scoring system assigns companies to one of five maturity stages: *Inactive*, *Reactive*, *Active*, *Established,* and *Proactive*, allowing companies to self-assess without the need for external consultants. As these maturity dimensions align with the previous research on IT consulting firms (Koch de Souza & Engstler, 2024), the following will focusses on enabling IT service providers to conduct the assessment independently and manage the CE implementation process themselves, without the need for external consultancy. The prioritization of different qualifying criteria for each maturity dimension along with the corresponding activities to be prioritized and their respective owners, is summarized in Table 1.

Table 1. Implementation of maturity model dimensions of the CEMM

Maturity dimension	Qualification criteria (based on Koch de Souza & Engstler, 2024)	Prioritized activities for achieving qualification criteria of next dimension	Activity owner
Inactive (0-20%)	No strategic interest in CE Linear business model and processes	- Conduct initial CE awareness sessions and build foundational support for CE principles.	Top management
Reactive (21-40%)	- Occasional, circular activities in response to impulses	Develop basic CE practices and establish minimal compliance structures that align with client and regulatory expectations. Document these basic CE-practices.	Mid-level management of customer relations
Active (41-60%)	Circular potentials identified Application of CE strategies Circular processes depicted in the business model	Initiate cross-departmental collaboration to implement CE-compatible technologies. Align CE initiatives and organizational goals.	Department heads (executive level)

Established (61-80%)	Monitored CE goals and public reporting of results Fully circular processes and business model orientation (CE frameworks)	Begin implementing advanced tracking and transparency tools to monitor CE performance metrics. Expand engagement with external partners across the ecosystem, including clients, suppliers and regulators. Set-up continuous alignment and improvement as part of CE-strategy.	Cross-functional team leads in collaboration with external stakeholders
Proactive (81-100%)	Proactive engagement across the ecosystem Continuous alignment and improvement of CE-strategy	Focus on establishing best practices and actively leading CE advancements within the industry. Continue alignment and improvement.	Senior leadership

In the ***Inactive*** level, organizations are just beginning to explore CE principles. This initial phase primarily involves top management, who recognize the potential benefits of CE and allocate minimal resources toward basic awareness and preliminary CE assessments. The primary activities to qualify for the *'Reactive'* maturity dimension involve conducting basic CE awareness sessions aimed at securing foundational buy-in from leadership. Major structural or operational changes are not expected – the emphasis remains on recognizing the potential relevance of circular approaches for long-term organizational goals. At this stage, structured CE activities or external partnerships are not prioritized.

At the ***Reactive*** level, companies begin to address CE in response to external pressures, often driven by specific client demands or compliance requirements. These early-stage CE practices, often confined to limited departments like customer relations, are overseen by mid- level management, to ensure alignment with minimal regulatory and client expectations. To progress, companies must establish and document basic CE practices and compliance structures, laying the foundation for more systematic CE approaches.

The ***Active*** level emphasizes a broader and more structured CE approach within the organization, where key action areas such as IT & Digitalization and Company Management begin to interact closely. Circular potentials are identified on a more strategic, rather than *reactive*, basis, and

singular circular processes are even depicted in the business model of the IT service provider. For this, cross-functional collaboration with executive oversight becomes increasingly critical to ensure that CE initiatives align with organizational goals and are cohesively implemented across departments. For companies at this stage, coordination and alignment across departments are essential, with CE processes now more explicitly integrated into business models. While partnerships with external entities may enhance CE activities, they remain optional at this level of maturity.

The ***Established*** level represents a mature phase where organizations have fully integrated CE goals and processes across all functional areas. CE practices are monitored, with transparent public reporting of their results. Cross-functional team leaders, working closely with external stakeholders, are beginning to employ advanced tracking and transparency tools to monitor and optimize CE performance metrics. Now, collaboration across the ecosystem, including clients, suppliers and regulators, enhances circularity efforts and is, thus, relevant for qualifying for the last CEMM dimension. However, the focus for becoming a CE-proactive IT service provider is on maintaining alignment and continuous improvement within established CE frameworks.

Finally, the ***Proactive*** level represents the full integration of CE principles within the organization and extends beyond to driving CE within the broader ecosystem. IT service providers in this dimension have positioned themselves as leaders in CE practices. Senior leadership actively promotes best practices, adapts to new CE advancements, and engages frequently with clients, suppliers, and regulatory bodies. This dimension emphasizes continuous alignment and improvement, with a focus on driving industry-wide CE progress and maintaining the organization's leadership role in circularity initiatives. Collaboration across the economic, environmental, and social domains strengthens the company's CE impact within the industry.

Discussion

This research builds on previous work by broadening the scope of the CEMM to directly include IT service providers, rather than focusing on how IT consulting firms can support these companies in their CE

implementation (Koch de Souza & Engstler, 2024). The objective of this research was to develop a framework for measuring and enhancing sustainability through CE maturity within the IT services industry, addressing both economic and environmental challenges. The CEMM, based on a mixed-methods approach (SLR and focus group), serves as a tool for companies to assess their CE progress, identify areas for improvement, and implement sustainability strategies.

However, while the CEMM provides a structured framework tailored for IT service providers, certain limitations and challenges emerge when applying CE principles within this industry, which must be addressed. Although the CEMM enables maturity assessment across certain identified areas, translating the full scope of CE into standardized metrics remains challenging. External influences, such as regulatory changes and resource availability, often lie beyond a provider's control, posing difficulties for accurate quantification within the CEMM. These factors suggest that, while the CEMM provides a structured path, it may not fully account for uncontrollable variables, which can significantly impact a company's ability to achieve and sustain CE objectives.

The challenge of providing linear action steps within the maturity model should be considered a potential limitation in applying the CEMM (Berghaus & Back, 2016). Improvements in one action area may not lead to overall CE maturity, as progress is often non- linear across the five fields. Furthermore, the CEMM's highest maturity level, labeled 'Proactive', may not be a realistic or necessary goal for all IT service providers. For smaller companies or those in emerging markets, the 'Established' level may provide an effective balance and is a more realistic goal, as it emphasizes efficient CE practices without the extensive resource commitments demanded at the Proactive level. Further validation and testing of the CEMM are needed to help determine a sufficient maturity level that aligns impact with resource allocation, particularly in cases where additional CE investments yield minimal incremental benefits. A recommended avenue for future research would be to identify and benchmark a maturity level that effectively aligns CE goals with a company's business objectives and stakeholder expectations, without necessitating maximum maturity.

Conclusion

In conclusion, the CEMM provides a valuable and actionable framework for IT service providers to integrate CE principles into their operations, facilitating the transition from linear to sustainable, circular business models. By identifying five critical action areas – *Ecosystem, External Influences, Company Management, IT & Digitalization, and Circular Strategy* – the model provides a scalable maturity framework to guide the adoption of CE principles. Implementing this CEMM allows IT service providers to enhance resource efficiency, meet regulatory demands and improve sustainability without sacrificing profitability, ultimately enabling them to drive circular transformations. Furthermore, by refining the CEMM's dimension criteria into qualification criteria and specifying priority activities for achieving these qualifications, the model empowers IT service providers to lead their own circular transformations.

However, a key limitation of this study lies in its reliance on theoretical models and a limited set of experts within the focus group, all from a single company background, which may not fully capture the diverse operational realities of IT service providers across different markets. Therefore, future research should aim to validate the CEMM through empirical studies involving a broader range of companies. Additionally, the CEMM's application should be explored across various sectors to further validate and enhance its effectiveness in different service industries, making it more applicable to the broader (IT) service industry. Nonetheless, the CEMM not only provides IT service providers with a strategic tool to measure sustainability and navigate CE challenges, but also empowers them to achieve lasting economic and environmental benefits – positioning them for long-term success in an evolving market.

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MJERENJE ODRŽIVOSTI: MODEL ZRELOSTI KRUŽNE EKONOMIJE ZA PRUŽATELJE IT USLUGA

Sažetak

Industrija IT usluga suočava se sa značajnim izazovima u prilagodbi promjenjivim ekonomskim i ekološkim uvjetima, što je potaknulo povećan interes za kružnu ekonomiju (KE) kao održiv pristup koji može donijeti ekonomske i ekološke koristi. Unatoč njenom potencijalu, implementacija KE u sektoru IT usluga ostaje složena, budući da industriji nedostaju konkretne, kontekstualno prilagođene smjernice. Ovaj rad odgovara na taj izazov razvijanjem i predstavljanjem modela zrelosti kružne ekonomije prilagođenog pružateljima IT usluga. Identificiranjem ključnih područja djelovanja unutar KE i definiranjem pripadajućih aktivnosti, model služi kao praktičan okvir, nudeći ciljane preporuke za unapređenje zrelosti KE unutar IT sektora, čime se podupiru i ekonomska i održiva poboljšanja.

Model je temeljen na sustavnom pregledu literature, koji je detaljno opisan u zasebnoj publikaciji, te na fokusnoj grupi provednoj putem radionice sa stručnjacima. Rezultati ovih metoda i razvoj modela zrelosti KE ističu pet ključnih područja djelovanja: „Ekosustav“,

„Vanjski utjecaji“, „Upravljanje poduzećem“, „IT i digitalizacija“ te „Kružna strategija“. Koristeći sustav ocjenjivanja, razina zrelosti KE kod pružatelja IT usluga može se procijeniti u ovim područjima, dodjeljujući stupanj zrelosti od „neaktivan“ do „proaktivan“. Ova klasifikacija omogućuje IT poduzećima procjenu svog trenutnog stanja u pogledu ekološke i ekonomske održivosti te olakšava poboljšanu implementaciju KE.

Razvijeni model zrelosti KE tako služi kao praktičan alat za usvajanje i evaluaciju kružnih poslovnih modela i procesa, nudeći održivo rješenje za ekološke i ekonomske izazove s kojima se suočava industrija IT usluga. Nadalje, model zrelosti KE može se prilagoditi i drugim sektorima uslužne industrije i kreativne ekonomije.

Ključne riječi: kružna ekonomija, IT usluge, model zrelosti, održivost

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CONSUMER ATTITUDES TOWARDS BRANDS IN THE CONTEXT OF SUSTAINABILITY

Review Paper
https://doi.org/1059014/PYCM3332

Abstract

This paper investigates consumer attitudes toward brand sustainability with a specific focus on the values and purchasing behaviors of Generation Z. With sustainability emerging as a key factor influencing consumer choices, the study seeks to explore the intersection between brand commitment to environmental and social responsibility and consumer expectations. The purpose of this research is to understand how sustainability shapes consumer preferences and informs marketing strategies, particularly for eco-conscious brands.

Methodologically, the study employs secondary research to analyze existing data on brand sustainability perceptions, purchasing attitudes, and ethical consumerism. It further investigates the generational shift in sustainability priorities and its implications for brand communication and positioning. This approach provides insights into the alignment between consumer values and brand strategies in the context of growing environmental awareness and sustainability demands.

Keywords: brand, gen Z, marketing communication, purchasing desicions, sustainability

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Introduction

According to the 2023 Edelman Trust Barometer, people trust business more than government. As many as 48 percent of people find businesses a more trustworthy source of information than government (46 percent) or the media (42 percent), with only non-profit organisations having a higher trustworthiness than the business sector. Moreover, 63 percent of consumers report purchasing brands that align with their values and beliefs. This is supported by data from research agency NMS Research, which shows that 66 percent of people say they support a brand choosing to engage in activities that have a positive impact on society alongside their business. Generation Z, in particular, is very critical of brands in this regard and tracks their activity in supporting or not supporting various organisations or events. At the same time, this is the generation that declares their positive attitude towards sustainability the most, but is questionable when it comes to their purchasing decisions.

As the climate crisis continues to impact our lives, awareness of the need to act sustainably is growing among consumers of all ages, albeit at different rates. Brands and retailers who respond to consumer demand to think and act more sustainably will be better placed to succeed in an increasingly uncertain future.

"One of the objectives of marketing strategy is to improve the value of a company through brand image (Chang, 2012; Gao et al., 2016), and in the context of the sustainable environment, marketing strategy aimed at collaborating the issue surrounding environmentally friendly product (Ellison et al., 2016; Gupta & Kumar, 2013) and to gain a competitive advantage (Ellison et al., 2016). Green brand image is proven to give impact on consumer purchase intention (Chang, 2012) as it explains consumer judgment and perception on product image (Ramirez, 2013). Green brand image is formed based on consumers' mind through a series of perception (Mourad et al., 2012). In other words, green brand image is being interpreted by the consumer not only due to the company's social activities but through product offer (Kull & Heath, 2016)". (Alamsyah et al., 2020, 1963)

For the purpose of sustainable development, recent studies have delved into the significance of a green brand image. Research investigating the

dynamics of consumers' perceptions of benefits associated with green brands reveals that product attributes addressing functional, social expression, and outward-directed self-esteem needs play a pivotal role in enhancing the green brand image. Notably, functional benefits exert a more substantial influence on consumers' beliefs in a brand's environmental consciousness and commitment fulfillment compared to emotional benefits. The connection between ecological innovations and the green brand is direct. Harini et al.'s findings propose that ecological innovation, facilitated through intervening variables in ecological marketing, can significantly amplify the performance of green marketing and green brands (Loučanová et al., 2021).

When we talk about sustainable brands, we can define them as brands whose main mission is precisely their response to social challenges, climate change (and the other attributes we define above in the section on sustainability) in the form of their behaviour or the design of their products or services. However, from our point of view, in this context we cannot leave out the term 'brand purpose', which we translate as the mission or purpose of a brand. Although some marketers question this notion, others give it great importance in branding. Even communication scholar Julia Frohne distinguishes between the two concepts of 'purpose' and 'brand purpose' with regard to stakeholder groups: 'The distinction of stakeholder orientation offers a starting point for distinguishing between the two concepts. While "Purpose" as a comprehensive concept encompasses all stakeholders of a company, i.e. customers, employees, suppliers, local communities and shareholders, "Brand Purpose" focuses on shaping the relationship between the brand and the consumer". From a sustainability perspective, we can also talk about a certain brand mission in ESG (which we have defined above). At the same time, it is also a concrete differentiator against competing brands, notwithstanding the fact that today Generation Z is coming to the fore, for whom, according to the available data, sustainability represents one of the basic concepts in brand choice or overall purchasing decisions (although here too we can see limits, see the article Sustainability as a new trend in brand communication and its perception by Generation Z in this proceedings) (Galera Matúšová and Načiniaková, 2023).

Purchasing attitudes of consumers toward sustainability

On the one hand, we are talking about sustainable brands that are trying to find their mission in the market they are entering or already operating in, precisely in the theme of sustainability. On the other hand, we also need to look at consumer purchasing behaviour. The existence of a brand on the market depends on them. In this context, we can talk about ethical consumerism. According to Kaufmann et al. (2012) the fundamental difference between traditional and environmental purchasing behaviour is that in traditional purchasing behaviour the consumer perceives the benefits of the purchased goods immediately, whereas in environmentally conscious behaviour the outcome and value of the purchase is oriented towards the future (e.g. a cleaner environment). Khan et al. (2020) further state in their study that people who actively engage in environmentally conscious consumer behaviour generally come from three key segments:

a) consumers who grew up in periods in which they registered specific critical environmental issues and their impact on the environment was immediate and relevant,

b) highly educated consumers who are more likely to be aware of the environmental impact of their unsustainable consumer behaviour,

c)higher income groups who are able to bear the higher prices of sustainable green products.

> "Increasing climate change and environmental problems have led many consumers to express concerns about environmental sustainability. A recent consumer research report indicated that around 60 percent of consumers are willing to change their consumption habits to mitigate the environmental impact. (e.g. offering clean products, demonstrating environmental responsibility and promoting recycling). Sustainability has thus become an incentive for consumer purchasing decisions." (Tae Rang Choi & Ahn, 2023, p. 90)

Strong commitment to sustainability in their purchasing decisions is exhibited by Generation Z. This eco-conscious generation values environmental responsibility and expects brands to take a lead in addressing environmental issues. Respondents across all generations expect retailers and brands to become more sustainable. The study of The Baker Retailing Center at the Wharton School of the University of Pennsylvania (2021)

shows that three-quarters of Generation Z consumers state that sustainability is more important to them than brand when making purchase decisions. 75 percent of Generation Z survey participants prefer sustainability over brand name of product, and 71 percent of Millennials, 73 percent of Generation X and 65 percent of Baby Boomers agree. This study also shows that Generation Z is influencing the older generations to place more importance on sustainability in their purchasing decisions and that older generations including Baby Boomers, Generation X, and Millennials are disconnected with Generation Z on what sustainability actually means. The majority of Baby Boomers (44 percent), Generation X (48 percent), and Millennials (46 percent) believe that sustainability means products made from recycled, sustainable, and natural harvested fibers and materials but Generation Z (48 percent) believes that sustainability is more about sustainable manufacturing (Jezerc, 2021).

Sustainable consumption behavior, alternatively referred to as pro-environment or green behavior, is characterized by actions that contribute to environmental sustainability without causing harm, and in some cases, may even provide environmental benefits. These behaviors encompass various activities, including the purchase of eco-friendly products, efficient energy use, conservation of natural resources, responsible waste sorting of water and garbage, and the reduction of food and solid waste.

> "Unlike previous generations (who successively postponed this concern because they were focused on economic growth), today's young people, born after 1994, christened Generation Z (Gen Z) seem more aware and concerned about the depletion of natural resources, often claiming that there is no planet B. Gen Zer's attitudes, believes and behaviours have been shaped by issues such as globalization, terrorism, the 2008 financial crises, technology and the Covid-19 pandemic. Understanding this generation is paramount since, in 2020, it has become dominant in the world, representing 32 percent of the world's population, greatly surpassing the Millennium or Baby Boomer generation. Furthermore, by 2030, this generation will be the central workforce in society and will play a major role in creating a sustainable future and achieving SDGs. Thus, Gen Z is an indispensable and strategic component of building a sustainable future" (Yamane and Kaneko, 2021, according to Pinho and Gomes, 2023, p. 2)

Compared to prior generations, Gen-Z consumers possess greater awareness and concern for environmental and social issues and display a stronger propensity to engage in sustainable consumption practices. As Gen-Z consumers currently constitute approximately 40 percent of global consumers and are projected to become the largest consumer segment worldwide by 2030, their burgeoning spending power has become increasingly evident (Zhang et al., 2023).

> "Gen Z is also generally known for its 'idealism' —they're part of a new wave of inclusive consumers and socially progressive dreamers. Generally speaking, Gen Zers believe in doing their part to help stop the intensification of climate change and to establish greater equity for all. More than any other generation, Gen Z collectively demands purpose and accountability, the creation of more opportunities for people of diverse and underrepresented backgrounds, and rigorous sustainable and green practices". (McKinsey & Company, 2023, para 4)

A special report was realized by Edelman in June 2022 on 13,700+ respondents in 14 countries. According this report Gen Z wants to work with brands to have shared action, not moments (a clever ad) but movements toward demonstrable change. Nearly two-thirds of those 14-17 and 62 percent of those 18-26 say that they want to collaborate with brands on addressing issues, including racism, climate change and gender inequality. A stunning 84 percent of young Gen Zers (14-17) say that they buy on beliefs, with a five-point jump in the past year among those 18-26 years old to 64 percent saying they're activist via brand choice. By nearly a 2-to-1 margin, respondents want more 'We than Me'—they prefer to have brands make the world a better place over brands making them a better person. Gen Z has a broad remit for brands. Previous Edelman brand study from 2017 found that brands were expected to take a stand on behalf of consumers (50 percent) (Edelman, 2022).

Today, the brand must take a stand on issues that affect its employees (60 percent), its customers (59 percent) and how the products are made (55 percent). As of May 2022, the brand's stand must be reflected in what they do (63 percent, on average across items) including fair treatment of employees, where they do business, and their supply chain. The brand's communications must also demonstrate their stand via advertising and

on their website (62 percent, on average across items). The new responsibility is geopolitics, with 41 percent of consumers telling us that they have bought, or boycotted brands based on their response to the Russian invasion. There is a tangible payoff for brands that heed the call for action. When brands take a stand on human rights, climate, gender equity or racial justice, there is a 4-to-1 higher likelihood of purchase. Over half of adult Gen Z respondents say they're willing to pay a premium for brands that earn their trust and improve the world, more than their willingness to pay a premium for brands based on their image. Trusted brands get much higher loyalty and advocacy (67 percent) in the face of competition (Edelman, 2022).

> "Recent World Retail Congress report found a 'clear disconnect' between retailers' sustainability ambitions and their measurable progress. Of 37 retail businesses, more than 50 percent had not set any sustainability KPIs, despite 60 percent believing that their company goals were 'bold and differentiated'. Gen-Z are demanding substance behind retailers' sustainability goals – alignment with values alone is not enough. To be sustainable in the eyes of Gen-Z consumers requires tangible, authentic, demonstrable environmental action. Sustainaibility as a major priority shall not be only a response to a consumer trend, it should be a key element of wider business strategy." (Judkins, n.d.)

So, in order to become the brand of choice for Gen Z, companies need to not only communicate, but also act, with ethical standards. Like environmental impact, social impact should be measured within all aspects of the business; ensuring ethical business practices every step of the way, from corporate policy to third-party vendors.

Having experienced a turbulent economic climate through upbringing, this has built a strong sense of frugality within Generation Z. Authors Djafarova and Foots (2022) conducted a qualitative method in the form of 18 semi-structured interviews on participants aged within the Generation Z cohort in the United Kingdom. This study explores the factors that encourage Generation Z consumers to turn an ethical purchase intention into purchase behaviour. When they asked what participants perceive to be the biggest limitation to them purchasing ethically more frequently all of them mentioned cost. Price is therefore the main perceived barrier for

Generation Z with ethical purchase habits. Literature indicated that this is not just a singular price factor that limits ethical consumption. The essential factor in ethical consumption is the elevated relative price. Consumers find themselves being obligated to travel further distances to retrieve ethical product selections. They are not only be hit with higher product prices, but extra costs incurred with traveling. Further to this, negative environmental impact from extra traveling feels counterproductive to consumers (Barbarossa and Pastore, 2015). Hence, consumers are inclined toward convenient product purchases while maintaining a heightened awareness of recycling and minimizing waste consumption. When discussing perceived behavioural control participants were also asked about purchase enablers with ethical products. Thirteen respondents (out of 18) agreed that social media influencers are a great tool when purchasing ethically (Djafarova and Foots, 2022).

Conclusion

A green brand image is crucial for sustainable development, as it impacts consumer purchase intention and perceptions of product image Generation Z, who declares a positive attitude towards sustainability the most, is particularly critical of brands and their purchasing decisions. Research has shown that Generation Z demonstrates heightened pro-environmental attitudes and a greater interest in the condition of the natural environment compared to preceding generations. They actively express concern for environmental degradation and declare a heightened awareness of the environmental state. This generation's strong commitment to sustainability is reshaping consumer behavior and influencing older generations to prioritize sustainability in their purchasing decisions as well. This study underscores the critical role of incorporating sustainability into branding and marketing strategies. Businesses should focus on authenticity and measurable outcomes to align with consumer expectations, particularly those of Gen Z, who demand tangible environmental actions rather than symbolic gestures. Additionally, brands must navigate the challenges of educating consumers about their sustainability efforts while ensuring affordability, especially for younger generations. However, we see limits in the declared and actual purchasing behaviour of Generation Z in relation to sustainability. The economic situation of this generation, which is just

entering the labour market, often does not allow them to behave sustainably in some areas and to be more inclined towards, for example, fast fashion, which we also see as an opportunity for further research.

Future studies could also explore the long-term impact of sustainability communication on brand loyalty across different consumer segments and regions. Comparative analyses between generational cohorts can provide a deeper understanding of the evolving attitudes toward sustainability.

Acknowledgement

Funded by the EU NextGenerationEU through the Recovery and Resilience Plan for Slovakia under the project No. 09I03-03-V02-00018.

The scientific paper was *prepared in the framework of the sub-phase of the project 1/0304/24 entitled The Impact and Value of Digitization of Product Marketing Communication Innovations for Generations of Ecological Users.*

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STAVOVI POTROŠAČA PREMA BRENDOVIMA U KONTEKSTU ODRŽIVOSTI

Sažetak

Ovaj rad istražuje stavove potrošača prema održivosti brendova, s posebnim naglaskom na vrijednosti i kupovne navike generacije Z. S obzirom na to da održivost postaje ključan faktor koji utječe na potrošačke odluke, cilj istraživanja je ispitati povezanost između predanosti brendova ekološkoj i društvenoj odgovornosti i očekivanja potrošača. Svrha ovog istraživanja je razumjeti na koji način održivost oblikuje potrošačke preferencije i kako informira marketinške strategije, osobito u slučaju ekološki osviještenih brendova.

Metodološki, istraživanje se oslanja na sekundarnu analizu podataka, proučavajući postojeće informacije o percepciji održivosti brendova, kupovnim stavovima i etičkoj potrošnji. Također istražuje generacijske promjene u prioritetima vezanim uz održivost i njihov utjecaj na komunikaciju i pozicioniranje brendova. Ovakav pristup pruža uvid u usklađenost potrošačkih vrijednosti i strategija brendova u kontekstu sve veće ekološke svijesti i zahtjeva za održivim poslovanjem.

Ključne riječi: brend, generacija Z, marketinška komunikacija, kupovne odluke, održivost

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GUERILLA MARKETING IN THE PRISM OF SUSTAINABILITY

Professional Paper
https://doi.org/1059014/UPBB6746

Abstract

This paper examines the intersection of guerrilla marketing and sustainability, focusing on how unconventional marketing strategies can foster environmentally and socially responsible business practices. Guerrilla marketing is defined by its creative, low-cost tactics that enable brands to engage consumers in impactful ways without requiring significant resource expenditures. This approach not only challenges traditional marketing paradigms but also aligns with the growing consumer demand for sustainability. The paper provides a comprehensive overview of guerrilla marketing, traditional marketing, and sustainable marketing, highlighting their key characteristics and differences. Traditional marketing often relies on established, high-budget strategies, while guerrilla marketing thrives on innovation and resourcefulness. In contrast, sustainable marketing emphasizes long-term ecological balance and social responsibility, integrating these values into all aspects of a business's operations. As businesses increasingly prioritize sustainability, the future of guerrilla marketing appears promising. By leveraging its inherent creativity, guerrilla marketing can create memorable consumer experiences that resonate with environmentally conscious audiences. This paper seeks to answer critical questions about the potential for guerrilla marketing to evolve within a sustainable framework, exploring how brands can harness its principles to foster positive social and environmental outcomes. Ultimately, the findings suggest that when executed thoughtfully, guerrilla marketing can not only drive brand engagement but also contribute significantly to the broader goals of sustainability *and responsible business practices.*

Keywords: difference, future, guerrilla, sustainable marketing

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Introduction

In an ever-evolving marketplace, businesses continuously seek innovative strategies to engage consumers and distinguish themselves from competitors. Marketing has traditionally relied on established methods, focusing on extensive advertising campaigns and predictable messaging. With the rise of digital technologies and evolving consumer behaviors, guerrilla marketing has become an appealing option. Defined by its unconventional strategies and budget-friendly initiatives, guerrilla marketing seeks to craft impactful experiences that strongly connect with target audiences. This paper explores the definition of guerrilla marketing, traditional marketing, and sustainable marketing, highlighting the key differences between traditional and guerrilla marketing. While traditional marketing often emphasizes reach and frequency, guerrilla marketing thrives on creativity and surprise, enabling brands to achieve significant impact with limited resources. As sustainability becomes a critical concern for consumers and businesses alike, this paper also investigates how guerrilla marketing can align with sustainable practices. Ultimately, this paper seeks to find out if guerrilla marketing can serve as a powerful tool for achieving sustainable marketing goals and fostering a more responsible future for the industry. Methodology used in this paper is based on two research questions, the first being "Is guerrilla marketing more sustainable than traditional marketing?" and the second "Is guerrilla marketing the future of sustainable marketing?".

Guerilla marketing

Guerrilla marketing is a strategy that involves using unexpected or unconventional methods to promote a product or service. It often emphasizes personal interactions, operates on a limited budget, and relies on creative ideas to engage specific target audiences, focusing on smaller groups to spread the word in a particular area.

This approach emerged as a response to the transition from traditional media like print, radio, and television to digital platforms. This term was coined by Jay Conrad Levinson in his 1984 book "Guerrilla Marketing," the objective is to generate excitement about a product or brand,

increasing the chances that consumers will purchase it or discuss it with others (Doyle, 2011). Guerrilla marketing is viewed as a branch of marketing, marking a notable stage in its evolution. It involves unconventional and distinctive promotional strategies that enable a company to achieve significant results swiftly with limited financial resources. The essential elements include time, energy, and creativity, with human psychology serving as the basis for its application (Levinson, 2008). The term "guerrilla" is mostly connected to the word war, even though in this context it is not, guerrilla tactics remain closely tied to their military origins.

These strategies emerged from armies that lacked the resources for conventional warfare, prompting them to innovate and utilize available resources creatively—essentially turning challenges into advantages. In military terms, guerrilla strategies involve seizing unexpected opportunities to strike the opponent and then disappearing back into the surroundings (Garrigan, Margolis, 2008). Guerrilla marketing inherently creates a more personal connection with consumers compared to traditional marketing methods. It's often called "relationship marketing" or "love marketing" because it aims for a close, intimate bond. Engaging with consumers as individuals is generally appreciated, as it encourages them to not only become customers but also advocates for a brand. This is where the strength of guerrilla marketing is (Garrigan, Margolis, 2008). Guerrilla marketing is an innovative advertising strategy that focuses on engaging consumers in unconventional settings, often at street level or through events. Instead of concentrating on the typical "what"—such as a product, slogan, or direct message—this approach emphasizes the "how," specifically how to deliver an interactive and unforgettable experience for the consumer. It aims to build unique and personal connections with the audience, frequently through surprising, intriguing, or entertaining interactions (Levinson, 1984). A key aspect that sets guerrilla marketing apart from traditional advertising approaches is its rejection of typical marketing boundaries and platforms. Instead of relying on standard channels like television ads, billboards, or digital banners, guerrilla marketing leans into public spaces, live events, and innovative tactics that resonate with the intended audience on a more personal and emotional level. These campaigns are designed to stand out and stick in people's minds, often encouraging word-of-mouth sharing and creating a sense of curiosity or wonder among viewers. For example, a guerrilla marketing campaign might involve eye- catching street

art installations, interactive pop-up experiences, or clever product placements in high-traffic urban areas. The objective is to spark genuine interest and engagement, catching the audience off-guard in places or situations where they might not expect a marketing message. By targeting people in their natural, day-to-day environments and encouraging participation or interaction, guerrilla marketing prioritizes creating an immersive experience that feels authentic, memorable, and specifically crafted for the target demographic. In essence, guerrilla marketing's success relies heavily on creativity, novelty, and a deep understanding of the audience's behaviors and preferences. It's this combination of elements that allows guerrilla marketing to cut through the noise of traditional advertising, delivering a message in a way that is not only unique but also deeply impactful (Garrigan, Margolis, 2008). The principles of guerrilla marketing can be captured in sixteen key concepts: commitment, investment, consistency, confidence, patience, variety, follow-up, convenience, surprise, evaluation, engagement, reliance, tools, approval, substance, and enhancement.

1. There needs to be a commitment to a marketing strategy.
2. This strategy needs to be viewed as a valuable investment.
3. The consistency of the program must be ensured.
4. There needs to be confidence instilled in the prospects regarding a business.
5. To uphold commitments there needs to be patience.
6. Recognition that marketing involves a range of strategies.
7. Understanding that profits come after making a sale.
8. Organizing a business in a way that prioritizes customer convenience.
9. Incorporating an element of surprise in marketing efforts.
10. Using metrics to evaluate the effectiveness of strategies.
11. Demonstrating engagement with customers through regular follow-ups.
12. Building mutual dependencies with other businesses.
13. Mastering the tools of guerrilla marketing, particularly in technology.

14. Using marketing to gain prospects' approval, then expanding that approval to secure sales.
15. Focusing on selling the substance of a product rather than just its presentation.
16. Once there is a comprehensive marketing program in place, work needs to be done on enhancing it instead of it becoming complacent (Levinson, 2007).

Guerrilla marketing can be a cost-effective choice, particularly for startups, local businesses, or companies with fewer corporate constraints. This approach utilizes informal methods to share marketing messages, allowing professionals to be creative and often making guerrilla campaigns more enjoyable to implement. However, these strategies tend to be less organized, which can lead to a higher likelihood of failure and lower overall success. Additionally, marketing professionals may struggle to gather metrics to assess the effectiveness of the campaign (Levinson, 1984).

Traditional Marketing

The term "marketing" dates back to the 19th century, but it wasn't until the 1950s that it began to take its current form. For a long time, marketing depended entirely on print media, such as newspapers, magazines, flyers, and other written advertisements. The emergence of radio and television brought a significant change, enabling marketing to reach these new platforms and fueling the advertising boom of the 1950s. Traditional marketing includes all the strategies that were used before the rise of digital marketing. It refers to any approach that employs offline media to engage audiences. Typical examples are newspaper and print ads, billboards, direct mail, and television and radio commercials (Keller, Kotler, 2016). Traditional marketing plays a crucial role in reaching audiences who are not constantly on their computers or smartphones. It can effectively target a broader demographic by placing advertisements in public spaces that many people frequent. Billboards and bus ads can enhance brand awareness and draw in potential customers. If your aim is to engage a local audience, traditional marketing methods such as television and radio commercials, print materials, or newspaper ads can help you connect

with the community and increase your visibility among local residents (Armstrong, Kotler, 2020).

There are eight types of traditional marketing methods. They include:

1. Handouts

A handout is a document (that is printed), such as a brochure or a flyer, used to promote a business, event, or sale. These flyers can be designed to be displayed in public spaces frequented by community members, informing them about promotional activities at a specific location. Brochures can offer detailed information about a company or describe the features of a product, which can be distributed at events or during client visits. Potential customers may be inclined to keep handouts for future reference when they want to learn more about that business or product.

2. Billboards

Billboards are commonly located along highways or major roads and showcase advertisements and company graphics. They usually combine images with concise text to deliver a quick yet memorable message to drivers. Creative billboard ads can enhance brand recognition and recall. Because billboards reach diverse audiences from multiple locations, they can be particularly effective for those aiming to achieve local or national brand visibility.

3. Direct mail

Direct mail marketing involves sending printed materials, such as letters or postcards, to the addresses of potential customers within a targeted area. These materials can be mailed directly to individuals who have shown interest in a company or its products. Alternatively, they can be sent to community members living near the business. This strategy raises awareness of the company and helps customers recognize how conveniently close they are to it. Many organizations, including nonprofits and fundraising groups, utilize direct mail as an emotional marketing tool. They may send letters to introduce their mission and the causes they support, fostering a personal connection between the recipient and the organization.

4. Print ads

Print advertisements enable companies to connect with a larger pool of potential customers through platforms like newspapers and magazines. If a business aims to increase community awareness, placing ads in local

newspapers can inform people about the brand, its location, and its offerings. It's important to identify the magazines or reading materials that the target audience typically engages with. This way, a company can strategically place its advertisements in these publications to generate more sales leads.

5. Event marketing

Event marketing provides the opportunity to create promotional materials for display at industry events such as seminars, conventions, or conferences. Developing booths and larger items like signs or banners can draw in attendees and educate them about the company and its offerings.

6. Broadcasting

Another effective way to achieve local or national recognition is by producing commercials for radio and television. Engaging ads can provide customers with valuable information about a brand and its products. When listeners or viewers hear or see these advertisements, it may spark their curiosity, prompting them to research the company or reach out for more information.

7. Cold calling

Also known as telemarketing, this marketing approach involves companies selling their products or services over the phone. Both business-to-business (B2B) and business-to- consumer (B2C) companies can use cold calling. By employing a cold-calling strategy, companies can engage with potential customers to explain their products and how they can address specific challenges faced by the customer or their business. This method fosters a personal connection and helps establish trust between the company and prospective clients.

8. Product placement

Product placement is a type of advertising where a company prominently features its product or brand within a television show, movie, or other media. The aim is to establish a subtle link between the product and the entertainment content, increasing the likelihood that viewers will choose to purchase the product. Some marketers also refer to product placement as embedded marketing, brand integration, or branded entertainment (Armstrong, Kotler, 2020).

The differences between traditional and guerrilla marketing

Traditional marketing and guerrilla marketing represent two distinct approaches to consumer engagement, each characterized by unique strategies and goals. Traditional marketing employs structured, scalable methods using mass media such as television, radio, print, and digital platforms to deliver consistent messaging to broad audiences, emphasizing predictability and control through demographic and psychographic segmentation (Hutter & Hoffmann, 2011). This approach serves as a foundation for long-term brand positioning and consumer loyalty, relying on measurable indicators like market share and brand recall (Jankovska, 2018). In contrast, guerrilla marketing prioritizes creativity and emotional resonance, using unconventional tactics like street art, flash mobs, and viral campaigns to generate buzz and word-of-mouth promotion, often appealing to startups and small enterprises with limited budgets (Saucet & Cova, 2015). Guerrilla strategies focus on spontaneity and memorable experiences rather than immediate conversions, leveraging public spaces and organic sharing for amplification (Gillert, 2021). Although guerrilla marketing's success metrics are harder to quantify, its ability to foster emotional connections has attracted even large corporations seeking to complement traditional campaigns with innovative, attention-grabbing initiatives (Kavoura et al., 2019). Hybrid approaches blending traditional and guerrilla tactics have emerged as particularly effective in today's fragmented media landscape, as seen in campaigns that create viral potential through unconventional elements while reinforcing messages via consistent multi-channel outreach (Jankovska, 2018; Saucet & Cova, 2015).

Sustainable marketing

Sustainable marketing is an approach that seeks to balance economic objectives with ecological responsibilities by redesigning products and systems to be more environmentally friendly. This concept has gone by various names, including green marketing, environmental marketing, and ecological marketing, which has sometimes led to confusion and misinterpretation of its true purpose. The term "sustainable marketing," however, has become widely accepted as it reflects a consistent approach aligned

with sustainable development principles, which emphasize meeting present needs without compromising the ability of future generations to meet theirs. At its core, sustainable marketing is defined as the strategic process of planning, implementing, and controlling the development, pricing, promotion, and distribution of products with three specific goals in mind. First, sustainable marketing aims to meet customer needs by providing products that deliver value, quality, and utility. Second, it seeks to achieve the business's goals, which could range from increasing sales and market share to enhancing brand reputation and customer loyalty. Third, and most distinctively, sustainable marketing requires that the entire marketing process be in harmony with ecosystems. This means ensuring that production, distribution, and consumption are carried out in ways that minimize environmental impact, reduce waste, and support the health of the planet's ecosystems (Kotler, Lee, 2008).

Rather than representing a radical shift from traditional marketing, sustainable marketing builds on the existing principles of contemporary marketing, such as customer satisfaction and organizational goal achievement. However, it differentiates itself by embedding environmental stewardship into every stage of the marketing process. For instance, a business practicing sustainable marketing would not only aim to create a product that appeals to consumers but would also consider how that product can be manufactured, packaged, and delivered in an environmentally responsible manner. This might involve using renewable resources, choosing sustainable packaging, or investing in efficient, eco-friendly logistics systems. By doing so, the business can reduce ecological costs — the hidden environmental toll associated with production and distribution — while still achieving its primary goals. In summary, sustainable marketing provides a framework for businesses to actively manage their marketing efforts in a way that fulfills customer needs, meets organizational objectives, and prioritizes ecosystem health. This alignment of business and environmental goals helps to foster long-term societal well-being, building consumer trust and loyalty while contributing to a more sustainable future (Fuller, 1999).

Sustainable marketing takes a comprehensive approach, encouraging companies to integrate sustainability deeply into their core values and guiding principles. To authentically embrace sustainable marketing, a company should reflect this commitment in its mission and vision, making it

clear that environmental and social responsibility are fundamental to its operations. This approach requires forward-thinking strategies that not only drive profitability but also generate positive impacts for society. To achieve these goals, companies can develop sustainable marketing strategies through four key avenues. First, they can promote "re- consumption," which involves encouraging customers to reuse or recycle products, reducing waste and extending the lifecycle of goods. Second, they can work on "redirecting customer needs and wants," aiming to align consumer desires with sustainable options by educating them on environmentally responsible choices or highlighting benefits of green products. Third, businesses can focus on "reorienting the marketing mix," where traditional elements like product, price, place, and promotion are adjusted to prioritize sustainability. This might include designing eco-friendly products, setting prices that reflect environmental costs, or selecting distribution methods that lower carbon emissions. Finally, companies should consider "reorganizing organizational efforts," ensuring that sustainability is woven into every department and process, from supply chain management to corporate communications. By structuring internal efforts around sustainability, corporations can create a cohesive and genuine commitment to sustainable marketing that resonates with customers, employees, and stakeholders alike (Kotler, Lee, 2008).

Reconsumption

Companies need to be fully aware of how their products are manufactured and the environmental consequences associated with their production. It is not enough for them to consider only the impact on consumers; they must also evaluate and address the product's entire ecological footprint. Products should aim to be "eco-balanced," meaning they minimize risks and reduce environmental impact throughout their entire lifecycle. An essential aspect of this is "re-consumption," or the capacity for products to be used and reused—either in whole or in part—across multiple cycles or generations. This idea is promoted by a new, progressive marketing approach that aspires to make companies leaders in sustainability within an economic system. Looking forward, businesses will increasingly need to aim for "zero pollution" and "zero waste," rethinking product development to prioritize ecological considerations and adapt to evolving environmental expectations.

Redirection

Resource consumption is exceeding the rate of extraction, leading to resource exploitation. To address this, individuals should adopt habits that prioritize reduced resource use. However, until this shift becomes widespread, marketers have a role in guiding consumer behavior towards more eco-friendly products. To encourage consumers to turn their awareness of environmental issues into purchasing choices, marketers can utilize communication and promotional strategies that appeal to this underlying interest, fostering a preference for sustainable options.

Reorientation

Reorienting the marketing mix involves marketers considering strategies like repackaging, relabeling, reformulating, and repositioning products to enhance their environmental compatibility. This means that not only should the product itself be eco-friendly, but its packaging should also be biodegradable. Many companies have already begun using biodegradable packaging, and others are quickly moving to adopt it as well. This reorientation also includes adding environmental information on product labels, eliminating harmful ingredients, and enhancing energy efficiency to make products more sustainable than typical market options.

Reorganization

To become a sustainably developed company, organizations must undergo reorganization, restructuring, and redesign of various processes and systems. Implementing effective incentive programs can motivate employees to contribute toward these sustainability goals. Changes might include creating environmentally friendly product alternatives and establishing amanagement approach that thoroughly considers each business aspect while fostering a culture of continuous learning.

Government Intervention for Sustainable Development

While it is essential to raise consumer awareness about environmental issues, comprehensive environmental protection requires active government involvement. In this context, government mechanisms that can drive

positive environmental change need to be identified and leveraged. Although sudden governmental interventions may disrupt current business practices, the government must lead in advancing sustainable marketing efforts globally.

Reforms

Reforms in cultural, social, and political spheres are essential for achieving sustainable development. This requires aligning production and consumption patterns across nations. Both production and consumption practices need to be reformed and should evolve in tandem.

Promotion

The government's role in sustainable development goes beyond merely imposing fees or taxes; it includes fostering the development of innovative, cleaner technologies to expedite the production of sustainable goods. For instance, just as the government supports export promotion through information, training, and other assistance services, it should also implement similar programs to encourage sustainable business practices among firms.

Participation

Through active involvement in procurement, research and scientific development, and international agreements, the government can support industries and the public in achieving sustainable development. Funds dedicated to research in this area can create a snowball effect, enhancing both the quantity and quality of research within academic institutions. This approach enables the government to fulfill its commitments to sustainable development and sustainable marketing (Bhatnagar et. al., 2020).

Research

Is guerrilla marketing more sustainable than traditional marketing?

Guerrilla marketing has the potential to be significantly more sustainable than traditional marketing due to its emphasis on resource efficiency and

creativity over material consumption. Unlike traditional marketing, which often involves high-budget campaigns requiring extensive use of printed materials, billboards, or large-scale media production, guerrilla marketing minimizes physical resource use while achieving substantial impact. For instance, campaigns like the Deadpool Valentine's Day Tinder Campaign effectively utilized existing digital platforms to create a powerful marketing impact with minimal environmental footprint. Additionally, guerrilla marketing campaigns are often localized and targeted, reducing the carbon emissions associated with broad distribution channels typical of traditional marketing. By focusing on specific audiences within defined geographic areas, guerrilla marketing can lower transportation emissions and avoid unnecessary material waste. This focus on immersive, in-person experiences and digital amplification through social media further enhances its sustainability by reaching broad audiences without additional material costs, significantly reducing the ecological impact of mass-marketing techniques. Campaigns that encourage word- of-mouth promotion extend their reach organically, eliminating the need for ongoing resource expenditure. However, the sustainability of guerrilla marketing is heavily dependent on execution, as campaigns involving temporary physical installations or props can generate waste if not planned with recyclable or biodegradable materials. For guerrilla marketing to reach its full sustainability potential, businesses must integrate eco-friendly practices at every stage of campaign design and implementation. By combining innovative strategies, localized targeting, and resource-conscious practices, guerrilla marketing offers a compelling and sustainable alternative to traditional marketing methods.

Is guerrilla marketing the future of sustainable marketing?

Guerrilla marketing demonstrates significant potential to shape the future of sustainable marketing by aligning creativity with environmentally conscious practices. Its resource- efficient nature, combined with its ability to create high engagement, positions it as a strong contender for leading sustainable marketing strategies. One of guerrilla marketing's core advantages is its capacity to create memorable, immersive experiences that resonate with audiences. Unlike traditional advertisements that may blend into the background, guerrilla marketing's focus on uniqueness and surprise captures attention while avoiding the need for repeated, resource-intensive

campaigns. For instance, campaigns designed to be shared virally on social media platforms can reach millions with minimal additional environmental impact. Additionally, guerrilla marketing naturally aligns with sustainable marketing principles by often including an educational element. Campaigns that highlight environmental issues, promote green behaviors, or use recycled materials actively engage audiences in sustainability discussions. This educational focus encourages long-term behavioral changes, fostering a culture of environmental awareness. Despite its promise, guerrilla marketing faces challenges in becoming the definitive future of sustainable marketing. Its small-scale, localized nature can limit its reach on a global scale, making it essential for businesses to integrate guerrilla tactics into larger, coordinated strategies. Furthermore, the reliance on surprise and novelty can pose difficulties in maintaining long-term audience engagement. As such, businesses must strategically combine guerrilla marketing with ongoing efforts to reinforce brand commitment to sustainability. Guerrilla marketing's future as a sustainable approach depends on how effectively companies embrace its principles while addressing its limitations. By integrating guerrilla marketing into comprehensive, long-term strategies, businesses can amplify its impact, ensuring it becomes a cornerstone of sustainable marketing practices.

Conclusion

In conclusion, guerrilla marketing presents itself as a strong contender for the future of sustainable marketing due to its emphasis on creativity, resource efficiency, and community engagement, all of which align closely with rising environmental and social priorities. By reducing material consumption and focusing on localized efforts, guerrilla marketing stands in sharp contrast to traditional marketing, which often depends on resource-heavy campaigns involving large-scale production, extensive media use, and wide distribution networks that impose significant environmental and financial burdens. Through the strategic use of digital platforms and amplification via social media and word-of-mouth, guerrilla marketing can achieve substantial impact with minimal ecological footprints. Its innovative and immersive engagement strategies not only lower environmental impact but also strengthen consumer connections, fostering loyalty and reducing reliance on repetitive, resource-intensive campaigns.

However, challenges such as scalability remain, as the need for constant novelty and creativity can be demanding, particularly for larger organizations or sustained initiatives. Moreover, the sustainability of guerrilla marketing hinges on careful execution, including the use of eco-friendly materials to minimize waste in temporary installations or props. Blending guerrilla marketing's resource-efficient creativity with the scalability and reliability of traditional marketing through hybrid models offers a promising solution. Such an approach could enhance sustainability, improve cost efficiency, and stimulate innovation within traditional marketing frameworks. By combining guerrilla marketing's inventive, low-resource techniques with traditional marketing's capacity for broader reach, businesses could establish a new benchmark for marketing strategies that align with vital sustainability goals. Guerrilla marketing's adaptability, affordability, and alignment with sustainable practices make it a transformative and leading option for the future of sustainable marketing.

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GERILSKI MARKETING U PRIZMI ODRŽIVOSTI

Sažetak

Ovaj rad istražuje povezanost gerilskog marketinga i održivosti, fokusirajući se na to kako nekonvencionalne marketinške strategije mogu potaknuti ekološki i društveno odgovorno poslovanje. Gerilski marketing definira se kroz kreativne, niskobudžetne taktike koje omogućuju brendovima da na upečatljiv način angažiraju potrošače, bez velikih troškova resursa. Ovakav pristup ne samo da dovodi u pitanje tradicionalne marketinške paradigme, već je i usklađen s rastućim potrošačkim zahtjevima za održivim poslovanjem. Rad pruža sveobuhvatan pregled gerilskog marketinga, tradicionalnog marketinga i održivog marketinga, ističući njihove ključne karakteristike i razlike. Tradicionalni marketing često se oslanja na uhodane, visokobudžetne strategije, dok gerilski marketing uspijeva zahvaljujući inovativnosti i snalažljivosti. S druge strane, održivi marketing naglašava dugoročnu ekološku ravnotežu i društvenu odgovornost, integrirajući te vrijednosti u sve aspekte poslovanja. Kako poduzeća sve više daju prednost održivosti, budućnost gerilskog marketinga izgleda obećavajuće. Korištenjem svoje inherentne kreativnosti, gerilski marketing može stvoriti nezaboravna potrošačka iskustva koja odjekuju među ekološki osviještenim publikama. Ovaj rad nastoji odgovoriti na ključna pitanja o potencijalu razvoja gerilskog marketinga u održivom okviru, istražujući kako brendovi mogu primijeniti njegove principe za postizanje pozitivnih društvenih i ekoloških učinaka. Zaključno, rezultati istraživanja pokazuju da gerilski marketing, kada se provodi promišljeno, ne samo da može povećati angažman potrošača, već može značajno doprinijeti širim ciljevima održivosti i odgovornog poslovanja.

Ključne riječi: budućnost, gerilski marketing, održivi marketing, razlika

Uwe Eisenbeis[29]

BEING RESILIENT AGAINST TECHNOLOGICAL DISRUPTION – THOUGHTS ON EIGHT DIMENSIONS OF A SUSTAINABLE TECHNOLOGY PORTFOLIO MANAGEMENT WITHIN THE DIGITAL AND MEDIA INDUSTRY

Preliminary Communication
https://doi.org/1059014/SYWC1451

Abstract

The topic of 'sustainability' is relevant to the digital and media industry in several respects: Digital and media companies can only survive in the long term if they remain competitive, particularly in terms of technology. The media industry has seen some radical transformations caused by new technologies. This is achieved, among other things, through appropriate technology management. Only a sustainable (long-term balanced) technology portfolio can prevent companies from being pushed out of the market due to technological innovation or even technological disruption. This article deals with some conceptual reflections on the development of a technology portfolio management (or technology investment portfolio management) that is intended to ensure the long-term competitiveness and the survival of companies. In terms of setting a strategic path for the future, the aim is to shape technology adoption behaviour and the resulting technology adoption strategies. In the context of a sustainable technology portfolio eight dimensions of managerial decision-making will be introduced.

Keywords: Economic Sustainability, Technology Acquisitions, Technology Investments, Technology Management, Technology Portfolio

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Technology Investments as Management Decisions Involving Risk

Taking into account 40 technologies classified by the consulting firm Gartner as 'emerging technologies' over the past 20 years (Fenn and Raskino, 2008; Fenn, Raskino and Burton, 2013; Panetta 2021) the 100 largest digital and media companies have collectively made over 3,000 equity investments in and acquisitions of technology companies, with a particular focus on start- ups (Crunchbase, 2021).

Since the so-called 'new economy boom' around the year 2000, and later driven on the one hand by the GAFAM companies (Wiedemann and Dielmann, 2020) and on the other by the start-up boom in the digital economy, investment in technology companies and start-ups or acquisitions and buy-outs has become a key component of the competitive strategy portfolio of companies (Dolata, 2017).

The motivations for these investments (equity investments, corporate venture capital and acquisitions) are numerous and diverse. Among others, they include the desire to gain insight into emerging and future technologies, to acquire technology patents, to influence the further development of technologies, to integrate these technologies into one's own products and services, and to benefit financially from the increase in the value of these technology companies. Ultimately, the objective is to secure or establish a competitive advantage in the short, medium, and long term through technology investments and acquisitions (Eisenbeis and Ciepluch, 2023).

Technology investment, particularly in technologies that are anticipated to be productive and profitable only in the medium to long term, presents both opportunities and an inherent element of uncertainty and risk (Jiang et al., 2014; Eisenbeis, 2022). These risks may include the following: the expected capabilities may prove to be overestimated or incorrect; competing technologies may emerge in the period between investment and amortization; further development may fail; market readiness may be delayed; and technologies may even become obsolete. More generally, internal and external conditions may change, with the consequence that technology investments may turn out to be failed investments in retrospect. Despite the best efforts in analysis and planning, there is always a possibility that a decision may not yield the desired outcome.

In light of the aforementioned risks, it is evident that technology investments require a risk management strategy. This entails a comprehensive examination of the economic sustainability of a firm's technology portfolio.

Sustainability as the Basis for Long-Term Competitiveness

The topic of sustainability is relevant for the digital and media industry in several respects: Digital and media companies (following Voci et al., 2019), like all other businesses, should pay attention to sustainability in all processes and thus operate in a sustainable manner overall (Scholz, Eisenbeis and Schaaf, 2009; Maxwell and Miller, 2021). For instance, green production in film and television industry has received a lot of attention in recent years (Sustainable Entertainment Alliance 2024). Streaming and artificial intelligence require completely new ways of dealing with the new energy demands (Leffer, 2023; Afzal et al., 2024).

According to the common understanding, sustainable management has three dimensions (Hauff, 1987; Meyer, 2008): ecological, social and economic sustainability. Economic sustainability (and this is the only dimension referred to in this article) does not only mean financial aspects, for example remaining liquid and solvent or making a profit (usually main corporate objectives), but is also directed towards the company's long-term competitiveness and thus its ability to survive. Long-term competitiveness is one of the most relevant goals for all stakeholders of a company (Mitroff, 1983; Freeman, 1984).

Sustainable Technology Portfolio Management as a New Challenge

Media companies can only survive in the long term (which has always been true, but is especially relevant today) if they remain competitive, particularly in terms of technology. This is evident in light of the fact that technological innovations have always shaped the development of media innovations (Broich 2015). The phenomenon of 'digitalization', which has been influencing and changing the media industry for a quarter of a century, is also primarily driven by technology (Godefroid and Kühnle,

2018). In addition, new technologies are not only seen as an opportunity for new competitive advantages, but also as a cause for the erosion of existing competencies of established companies (Abernathy and Clark, 1985; Porter, 1985; Tushman and Anderson, 1986). Throughout the history of the media industry in particular, new technologies have led to radical transformations (Küng, 2017). In this respect, it is (today) a key task of the management of digital and media companies to ensure the future viability of the business model and thus to ensure general competitiveness (and thus economic sustainability). This is achieved, among other things, through appropriate technology management – or more specifically: making sure that the technology portfolio is sustainable (consistent in the long term). Only a sustainable (long-term balanced) technology portfolio can prevent companies from being pushed out of the market due to technological innovation or even technological disruption (Olivan, 2019). For example, it is evident that Kodak (Muim 2012) and Nokia (Kornelakis and Petrakaki, 2024), for instance, have failed to maintain a consistent and sustainable technology portfolio. Another example is the music industry as a whole: Companies in the music industry have failed to capitalise on several technological developments, resulting in an industry crisis ('MP3-crisis')(Leyshon et al., 2005).

Eight Possible Dimensions for a Sustainable Technology Portfolio Management

Against this background of the aforementioned, this article deals with some conceptual thoughts on the development of a technology portfolio management (or technology investment portfolio management), which are intended to ensure the long-term competitiveness and survival of companies. In terms of setting a strategic path for the future, the aim is to shape technology adoption behaviour and the resulting technology adoption strategies.

From the perspective of decision-oriented risk management (Gleißner, Stein and Wiedemann, 2021) and sustainable corporate development in the sense of long-term competitiveness (Nobanee et al., 2021), companies and their management are fundamentally concerned with making a conscious decision about their technology portfolio as soon as new

technologies emerge and in the period that follows. To establish a strategic trajectory for the future, it is crucial to cultivate sustainable technology adoption behaviours and the subsequent technology investment strategies. To achieve this, eight dimensions of the managerial decision-making will be introduced.

In the context of a sustainable technology portfolio management, these eight dimensions can be considered in order to analyse the current position and to evaluate scenarios of potential future positions that can be achieved through the implementation of planned investments (based on and expanded from Eisenbeis, 2022):

- the innovative power of the technologies in the portfolio (technology impact)
- the maturity of the technologies in the portfolio (technology lifecycle)

These dimensions relate to the technologies/assets.

- the scope of the overall technology portfolio (number and size of the assets in the portfolio)
- the diversity of the portfolio (variety, balance and disparity)

These dimensions relate to the portfolio itself.

- the earliness of the individual technology investment activities (speed of reaction)
- the planning horizon of the individual technology investment activities (future orientation)

These dimensions relate to the company's time-related strategic approach.

- the degree of autonomy in investment activities (exclusivity of assets)
- the organisational integration of the investment objects (organisational integration of the assets)

These dimensions relate to the company's organisational strategic approach.

The following section will provide an overview of the eight dimensions, with a particular focus on their implications for strategic risk management and their relationship to sustainability and long-term competitiveness.

Innovative Power and Maturity of the Technologies

The definition of types of technological innovation (Grossman, 1970; Tushman and Anderson, 1986; Nord and Tucker, 1987; Christensen and Bower, 1996) distinguishes between evolutionary technologies, radical technologies and, more recently, disruptive technologies (Olivan, 2019). While evolutionary technologies contribute to a slight and continuous improvement of what already existing products and markets, radical technologies lead to innovations and performance improvements that are characterised as breakthroughs. With incremental technologies, however, the potential benefits and return on investment can be determined more quickly (Schumann, Hess and Hagenhoff, 2014). Disruptive technologies, on the other hand, have the potential to transform entire systems (firms, markets, industries) in the long term, or even replace them with entirely new systems (Bright, 1969; Dolata, 2009; 2011), thus increasing the uncertainty of strategic planning.

The maturity of a technology takes into account the fact that technologies evolve at different paces, from the first development steps to the first prototype-like applications, market awareness and diffusion. It is usually uncertain when exactly the market maturity or productive, economically rewarding use will be reached. Maturity can therefore be described as the time it takes for a technology to move from its current state of development to becoming a market standard (Fenn, Raskino and Burton, 2013).

The so-called 'technology readiness level' is a widely used construct (Mankins, 2009) for assessing the maturity level of technologies and thus their lifecycle – not to be confused with the readiness of organisations with regard to a specific technology. The 'technology readiness level' provides an indication of the risk associated with the investment or (further) development of the respective technology and is therefore a central element of technology risk management (Mankins, 2009).

The risk considerations at issue here are manifested in the decisions between …

(1)

... the risk of being outpaced by competitors, if not having radical or disruptive technologies in the portfolio, or of being left behind

because of a lack of real innovation by focusing exclusively on incremental technologies that tend to have short-term effects,

versus

... the risk of damaging the existing core business, if technologies in the portfolio are too radical and disruptive (which significantly extends the planning and amortisation horizon), as this can lead to self-induced cannibalisation and/or substitution of already established technologies within the company.

(2)

... the risk of ending up in a dead end, because of investments in technologies that are in a very early stage of the technology lifecycle and the (further) development of these technologies cannot be realised as planned or they have been replaced by other technologies,

versus

... the risk of having only limited influence on the (further) development of technologies and possibly having to accept standards that have already been set due to investments in technologies that are already at an advanced stage in their lifecycle.

Scope and Diversity of Technology Investments

The scale of technology investment refers to the actual number of investment transactions that a company undertakes and their value in relation to the company's turnover or profit. It is important to decide whether the technology is at the centre of the business model and should form the core of customer value creation, or whether the technology should only support several stages in the value creation process. By deciding on the scale and scope, a company predetermines the path of further subsequent investments and thus may enter into a path dependency ('lock-in') at the time of the decision.

The diversity of technology investments refers to qualitative aspects. It considers the extent to which technology investments are focused on one or a few technologies, or whether a large number of technology fields are to be covered. The degree of diversity of the technology areas involved

must be taken into account, as well as whether the investment is an initial investment in the sense of entering a new technology or whether existing technologies are being further developed. Technological diversification is therefore a key issue for technology and risk management, as it affects such critical factors as resource allocation, sustainability and hence the survival of the company.

There is a large body of literature, analysing and discussing the topic of technological diversification (Ceipek et al. 2019; Kim et al., 2019). Stirling (2007) identifies three fundamental components of diversity: vriety (the number of categories into which system elements are apportioned: 'how many types of things do we have?'), balance (a function of the pattern of apportionment of elements across categories: 'how much of each type of thing do we have?'), and disparity (referring to the manner and degree in which the elements may be distinguished: 'how different from each other are the types of things that we have?'). In this context, Pugliese et al. (2019) argue that the coherence (sustainability) of a technology portfolio is less about the question of fewer or more investments in and the number of different technologies (absolute technological diversification), but rather about a 'coherent technological diversification', defined as "a weighted average of the relatedness of the technological fields included in the portfolio of a firm" (Pugliese et al. (2019, 18). In general, it can be assumed that diversification can reduce the risk from technological investments (Garcia-Vega, 2006). The question of the diversity of the technology portfolio (technological diversification) is of course determined by the size of the company (Chen, Jang and Wen 2010) and thus the available resources and the associated ability to manage high diversity and complexity. The available literature suggests that a diversified technology strategy is positively correlated with performance in large firms. Such a strategy enables firms to reduce their reliance on specific technologies while enhancing their capacity to adapt to technological or market changes (Lin and Chang, 2015).

The risk considerations at issue here are manifested in the decisions between …

(1)

... the risk of taking a high financial risk (for the future) with regard to potentially bad investments, due to the large number and/or high volume of technology investments,

versus

... the risk of not having enough market power and influence in the respective technology fields, because there are only a few and small assets (number and volume of the investments) in the portfolio.

(2)

... the risk of not having the right (successful) technologies in the portfolio in the future, if the spread across different fields of technology and/or the technological diversity is too low – or, if combinations or the interaction of several technologies prove to be critical for success, not being able to benefit from synergies of the corresponding combinations – both of which would ultimately have to be interpreted in retrospect as a misallocation,

versus

... the risk of being exposed to overwhelming complexity, if the spread across different fields of technology and/or the technological diversity is too high – or, if this contingency-active approach and financial commitment into the future places too great a burden on the organisation, possibly leading to 'strategic frittering away' and loss of control.

Earliness and Planning Horizon of Technology Investments

The timing of technology investments can be determined by a firm's decision-making patterns. According to the Miles-Snow typology (Miles and Snow 1978), there are four strategic company types: The 'prospector' (fundamentally technologically innovative as a pioneer), the 'defender' (rejection of new technologies with a focus on stability), the 'analyser' (wait-and-see approach with a focus on security) and the 'reactor' (selective decision maker between rapid adoption and wait-and-see approach). Based on this typology, Chan-Olmsted (2006) develops six types of technology adoption for the media industry: 'Innovative prospectors' experiment, are innovative and proactive, and look for opportunities in new markets. 'Entrepreneurial prospectors' invest aggressively and are willing to take risks in new products and/or markets. 'Entrepreneurial analysers' seek opportunities through new technologies within the stable framework of their

existing structures and processes. 'Conservative analysers' are very slow to adopt new technologies. 'Defenders' wait until the new technology is fully established in the market. vReactors' either try to take advantage of new technologies at a very early stage or wait until the technology is widely used and established in their industry.

Rogers (2003) assesses the speed of technology investment by looking (retrospectively) at the actual adoption times of all investments and acquisitions in a technology. He distinguishes five types of behaviour: 'Innovators' are enthusiastic about technology, willing to take risks and have the financial resources to be the first to adopt innovations. 'Early adopters' are considered visionaries, attracted to high-risk, high-reward innovation projects, and influence the groups that follow. Members of the 'early majority' are less innovative but, as pragmatists, are quick to embrace the benefits of technological innovation once a new technology is established in the market. The 'late majority' tends to be conservative. They only start adopting new technologies when they are under a lot of pressure and have to use them to not get left behind. 'Laggards' are latecomers who try to maintain the status quo for as long as possible and only adopt new technologies when the rest of the industry has already deemed them obsolete. The types of companies described above suggest that there is no universally 'right' decision. This also becomes clear when we look at the speed of action in terms of competitive strategy: A distinction is made between a first mover, which is the first to enter a new (technological) field, a second mover, which reacts to the actions of a first mover competitor, and a late mover, which remains in a wait-and-see position and observes the market and competitors in order to be well prepared for later reactions (Lieberman and Montgomery 1988). The extent to which the respective advantages and disadvantages of the three strategies come into play depends on situational factors, some of which may only become apparent in the future from the perspective of the time of the decision.

The planning horizon represents the temporal perspective of strategic planning. Typically, three planning horizons are distinguished: short-, mid- and long-term (Schumann, Hess and Hagenhoff, 2014). The term 'short-term planning' is used to describe a planning horizon of up to one year. The mid-term planning horizon is typically set at a period of between one and five years, while long-term planning horizons can extend over a timespan of five to ten years or even beyond 20 years (Schumann, Hess

and Hagenhoff, 2014; Sołoducho-Pelc, 2015; Hubert, 2016). The three different time horizons do not exclude each other but actions must be coordinated and consistent to each other (Sołoducho-Pelc, 2015).

Risk and uncertainty are the decisive factors concerning the planning horizon. As a company considers a long-term planning and thus looks far into the future, the uncertainty associated with the plan increases (Schumann, Hess and Hagenhoff, 2014; Wilczek, 2019). This is particularly relevant when evaluating investments and acquisitions, conducting risk assessments, or considering return on investment or amortisation periods. There is a tendency to favour short-term returns over long-term investments that might be more profitable (Hayes and Abernathy, 1980; Porter, 1992; Laverty, 1996). Consequently, focused and detailed planning is typically conducted for short-term horizons, whereas approximate planning is employed for long-term goals (Schumann, Hess and Hagenhoff, 2014). Following Matheson and Menke (2016) with regard to a generally balanced (and therefore sustainable) portfolio, in order to achieve sustainable technology portfolio management, it is essential to make well- informed decisions at portfolio level. This entails ensuring an appropriate balance between high-risk, high-potential technologies (long-term, high uncertainty) and lower-risk technologies that generate near-term returns through incremental enhancements to existing products and/or processes.

The risk considerations at issue here are manifested in the decisions between …

(1)

... the risk of making mistakes and subsequently failing, if acting to fast and take a pioneering role as an early adopter or first mover in a new and uncertain environment with high market development and expansion costs,

versus

... the risk of not being able to overcome newly emerging market entry barriers and not being able to catch up with the first mover, if following a wait-and-see approach as second mover, late mover (despite careful preparation), or as a laggard.

(2)

... the risk of losing sight of the future and being unprepared for future developments, because the lifecycle of the assets in the portfolio will soon come to an end (despite short-term returns), versus

... the risk of not really being able to influence future developments (because the distant future is uncertain) and not being able to benefit from incremental and short-term innovations, because the perspective is too future-oriented.

Autonomy und Organisational Integration of Technology Investments

The question of autonomy in technology investments is about whether a cooperative or competitive approach should be chosen. In many cases, cooperation in various forms (strategic alliances, joint ventures, technology consortia or alliances) seems to be the reasonable way. Shared risk, combined and thus greater resources and synergies are the obvious advantages. Very often investment rounds (seed, early stage, late stage, private equity) are also financing rounds in which multiple investors are usually involved. The cooperative approach offers the opportunity for joint (further) development, to establish common standards and a high degree of compatibility in (later) product or market phases. However, the disadvantages mirror the advantages of competitive approaches. While the cooperative approach does not require exclusive control but rather (possibly complex) coordination processes and negotiations, mergers and acquisitions guarantee exclusive access rights with the advantages of full control. However, this is accompanied by the risk of bearing the financial burden alone.

Although it was previously assumed that the media industry would prefer the cooperative approach (Sjurts, 2005), the situation appears to be different for large US-American digital corporations. At least in the case of the largest digital corporations (GAFAM), it can be observed that their strategies are largely characterised by a preference for "acquisition instead of cooperation" (Dolata, 2017, 18).

As part of the organisational integration, it is important to assess the conflicts of interest between the technologies already in the portfolio and

potential new technologies. It must be ensured that the company's core business is not affected if the new technologies to be integrated will fail. This is because the failure of the new technologies may lead to a loss of reputation for the company as a whole. It is therefore important to ensure that the new technologies do not have an unplanned negative impact on the company's core business throughout their lifecycle – unless a conscious decision has been made to replace and substitute existing businesses and/or products. This raises the question of whether the technologies should be acquired by the parent company itself, by subsidiaries, or possibly by venture capital companies specifically established for this purpose. In cases where investments or acquisitions are deliberately kept undisclosed, they may even be acquired through front companies.

The risk considerations at issue here are manifested in the decisions between …

(1)

... the risk of limited control and influence over the technologies and their development, as too many actors with potentially diverging interests have a stake and take decisions through cooperation (although a high degree of compatibility can be ensured),

versus

... the risk of having to invest too many resources and bear the (financial) risk alone (with a high degree of influence and control), as there is no partner, but rather the competitors might enter the market with other solutions and thus a possible lack of complementary products in the market will occur.

(2)

... the risk of watering down core competencies and core businesses, having difficulties in prioritising and balancing allocation decisions, and of neglecting or damaging existing core businesses due to internally competing technologies, when organisationally integrating new assets/technologies into the existing organisation (parent company),

versus

... the risk of not paying enough focus and priority to the new assets/technology, which leads to a lack of innovation and synergies,

when assets that are not closely linked to the main business are brought together as part of an external organisational integration (spin-off or subsidiary).

Sustainable technology investment decisions through sustainable technology portfolio management

In today's world, it is very important for companies to stay at the cutting edge of technology, or even to shape technological development beyond the company itself – especially in terms of a sustainable strategy. The development of a sustainable technology portfolio management is therefore a decisive competitive factor and ultimately critical to a company's survival. In addition, many important resource allocation decisions for the future are derived from these basic decisions outlined above. Companies, to a certain extent, commit themselves to long-term strategies, also in terms of economic sustainability. This clearly underscores the aspect of sustainability.

In this context, specific risks arise that need to be anticipated and strategically managed at an early stage (also implies sustainability) – with reference to the business model and stakeholder interests. In this respect, the eight dimensions presented here are not only conceptual-theoretical considerations, but – in the sense of pragmatic-prescriptive strategy concepts – also provide orientation and, if necessary, recommendations for action for corporate practice.

There are, however, also limitations to be mentioned. The considerations presented in the paper are, first of all, considerations based on the initial fundamental ideas of Eisenbeis (2022), which are then further developed and expanded here. The dimensions have not yet been embedded and located in the field of technology management. Furthermore, they have not (yet) been used in empirical research. Accordingly, concrete considerations and suggestions for measuring the eight dimensions are also missing. The latter point in particular also represents a limitation in terms of practical application in companies.

In terms of adding value to theory, the eight dimensions provide suggestions for developing a framework for (sustainable) technology portfolio management – in general and fundamental terms, but particularly with

regard to technology investments and acquisitions. The dimensions also provide suggestions for how the strategic behaviour of companies with regard to technology investments and acquisitions can be empirically examined (and measured).

In terms of added value for corporate practice, the eight dimensions serve as actionable guidance for decision-makers regarding the evaluation criteria for technology investments and acquisitions. Portfolio matrices can be derived directly from the eight dimensions, for example, using a matrix to display 'earliness' and 'planning horizon' in order to evaluate, how the company is or will be positioned in the short, medium and long term, depending on the companies' behaviour, given the time of entry into a technology. The dimensions 'scope' and 'diversity' provide information in a matrix regarding the balance of a technology portfolio.

This is where the aspects of risk management and sustainability management come into play, namely when it comes to managing corporate risks against the background of ensuring the long- term survival of the company. Sustainability as part of a fundamental philosophy – also in technology investment decisions – means the penetration of the company with stakeholder- oriented risk management from a strategic perspective (Stein and Wiedemann, 2016). It is explicitly linked to a company's strategic business model, as this is where the relevant external and internal stakeholders are mapped, with their objectives and interests, which the company should fulfil as far as possible. Sustainability entails proactive management and extending the time horizon as far into the future as possible. Stakeholders must be able to rely on the risk- adjusted sustainability of the company's actions – even when making technology investment decisions.

Future research on this topic should in particular (a) anchor the dimensions even more deeply in the existing body of literature, (b) make them measurable for empirical research, and (c) make suggestions as to how companies can make the individual dimensions quantifiable and evaluable in terms of portfolio analysis.

Following the suggestions for information technology portfolio management by Ajjan, Kumar and Subramaniam (2016), technology portfolio management (or technology investment portfolio management) involves the ability to create, evaluate and balance the different components of the portfolio. The process of technology portfolio management entails the

collation of internal and external data, as well as the analysis and evaluation of the individual and combined risks associated with the technologies in question to create a holistic view of the portfolio as a whole. Technology portfolio management assessment and balancing processes involve analysing the characteristics of the portfolio assets (risks, benefits, costs, alignment and interdependencies) and then taking actions (balancing) to manage the portfolio towards a sustainability. Balancing actions include, but are not limited to, technology selection, termination of selected technology activities, technology risk mitigation, and resource allocation.

There is a large body of literature on the subject of technology portfolio management (Say, Fusfeld and Parish, 2003; Ajjan, Kumar and Subramaniam, 2016). Some of the eight dimensions presented in this article are already included to some extent in existing considerations. The further development of these dimensions represents a significant challenge for both scientific and research communities, as well as for business practice. However, this is not merely a challenge for the management; it also represents an opportunity – for the media industry in particular, as technological innovations have always shaped the development of media innovations (Küng, 2013; Broich, 2015; Gershon, 2018).

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OTPORNOST NA TEHNOLOŠKE POREMEĆAJE: RAZMATRANJA O OSAM DIMENZIJA ODRŽIVOG UPRAVLJANJA TEHNOLOŠKIM PORTFELJEM U DIGITALNOJ I MEDIJSKOJ INDUSTRIJI

Sažetak

Tema "održivosti" relevantna je za digitalnu i medijsku industriju u više aspekata: Digitalne i medijske tvrtke mogu opstati dugoročno samo ako ostanu konkurentne, posebno u pogledu tehnologije. Medijska industrija doživjela je radikalne transformacije uzrokovane razvojem novih tehnologija. Jedan od ključnih faktora prilagodbe ovim promjenama je odgovarajuće upravljanje tehnologijom. Samo održiv portfelj tehnologija (dugoročno uravnotežen) može spriječiti da tvrtke budu istisnute s tržišta uslijed tehnoloških inovacija ili čak tehnoloških poremećaja (technological disruption).

Ovaj rad razmatra konceptualne aspekte razvoja upravljanja portfeljem tehnologija (ili upravljanja portfeljem tehnoloških investicija) koji ima za cilj osigurati dugoročnu konkurentnost i opstanak tvrtki. U kontekstu strategijskog usmjeravanja budućeg razvoja, cilj je oblikovati ponašanje pri usvajanju novih tehnologija i strategije koje iz toga proizlaze. U okviru održivog tehnološkog portfelja uvodi se osam dimenzija menadžerskog odlučivanja.

Ključne riječi: ekonomska održivost, tehnološke akvizicije, tehnološke investicije, tehnološki portfelj, upravljanje tehnologijom

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AUTOMATION AND ROBOTS IN THE LABOUR MARKET: YOUNG ADULTS' PERCEPTIONS

Original Paper
https://doi.org/1059014/USDW6606

Abstract

The Fourth Industrial Revolution (4IR), marked by automation and robotization, significantly influences sustainable economic development and policies. Key aspects include job displacement and job creation, and the evolving nature of work, necessitating reskilling, upskilling and cross-skilling. Addressing these challenges requires strategic frameworks and empowering young adults, the future workforce, through education and awareness. This paper explores the impact of the 4IR on the labour market, particularly its effect on the nature of work, skills, lifelong learning, and labour law. It examines how young adults, especially the graduate and final year students at the University of Osijek, perceive these changes and their readiness to encounter them. The study aims to understand their perceptions, attitudes, and beliefs about the 4IR's transformative effects on the labour market. This is crucial as they represent the emerging workforce, which will be impacted by automation, robotization, and other technological shifts. The purpose of the study is to gain deeper insight into how young adults perceive these changes in general, but also in terms of their future jobs and necessary skill pool. The research involved a survey (Lime Survey, SPSS) based on a critical review of literature in the 4IR, automation, robotization, and labour market changes. It assessed the perceptions, attitudes, and preparedness of young adults regarding the 4IR's impact on the labour market. Findings indicate that young adults generally anticipate job losses due to automation and robotization but also expect new jobs creation. They are largely willing to engage in lifelong learning and to adopt new skills in order to adapt to a dynamic labour market. The study gains relevance in light of the unexpected rise of generative AI (GAI), which

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introduces more profound changes and challenges, and creates a context that allows for a comparison between the current and recent economic and labour disruptions.

Key words: 4th industrial revolution, automation, labour market, robotization, young adults

Introduction

From 1750 onward, industrialization has always had an important role in Western Europe's societies. Continuous technological progress has been an important factor for innovation culture, industrial development and economic growth (Landes, 1969). As Friedrich (1966) claims, each (industrial) revolution reshaped societies by altering power structures and ideologies, though their outcomes are unpredictable and often deviate from original intentions. This is, in part, true for the Fourth Industrial Revolution (4IR), also known as Industry 4.0 (I4.0), especially in regards to emerging technologies and processes such as automation and robotization which introduce an unprecedented level of unpredictability regarding economic impact and, despite strategic planning, challenge accurate forecasting (Popkova et al., 2019). What is 4IR? Investments, development, and innovations in the fields of computing, information and communication technology, data science, artificial intelligence, and machine learning, as well as technological phenomena such as the Internet of Things (IoT), augmented reality, smart devices, and 3D printing, have gradually precipitated social and technological disruptions leading to the 4IR (Schwab, 2016). This new industrial revolution has transformed manufacturing sector bringing profound economic, social, and environmental changes. The integration of advanced and emerging technologies has helped to enhance control and optimization, not only within the industry itself, but also in changing the labour market and even the very nature of work. These shifts are not only confined to the business processes, they also extend to the entrepreneurs and workers, altering their traditional roles and introducing new paradigms regarding productivity and efficiency. Some of the most prominent processes within the 4IR are automation and robotization for which many think will revolutionize human jobs and labour market.

However, while this (r)evolution brings technological efficiency, it is important to maintain a balanced socio-technological framework and ensure

continued human involvement, whether through independent decision-making or human-machine collaboration. This integration is essential for society in order to mitigate potential risks such as job displacement and socio- economic disruption. To successfully manage challenges and mitigate potential risks, it is also important to apply strategic monitoring and analysis of the ongoing transformation within the economy and society. Some of these strategies refer to other aspects of society, like education and social security systems and services. Many experts warn about the fact that forecasts about the future skill demands will be increasingly problematic. This is particularly important in terms of education and training which should prepare and adapt young people for continuous automation and robotization of work (Borrageiro and Mennega, 2023).

The aim of this research is to examine young adults' perceptions of 4IR-driven labour market changes, focusing on University of Osijek graduates. It explores their attitudes toward, views on and self-assessment of relevant professional skills and competencies, providing insight into how technological trends reshape work and the necessity of adapting to new demands.

Theoretical background

Until the mid-2016 there was still a certain research gap in regards to the Fourth Industrial Revolution (4IR) (Liao et al., 2017a), but lately this has changed due to great number of research, studies, projects, and reports. Schwab (2017) defines 4IR as an industrial revolution that merges physical, digital, and biological technologies, transforming industries and challenging human concepts. It has many benefits, some of which include enhancing production agility and intelligence across borders, transforming industry through digitalization and intelligent automation, and leading to enhanced production and sustainable practices, but also transforming society in general and challenging its values (Gothwal et al., 2023; Schwab et al., 2018; Liao et al., 2017b).

Digital and other emergent technologies of the 4IR have transformative impact on society and economy, and along with many advancements there is also a disruption of professions and traditional work structures (Devezas et al., 2016; Brynjolfsson and McAfee, 2014). World Economic Forum

(2023) predicts that technology will drive business change over the next five years, led by big data, AI, and cloud adoption. Automation was seen as a technology with a potential to reshape jobs and autonomy and increase workplace safety and efficiency, but also raising concerns about job (in) security,[33] traditional roles and personal autonomy (Servoz, 2019; Cribb and Glover, 2018). Yet, research done by World Economic Forum (2023) showed that when it comes to automation businesses introduce automation into their operations at a slower pace than previously anticipated. The report shows that while 23% of jobs will transform, job growth is likely in education, agriculture, and digital sectors. On-the-job training and automating processes are the most common workforce strategies for achieving business goals. In terms of robotization, Bachmann et al. (2024) conclude that robots somewhat reduce the rates of job separation and therefore increase job stability. I.e. they increase employment through reductions in separations rather than increases in hires. This is more so for low to average labour-cost countries. Also, routine jobs benefit more than non-routine jobs. Research done by Antón et al. (2020) shows that from 1995 to 2015 industrial robot adoption had a generally small and variable impact on European labour markets. Employment impact was mostly negative from 1995 till 2005, but became positive for a period between 2005 and 2015. Along with AI, big data, blockchain and cloud technologies, automation and robotization present main 4IR technologies that will disrupt economies and labour market. Certain authors (Siekmann et al., 2023; Schwab, 2017) agree that while the 4IR and its technologies bring many advantages and opportunities, they also raise concerns about sustainable progress in adaptability, inequality, employment, security, and education. Those are some of the reason prompting the need for better control, management and governance in the context of the 4IR and technological development and integration. Controlling technology's development and its societal impact doesn't come without challenges. One of them has been known as a "Collingridge Dilemma" (Collingridge, 1980) referring to the fact that early-stage technologies are easier to control but poorly understood, while mature technologies, though better understood, are harder

33 Job insecurity is especially relevant in regards to the new global economic class „precariat" distinct for its unstable income and limited social security, and often involved in atypical, part-time, or unregulated work associated with increased social and economic risks (Starčević, 2014; Standing, 2011).

to modify. This is why it is important to apply flexible and adaptive governance and public involvement in regards to developing and integrating technologies into society. Many (World Economic Forum and Accenture, 2023; Schwab et al., 2018; Enders and Remig, 2014) agree that adaptive governance is essential in that regard, and that system leadership is one of the main ways to ensure responsible integration of technology. They recognize the transformative potential AI and other technologies offer to organizations, but at the same time, they recognize the need for responsible management. E.g. World Economic Forum and Accenture's report (2023) shows that only 6% of organizations have adopted frameworks of responsible AI and conclude that job displacement, quality of jobs, and AI literacy are key areas businesses need to address in their strategies to enhance workforce transformation and societal benefits.

Nevertheless, the 4IR has a great role in advancing sustainable development. Many authors (Siekmann et al., 2023; Roblek et al., 2020; WBGU – German Advisory Council on Global Change, 2019; Enders and Remig, 2014) agree that the 4IR should implement different approaches to sustainable development, such as intergenerational equity, ecological balance, economic sustainability, holistic management of the process of digitalization and automation, creating sustainable business models and production, as well as supporting green investments and standards. Other important approaches include: 1) designing sustainable and transformative development and innovation policies that prioritize anticipation, experimentation,[34] participation, and directionality (Roblek et al., 2020; Fagerberg, 2018; Kuhlmann and Rip, 2018; Schot and Steinmueller, 2018; Skilton and Hovsepian, 2018; Liao et al., 2017b), 2) enabling interdisciplinary collaboration and cooperation between different stakeholders and applying human-centric innovation and people-first approach (Kuhlmann and Rip, 2018; Schwab et al., 2018; Schwab, 2017; Brynjolfsson and McAfee, 2014; Enders and Remig, 2014), and 3) investing in and transforming education (Brynjolfsson and McAfee, 2014).

The 4IR's impact on economy and labour market highlights the importance of continual skill development and lifelong learning programs, i.e.

34 E.g. pilot programmes in several countries testing the impact of Universal Basic Income (UBI) as one of the main approaches to reduce poverty and economic insecurity, and create social safety net in the new dynamic and disrupted labour market (Tipurić, Garača and Krajnović, 2020; Uhuru Bidadanure, 2019; Starčević, 2014; Standing, 2011).

the importance of processes of reskilling, upskilling and cross-skilling (Ayinde and Kirkowood, 2020; World Economic Forum and The Boston Consulting Group, 2018; Gray, 2016; Huws, 2014). To benefit from the shift caused by the 4IR, businesses must embrace tech-driven, horizontal structures and invest in lifelong learning, research, and infrastructure. Embracing AI and empowering young people with adaptable learning skills could enhance Europe's competitiveness and innovation in a global market (Servoz, 2019). World Economic Forum (2023) states that 44% of workers' skills are being disrupted and are in need of additional training, especially in terms of key skills such as analytical and creative thinking. The importance of digital literacy and building skills and capacities is also recognized by The General Assembly (2024) which highlightens vocational, upskilling and reskilling training for workers in occupations impacted by digitalization and automation. They find this trainings important for successful mitigation of potential negative consequences and ensuring decent work conditions. Of course, this transformation of education should be done in a way that supports future workers' abilities and capacities while avoiding the risks of modern global capitalism, such as sole utilitarianism and dehumanization that deem many people irrelevant and „disposable" (Žižek, 2016, according to Belinski, 2016).

Research objectives and methodology

Automation, robotization, and other technological developments will undoubtedly affect graduate students and recent graduates who are just about to start participating in the labour market; nevertheless, their influence will vary much according to their own profession. Notwithstanding the wide-ranging pessimism over disruptive technologies and their impact on work, there is a critical need not to generalize, but to understand the complex interplay of disruptive technologies and labour market processes in light of technological, economic, social, legal, and educational variables that shape the work culture in the 21st century. Specialists from many different fields such as industry, education, law, sociology, and other, underline the uncertainties and challenges that surround any attempt at predicting, with any degree of accuracy, the future of work. However, they insist on the role of preparation and review strategies, especially in educational policy and the development of skills, so that the current and

future workforce are prepared to meet the requirements set by the Fourth Industrial Revolution (4IR).

The aim of this research is to examine perceptions, attitudes, and beliefs among young adults – specifically graduate students, and recent graduates from the University of Osijek – about disruptive changes brought by the 4IR which are affecting the labour market and transforming the nature of work. It also aims to establish their view on the need to develop relevant professional knowledge, skills, and competencies, including their self-assessment of these attributes. The purpose of this research is to provide a more nuanced understanding of changes in the labour market which have been propelled by technological trends within the context of the 4IR, and to explore the perceptions of young adults in regard to these changes.

Research is based on a critical review and appraisal of state-of-the-art literature and research outputs relating to the 4IR, automation, robotization, labour markets, and changing work conditions. It also focuses on key issues within the domain of their mutual relationship and impact.

A quantitative survey method was employed, with the questionnaire comprised of 19 questions divided into three thematic groups: 1) introductory questions about socio-demographic characteristics; 2) questions about young adults' attitudes towards the 4IR and disruptive technologies and how they influence the labour market and shape the work culture, including young adults' perception of automation, robotization, and consequences for work and social security; and 3) questions exploring young adults' perceptions of their general and personal professional knowledge, abilities, and skills in the context of labour market changes brought about by the 4IR.

Research was carried out from April till September 2021 by means of a digital anonymous online survey created in Lime Survey. The survey was distributed using social networks, e- mail, and personal contacts with professors, who were asked to further disseminate the survey to students.

Total sample included 102 first and second year graduate students and recent graduates of Josip Juraj Strossmayer University of Osijek. The main criteria for determining the sample was the fact that graduate students and recent graduates comprised a generation that, in the near future, will join the labour market and therefore will be exposed to the effects of this

disruptive technological change either directly or indirectly. This is explained in greater detail within the results section.

The questionnaire included dichotomous questions, multiple-choice questions, and Likert scale questions that measured the attitudes of the respondents. Data analysis was performed using SPSS software, implementing descriptive statistical methods.

Research is based on several research questions:

> RQ1: What is the attitude of young adults to the 4IR, particularly to the disruptive technologies and processes driving it?
>
> RQ2: How do young adults perceive the impact of automation and robotization on employment, nature of work, and social security?
>
> RQ3: How do young adults perceive the implications of the 4IR – particularly automation and robotization – for their current profession and future career and work life?
>
> RQ4: To what extent do young adults consider themselves knowledgeable, skilled, and capable of addressing challenges brought about by labour market shifts and changes in the nature of work induced by the 4IR and the processes of automation and robotization? RQ5: How well do young adults prepare for continuous learning and professional development throughout their careers in light of the consequences brought about by the labour market and work-related changes from the 4IR and automation and robotization processes?

Results[35]

Regarding the socio-demographic characteristics of respondents, 63.7% were female and 36.3% male. The majority, 44.1%, study at the Faculty of Humanities and Social Sciences, followed by 10.8% who study at the Department of Mathematics. Other notable faculties included the Faculty of Electrical Engineering (7.8%), the Faculty of Mechanical Engineering Slavonski Brod (6.9%), the Faculty of Civil Engineering and Architecture

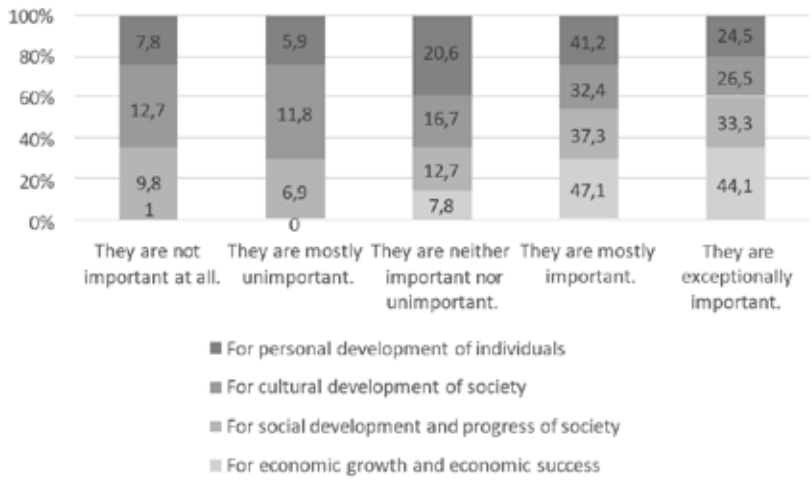
35 Due to the number and complexity of the questions analysed, only the most significant results will be presented.

(5.9%), the School of Medicine (3.9%), the Academy of Arts and Culture (2.9%), the Faculty of Food Technology and

Biotechnology (2.9%), and the Faculty of Education (2.9%). The majority, 47.1%, were in their first year of graduate studies, 38.2% in their second year, and 14.7% were final year graduate students.

When asked about the technologies of the Fourth Industrial Revolution (4IR), artificial intelligence (AI) was perceived as the most disruptive one (28.4%), followed by genomics (13.7%), robotics (12.7%), biotechnology (7.8%), the Internet of Things (IoT) and renewable energy (6.9%), additive manufacturing technologies and 3D printing (5.9%), nanotechnology (4.9%), quantum computing and advanced virtual reality (VR) (3.9%), blockchain (2.9%), and autonomous vehicles (2.0%).

When asked about the impact these technologies have on economic growth, social progress, culture, and personal advancement, most of the respondents find them to be eceptionally or mostly important for all four areas.



Graph 4IR's
1. The impact of disruptive technologies on economic growth, social progress, culture, and personal development

The next two question presented different statements about the process of robotization and automation, asking respondents to what extent do

they agree or disagree with them. Respondents are notably divided on the issue of robots replacing humans as workers, with 29.4% mostly agreeing, 24.5% mostly disagreeing, and 27.5% neither agreeing nor disagreeing with the statement. One of the most interesting answers refers to the respondents' perception of possible future automation of work in their professional field, where majority of respondents strongly or mostly disagree with the possibility of full automation.

Table 1. Statements related to the robotization process

Statement	Strongly Disagree	Mostly Disagree	Neither Agree nor Disagree	Mostly Agree	Strongly Agree	Mean
"As a (future) participant in the labour market, I feel threatened by robots and artificial intelligence as the 'new workforce.'	18.6%	25.5%	18.6%	31.4%	5.9%	2.80
"Robots and AI can be more productive workers than humans."	5.9%	15.7%	20.6%	39.2%	18.6%	3.48
"Robots and AI can drive economic growth and development faster and more effectively than humans."	4.9%	12.7%	25.5%	42.2%	14.7%	3.49
"The robotization of the labour market will primarily involve humanoid robots."	19.6%	32.4%	25.5%	19.6%	2.9%	2.53
"The robotization of the labour market will primarily involve machine robots."	1.0%	7.8%	14.7%	56.9%	19.6%	3.86
"The robotization of the labour market will primarily involve AI (software)."	2.9%	5.9%	11.7%	47.1%	32.4%	4.00
"With the onset of robotization, robots will replace humans as workers."	12.7%	24.5%	27.5%	29.4%	5.9%	2.91
"With the onset of robotization, robots will become mentors/ teachers to humans."	39.2%	27.5%	14.7%	15.7%	2.9%	2.15

"With the onset of robotization, robots will become equal collaborators with humans."	30.4%	23.5%	26.5%	13.7%	5.9%	2.41
"With the onset of robotization, robots will become assistants to humans."	3.9%	6.9%	17.6%	47.1%	24.5%	3.81

Table 2. Statements related to the automation process

Statement	Strongly Disagree	Mostly Disagree	Neither Agree nor Disagree	Mostly Agree	Strongly Agree	Mean
"Automation will lead to the loss of a large number of existing jobs."	3.9%	6.8%	18.5%	51.0%	19.8%	3.77
"Automation will create new jobs and employment opportunities."	2.9%	15.7%	29.4%	37.3%	14.7%	3.45
"Automation positively impacts the quality of business and production."	0.0%	2.9%	26.5%	58.8%	11.8%	3.79
"Automation positively impacts the speed of business and production."	0.0%	2.0%	9.8%	59.8%	28.4%	4.14
"Automation positively impacts the standardization of business and production."	0.0%	4.9%	24.5%	53.9%	16.7%	3.82
"Automation represents a form of rationalization in business and production."	0.0%	5.9%	30.4%	45.1%	18.6%	3.76
"Automation increases safety in business and production processes."	1.0%	10.8%	22.5%	44.1%	21.6%	3.74
"Automation of business and production leads to faster economic growth and greater economic success."	0.0%	5.9%	17.6%	55.9%	20.6%	3.91
"I believe that my (future) job (which I will or want to work in) could be fully automated."	32.4%	28.4%	21.6%	12.7%	4.9%	2.29

The following question presented statements related to the issue of work within the 4IR and its disrupted labour market, asking respondents to what extent do they agree or disagree with them. Results show that while respondents mostly welcome the opportunity to work in a dynamic and flexible work environment, they are less inclined to accept flexible work contracts. Regarding the new economic models, like gig economy, more than 1/3 of respondents are mostly indecisive.

Table 3. Statements related to the automation process

Statement	Strongly Disagree	Mostly Disagree	Neither Agree nor Disagree	Mostly Agree	Strongly Agree	Mean
"I am attracted to the idea of job mobility, i.e., finding a job and moving to another country."	22.5%	12.7%	18.6%	26.5%	19.7%	3.07
"I would gladly change jobs every 3 to 5 years. (This statement applies to your entire career.)"	23.6%	22.5%	18.6%	22.6%	12.7%	2.77
"I would agree to a flexible work contract (e.g., full time, part-time, occasional work, etc.)."	23.5%	20.7%	17.6%	23.5%	14.7%	2.85
"I want to work in a dynamic and flexible work environment."	0.0%	6.9%	14.7%	50.0%	28.4%	3.99
"New economic models like the gig economy and sharing economy positively impact economic growth and success of the country."	4.9%	10.8%	38.2%	34.3%	11.8%	3.37
"New economic models like the gig economy positively impact the material success of individuals working in this economy."	3.9%	7.8%	44.1%	32.4%	11.8%	3.40
"I would gladly be employed in the gig economy or an economy based on outsourcing."	13.7%	20.6%	41.2%	18.6%	5.9%	2.82

Regarding the issue of social security within the 4IR, most respondents believe there is a need for new innovative forms of social security, like

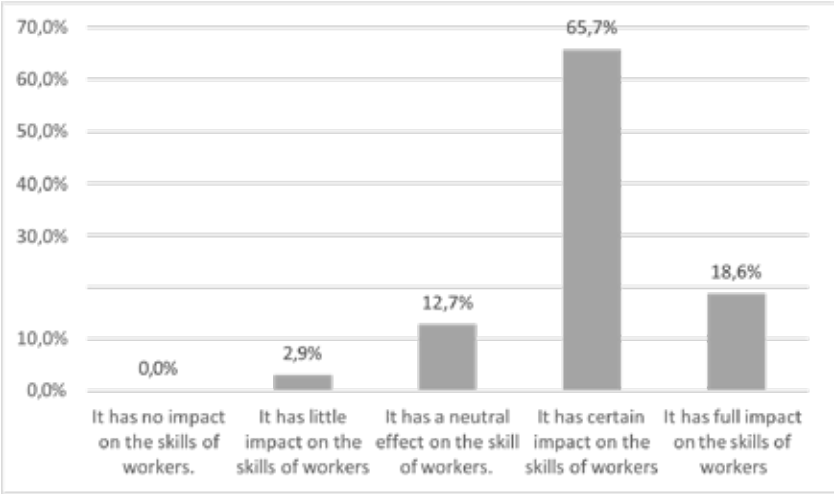
Universal Basic Income (UBI), and they have concerns about the future of their own social security.

Table 4. Statements related to the issue of social security within the 4IR

Statement	Strongly Disagree	Mostly Disagree	Neither Agree nor Disagree	Mostly Agree	Strongly Agree	Mean
"The trends and developments caused by the Fourth Industrial Revolution and labour market disruption increase the need for new forms of social security."	0.0%	4.9%	26.5%	52.0%	16.6%	3.80
"Instruments like Universal Basic Income (UBI) present a suitable solution for the growing problem of social insecurity."	7.8%	4.9%	37.3%	30.4%	19.6%	3.49
"I am concerned about my personal social security in the future (e.g., health insurance, pension, etc.)."	5.9%	13.7%	25.5%	36.3%	18.6%	3.48
"I have my own plan for securing social security (e.g., investing in funds, stocks, cryptocurrencies, real estate, etc., if I have the opportunity).	20.6%	31.4%	20.5%	15.7%	11.8%	2.67
"Ensuring social security is solely the responsibility and duty of the state and state institutions."	4.9%	11.8%	35.3%	34.3%	13.7%	3.40
"The costs of social security generate excessive expenses for the state and may pose a burden to the country's economic success."	4.9%	18.6%	40.3%	28.4%	7.8%	3.15

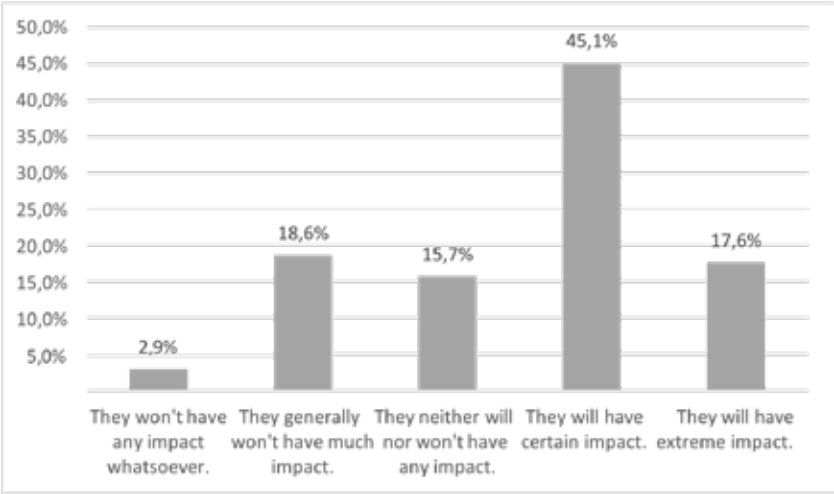
The third and final group of question referred to the issues of skills, learning and professional development.

Majority of respondents (65.7%) believe that disruption affecting the labour market have a certain impact on skills of today's workers, and will continue to have impact in the future.



Graph 2. The impact labour market disruption has on the skills of workers within the 4IR

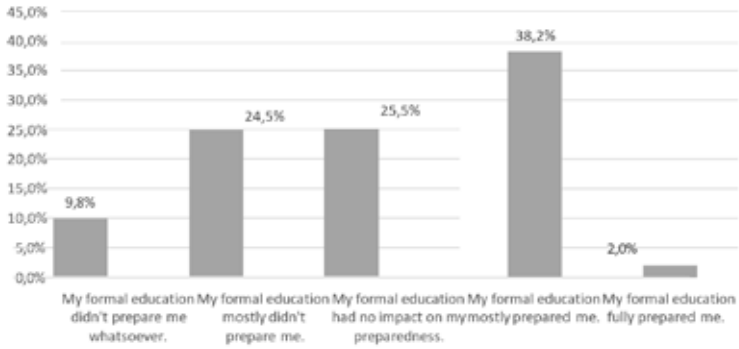
As for their own profession and work, respondents mostly (45.1%) believe that 4IR trends and disruption affecting the labour market will have certain impact, while the remaining respondents are almost evenly split among other opinions, except the one referring to no impact.



Graph 3. impact market The labour disruption and 4IR trends have on respondents' profession and future work

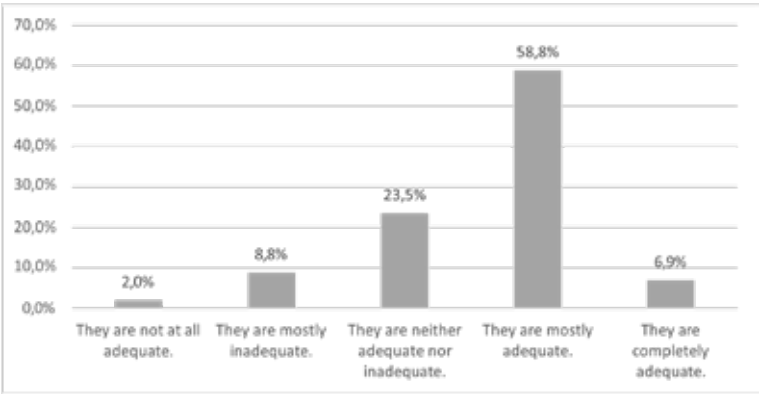
Also, when asked whether they inform themselves about the innovations, trends and changes within their professions, majority of respondents (73,5%) answered positively.

When asked if their formal education prepared them for the dynamic labour market of the (near) future, more than 1/3 of respondents (38.2%) said it mostly prepared them, with only 2% stating it fully prepared them.



Graph 4. The impact of formal education on respondents' preparedness for the future labour market

Concerning the skills they have acquired through formal and informal learning and their responsiveness to the labour market, more than 1/2 of respondents (58.8%) perceive their skills as mostly adequate.



Graph 5. Adequacy of skills adopted through formal and informal learning

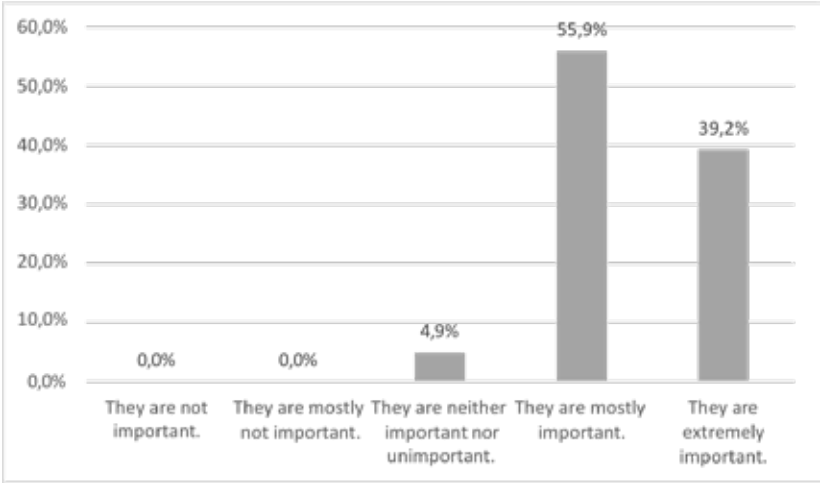
Another important question referred to the issue of skills and competencies respondents find important for the labour market in the next 10 years. They find majority of them either mostly or extremely important, except with artistic skills where respondents are somewhat evenly split in their opinions.

Table 5. Knowledge, skills, and competencies required for the labour market over the next decade

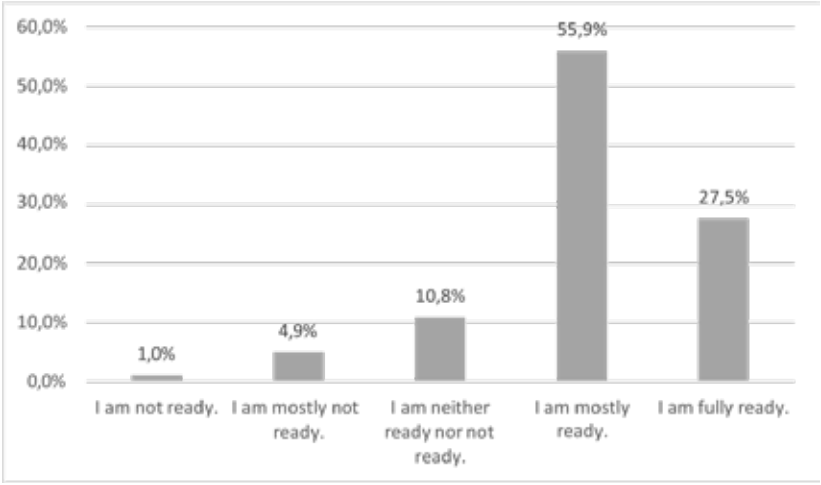
Knowledge, skills, and abilities	Not Important at All	Mostly Not Important	Neither Important nor Unimportant	Mostly Important	Extremely Important	Mean
Analytical skills (e.g., ability to learn and quickly acquire knowledge and skills, identify relevant information, etc.).	0.0%	0.0%	7.8%	44.2%	48.0%	4.39
Emotional stability.	1.0%	4.9%	7.8%	46.1%	40.2%	4.19
Physical abilities (e.g., physical strength, precision, and bodily coordination, etc.).	5.9%	19.6%	20.6%	37.2%	16.7%	3.39
Cognitive abilities (e.g., cognitive flexibility, logical and mathematical reasoning, visualization, etc.).	0.0%	2.0%	2.9%	49.0%	46.1%	4.39
Communication skills (e.g., verbal and written expression, active listening, foreign language knowledge, ICT literacy, etc.).	0.0%	0.0%	3.9%	40.2%	55.9%	4.52
Mental flexibility.	1.0%	1.0%	8.8%	39.2%	50.0%	4.36
General knowledge and skills (e.g., general knowledge, critical thinking, etc.).	1.0%	2.9%	7.8%	44.2%	44.1%	4.27

Organizational skills and abilities (e.g., coordination, leadership, project management, etc.).	0.0%	2.9%	10.8%	40.2%	46,1%	4.29
Computer skills and abilities (e.g., database, programming, web design, etc.).	0.0%	1.0%	4.9%	38.2%	55.9%	4.48
System skills (e.g., judgement and decision-making, system analysis, planning for improvement or creation of new systems, etc.).	3.9%	2.0%	13.7%	42.2%	38.2%	4.08
Social skills and abilities (e.g., teamwork, adaptability to multicultural environments, emotional intelligence, negotiation skills, etc.).	2.0%	6.9%	8.8%	41.2%	41.1%	4.13
Ability to cope with change.	2.0%	1.0%	2.0%	39.1%	55.9%	4.46
Willingness for lifelong learning.	0.0%	0.0%	6.9%	40.2%	52.9%	4.46
Professional knowledge and skills (knowledge and skills in your field).	1.0%	2.9%	4.9%	44.1%	47.1%	4.33
Technical knowledge and skills (e.g., working with new, innovative, and disruptive technologies—testing, maintenance, usage, etc.).	0.0%	0.0%	9.8%	52.0%	38.2%	4.28
Artistic skills and abilities (e.g., music, design, writing, dance, etc.).	8.8.%	19.6%	24.5%	27.5%	19.6%	3.29
Problem-solving skills.	0.0%	0.0%	5.9%	46.1%	48.0%	4.42

Lastly, regarding the importance of lifelong learning and adopting new skills during their work life, majority of respondents find lifelong learning and adopting new skills mostly (55.9%) or extremely (39.2%) important. Moreover, respondents are mostly (55.9%) and fully (27.5%) ready to develop and adopt new skills during their work life.



Graph 6. The importance of lifelong learning and adopting new skills



Graph 7. Respondents' readiness to develop and adopt new skills during their work life

Discussion

The results offer insights into the five main research questions concerning young adults' attitudes towards the Fourth Industrial Revolution (4IR) and the implications of automation and robotization on their professional life. They also refer to previous research and studies analysed in the *Theoretical background* chapter. We have to address two anticipated limitations of this research. Firstly, while aimed at young adults, this research only includes graduate students, representing just one segment of the broader young adult population and its attitudes and beliefs. And secondly, the rapid evolution of 4IR technologies and trends makes it challenging to track their social impact and ensure the findings remain up-to-date and fully relevant for a longer time.

Regarding the attitude of young adults **toward the 4IR and its disruptive technologies,** the findings indicate that young adults generally hold positive attitudes towards disruptive technologies, seeing them as essential for economic, social, and their own professional growth. Artificial intelligence, in particular, is perceived as the strongest driver of change, impacting various aspects of life and work. These results are consistent with results from previous research (Siekmann et al., 2023; World Economic Forum and Accenture, 2023; Schwab et al., 2018; Schwab, 2017; Devezas et al., 2016; Brynjolfsson and McAfee, 2014). Respondents answers also echoed opinions and conclusions form previous research, especially regarding the issue of automation as a process that will most likely provide a complementary relationship, rather than a replacement for humans, by capitalizing on strengths contributed by both humans and machines (World Economic Forum, 2023; Cribb and Glover, 2018).

Related to the second research question referring to the perceptions of the impact automation and robotization have on employment, nature of work, and social security, the young adults appreciate the aspect of productivity and the economic benefits being propagated through automation and robotization. However, they still feel somewhat threatened by the potential aspect of job loss. This feeling of insecurity also extends to social security, where respondents expressed the need for more adaptable social safety measures, though having no definitive personal plans and strategies in that regard. Although the discussions on universal basic income are far from certain conclusions and solutions, they feel the increasingly growing

demand for new models of social security that could successfully counterbalance the risks of precarious work and technological development. These finding also align closely with those of prior studies (World Economic Forum, 2023; Tipurić et al., 2020; Servoz, 2019; Uhuru Bidadanure, 2019; Cribb and Glover, 2018; Starčević, 2014; Standing, 2011).

When it comes to implications the 4IR has on their professions and future careers and work life, especially in terms of automation and robotization, young adults' general outlook is that they feel optimistic about the future work environment, envisioning it to be flexible and dynamic, yet not fully automated. Their views corroborate established body of evidence that automation optimizes industrial and business processes by minimizing human error and modernizing production (Gothwal et al., 2023; Siekmann et al., 2023; Schwab et al., 2018; Schwab, 2017; Liao et al., 2017b), yet they still foresee a collaborative model between human and machine (World Economic Forum, 2023; Cribb and Glover, 2018; Schwab et al., 2018; Schwab, 2017; Schwab, 2018). Respondents' views also aligns with the idea of human-centric innovation and people-first approach, where human intelligence and emergent technologies, especially artificial intelligence, work together in synergy (Schwab et al., 2018; Brynjolfsson and McAfee, 2014).

Regarding the question of how young adults perceive and assess their knowledge, skills and readiness to address the changes in the labour market, most respondents feel that their formal and informal education was sufficient to meet the needs of the modern labour market, with almost 80% of respondents not pursuing additional education outside the formal one. They recognize and emphasize the importance of skills such as analytical thinking, communication, adaptability, critical thinking, problem-solving, and digital literacy, which is consistent with the skills World Economic Forum (2023) and The General Assembly (2024) identified as crucial for future labour markets.

Finally, when it comes to young adults' commitment to lifelong learning and continuous professional development, the majority of the respondents are confident in their current skill set, and they are quite committed to continuous learning in order to respond to changes in the labour market. Most of them consider lifelong learning to be important, the fact which is also supported by recent studies which insist upon continuous skill

development in relation to the demands of the 4IR (Ayinde and Kirkwood, 2020; World Economic Forum and The Boston Consulting Group, 2018; Gray, 2016; Huws, 2014).

In general, it could be concluded that young adults view changes driven by the 4IR with cautious optimism, acknowledging both opportunities and challenges. They are ready to commit to lifelong learning and seek adaptable social policies to ensure professional stability and social security in the context of an increasingly automated workforce.

It is important to address few issues and challenges regarding the subject of the research and its complexity. It is important to consider the issue of respondents' general awareness and understanding of the concept of the 4IR and its disrupting changes. There is a possibility that some of them encountered and considered the concept of the 4IR and its implications for the labour market for the first time, potentially affecting their perception and understanding of the issue and, eventually, their responses. Additionally, respondents' attitudes and opinions may be influenced by their field of study – natural sciences, technical sciences, social sciences, or humanities. For example, perceptions of the skills, knowledge, and abilities necessary for their future work are not only shaped by their personal perception and experience, but are also closely linked to the specific professional demands of their field, as well as how and to what extent do emerging technologies affect their profession. A notable challenge in this research was the fairly low or slow response rate from the respondents. In fact, during this six-month period that the survey remained open and extending continuous outreach efforts to both students and faculty throughout Josip Juraj Strossmayer University of Osijek, there were 102 complete questionnaires. The relative complexity of the questionnaire (deliberatively designed to comprehensively explore the five research questions) may have contributed to the questionnaire's lower completion rate. Indeed, the Lime Survey recorded 562 incomplete attempts at the survey, indicating that many respondents may have found the questionnaire time demanding and opted not to complete it. The last important issue the authors want to address is that this research was done before the emergence of generative artificial intelligence (GAI) and deep learning algorithms such as large language models (LLMs). The emergence of GAI introduces new dynamics and reshapes tools and systems within educational system and labour market, and extends the scope of research such as this one.

Thus, the future extension of this research, or a follow-up research, will include the issue of GAI. Eventually, it will be a valuable comparison between the results of this and future research that could reveal significant shifts in young adults' attitudes, expectations, and preparedness for the future of work, pointing to some new expectations and concerns that were brought about by the latest wave of technological innovation. Young adults today are likely to be more aware of the potential and consequences of GAI because such AI is already in operation across fields automating tasks, improving learning, and assisting in creative processes and complex problem-solving. This would likely affect young adults' perceptions of employability and skill requirements (the need for continuous upskilling), and perception of their future roles in a workforce where AI can handle complex, creative, and high-level cognitive tasks.

Conclusion

The Fourth Industrial Revolution (4IR) has profoundly impacted industrial and economic panorama, changing labour markets, the nature of work, and the relationship between technology and sustainability. At its core is the issue of achieving balance in automation or robotization that will optimize processes for increasing productivity, but also bring significant shifts in employment patterns. While machines and algorithms displace human labour, raising concerns about significant job losses, the upside of emerging new jobs in different and new sectors helps with addressing the concerns and anxiety about massive unemployment. Thus, achieving economic sustainability requires minimizing the risks of unemployment while maximizing job creation in new fields driven by technology. This calls for different large scale initiatives and programmes for reskilling and upskilling of the current working force, and education and training will have to be refocused on equipping individuals with both technical and soft skills to sustain them in technology-intense markets.

Automation also tends to increase income inequality by taking the place of low-skilled labour. Therefore, the approach should involve the adoption of mechanisms for correcting economic inequality, including progressive taxation, universal basic income, and social safety nets. As much as productivity gain through automation contributes to economic growth, a fair

share of output is critical for long-term sustainability within the community. Organizations, institutions and corporations will be expected to implement responsible automation and robotization within their business models, considering societal and environmental impacts. Similarly, the role played by the government is instrumental in establishing adaptive and inclusive policies that support innovation while securing labour rights.

Young adults have a rather optimistic view – they believe technological change provides an opportunity for improving their job prospects, especially in new emerging industries, while they also recognize related challenges such as the risk of job loss due to automation. In this regard, their interest in lifelong learning reflects the findings of the World Economic Forum that skills related to analytical thinking, innovation, and creativity are fundamental in a rapidly changing labour market and will be irreplaceable in the near future. This, however, makes prediction for the future labour market quite difficult and increases the demand for adaptive educational policies that foster both technical and soft skills. The limitation of the research is that young adults who have not studied were excluded thus the research sample included only students.

Lastly, while the 4IR does hold great promise for furthering economic sustainability, in order to ensure successful balance between social responsibility and technological advancement, it also demands the most careful consideration regarding labour dynamics, income inequality, and social security rights, which interact with its dual impact on economic sustainability and call for a coordinated approach across different sectors. To create such a resilient, equitable and sustainable path in the face of dynamic, technology-driven change, society needs a collaborative and interdisciplinary approach involving governments, businesses, educational institutions, and communities. It also requires policy interventions to ensure technological diffusion along with the protection of rights of labourers, a decrease in unemployment, and striving for equitable economic growth. By fostering a culture of adaptability, collaboration, and ethical innovation, societies can navigate these transformations toward the actual building of a more inclusive and sustainable future.

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AUTOMATIZACIJA I ROBOTI NA TRŽIŠTU RADA: PERCEPCIJE MLAĐIH ODRASLIH OSOBA

Sažetak

Četvrta industrijska revolucija (4IR), obilježena automatizacijom i robotizacijom, značajno utječe na održivi ekonomski razvoj i politike. Ključni aspekti uključuju gubitak i stvaranje radnih mjesta te promjene u prirodi rada, što zahtijeva prekvalifikaciju, nadogradnju i stjecanje novih vještina. Suočavanje s tim izazovima zahtijeva strateške okvire i osnaživanje mladih odraslih, buduće radne snage, kroz obrazovanje i podizanje svijesti.

Ovaj rad istražuje utjecaj 4IR-a na tržište rada, posebno njegov učinak na prirodu rada, vještine, koncept cjeloživotnog učenja i radno zakonodavstvo. Fokus istraživanja je na percepcijama mlađih odraslih osoba, posebno studenata diplomskih i završnih godina Sveučilišta u Osijeku, o ovim promjenama i njihovoj spremnosti za suočavanje s njima. Cilj istraživanja je razumjeti njihova stajališta, stavove i uvjerenja o transformativnim učincima Četvrte industrijske revolucije na tržište rada. Ova analiza je ključna jer se radi o generaciji koja ulazi na tržište rada i koju će automatizacija, robotizacija i tehnološke promjene izravno pogoditi.

Svrha istraživanja je dublje sagledati kako mladi doživljavaju ove promjene, kako ih percipiraju u kontekstu svojih budućih karijera te koje vještine smatraju ključnima za prilagodbu. Istraživanje je provedeno anketom (Lime Survey, SPSS) temeljenom na kritičkom pregledu literature o 4IR-u, automatizaciji, robotizaciji i promjenama na tržištu rada. Analizirane su percepcije, stavovi i spremnost mlađih odraslih osoba na prilagodbu promjenama koje donosi 4IR.

Rezultati pokazuju da mlađe odrasle osobe općenito očekuju gubitak radnih mjesta zbog automatizacije i robotizacije, ali istovremeno vjeruju u stvaranje novih radnih pozicija. Većina ih je spremna uključiti se u cjeloživotno učenje i usvajati nove vještine kako bi se prilagodili dinamičnom tržištu rada. Istraživanje dobiva dodatnu relevantnost u svjetlu naglog razvoja generativne umjetne inteligencije (GAI), koja donosi još dublje promjene i izazove te stvara kontekst za usporedbu između trenutnih i nedavnih ekonomskih i radnih poremećaja.

Ključne riječi: automatizacija, četvrta industrijska revolucija, mlađe odrasle osobe, tržište rada, robotizacija

III. Media and Promotion of Sustainability Agenda

Dinko Jukić[36]

THE ROLE OF DIGITAL GAMES IN CULTURAL AND EDUCATIONAL CONTEXTS

Preliminary Communication
https://doi.org/1059014/LBTL9620

Abstract

The study explores digital games as a subset of digital culture in media studies, educational sciences, and culture. It analyses digital games and the digital world through pedagogical and cultural values. Building on Kellner's media culture theories, Vuk-Pavlović's philosophy of education, and Huizinga's game theory, the study uses qualitative content analysis for an interdisciplinary analysis of contemporary media culture. Cultural meanings are interpreted using critical theory and the philosophy of education. Digital games reflect media values, messages, and serve as cultural communication. Media meanings represent media ideology and promote cultural values. Ultimately, digital games are a significant and relatively new phenomenon in media pedagogy, impacting society and culture in Eagleton's sense. Digital games, like those analysed through Vuk-Pavlović's philosophy, promote ethical and cultural values through interactivity and narratives. They not only entertain but also educate, shaping moral and social norms through media messages and pedagogical principles.

Keywords: digital game, educational value, media culture, media pedagogy

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Introduction

The first and most fundamental question is: why study digital games? The real question would be: why not study digital games? Considering that digital games have been studied for decades, yet very little has been written about them in Croatia, and what has been studied is mostly related to psychology, sociology, and philosophy, it gives the impression that this area is being tacitly ignored. However, what is even more intriguing is *why* the field of digital games is being *ignored*? Or, more precisely: are digital games *worthy* of being a scientific field on their own, or are they *part* of research in other disciplines such as philosophy, psychology, medicine, anthropology, pedagogy, and economics?

Are digital games an activity or an artefact? If they are an artefact and product of mass culture, which they certainly are, can we say that digital games are a postmodern phenomenon? Are they the continuation of modern man, his extended *essence* and hidden message in the virtual world, or, to paraphrase McLuhan (2008), a *digital skin*? After all, do digital games have meaning, and if so, by what methods do we interpret it? Also, have digital games improved play in a philosophical sense (Fink, 2000) or have games upgraded cultural values (Huizinga, 1992)?

After all, can we ignore one such field that has surpassed the film, theatre, literary, and music industries in terms of revenue? On the other hand, if digital games are an activity, does this mean that we observe them exclusively from the context of gaming, entertainment and recreation? Or are games so integrated into society that we don't even notice them? However, the fact that we do not notice them does not mean that they do not exist. That says more about us than the games.

Theoretical and methodological framework

This study aims to explore digital games' roles in culture and educational values. Using diverse methods and theories, it examines how digital games serve as educational and cultural tools. The main research question is: how do digital games contribute to educational values and culture? The analysis will focus on popular games with significant cultural impact and research relevance.

The research employs content analysis, critical theory, description, narration, interpretation, and phenomenological approach. The study interprets, describes, and analyses digital games to identify educational values and cultural context, using critical theory to highlight correlations. The research uses Huizinga's and Caillois' theories of play, Vuk-Pavlović's philosophy for educational values, and Eagleton's theory of culture. Combining these through triangulation provides a comprehensive understanding and multi-perspective insight into digital games.

Thematically, the paper has two parts. The first part investigates the digital game phenomenon using game theories (Huizinga, 1992; Caillois, 2001) and explains the concept of play and digital games (Mäyrä, 2008) in cultural and social contexts. The second part analyses educational values according to Vuk-Pavlović philosophy of education (2007; 2016), Eagleton cultural context (2016) and connects them to Kellner's (2004) media culture.

The digital games analysed in this study include: *The Last of Us* (Naughty Dog, 2013), *The Last of Us Part II* (Naughty Dog, 2020), *Life is Strange* (Dontnod Entertainment, 2015), *Life is Strange 2* (Dontnod Entertainment, 2018), *Heavy Rain* (Quantic Dream, 2010), *Detroit: Become Human* (Quantic Dream, 2018), *Hellblade: Senua's Sacrifice* (Ninja Theory, 2017), *God of War* (Santa Monica Studio, 2018), *The Walking Dead* (Telltale Games, 2012) and *A Plague Tale: Innocence* (Asobo Studio, 2019).

Game as the source of culture

According to J. Huizinga (1992:15), play has deep-rooted cultural and social functions, making it a fundamental component of human culture. Huizinga defines play as a free activity within specific time and space boundaries, governed by voluntarily accepted rules. It transcends cultures and history, driven purely by the desire for enjoyment and pleasure. According to Huizinga, play has educational, social, psychological, creative, and cultural functions. It helps people learn, develop skills, and acquire knowledge in a safe environment (Sutton-Smith, 2001). Play builds social relationships, teaches cooperation, competition, and rule-following, essential for social cohesion. It encourages imagination and creativity, contributing to cultural development (Huizinga, 1992).

Play provides emotional release, reduces stress, and improves mental health. It reflects and transmits cultural values and norms, allowing people to express and interpret cultural symbols and rituals. Play builds social bonds and togetherness, acting as an agent of culture (Huizinga, 1992:10). Simply put, a game is a free activity that occurs in time and space, encompassing imagination, immersion, and temporality. From the perspective of the understanding of media pedagogy (Baacke, 1997) and theory of education media, digital games represent an educational potential since they are in the relationship between the real and the digital (Qvortop, 2007, p. 14). In this context, digital games are not only a part of the modern world but also reflect the attitudes, ideologies and beliefs of society.

According to E. Fink (2000), play is not only a human activity but symbolizes the world and the way people experience reality. In this sense, play is a way for people to explore and understand the world, and it is central to human existence. Caillois (2001) adds that games can be structured or unstructured, and that different types of games can combine elements of competition, luck, simulation, and vertigo. According to Huizinga (1992:15), the game has the specificity of exposure to the temporary sphere of activity as well as the temporality of place and time (1992:16). In the context of digital games, this means that games have the possibility of repeatability. The *magic circle* concept, introduced by J. Huizinga in his book *Homo Ludens*, refers to a special space within which the game takes place. Within that space, the rules of the game are the only ones that apply, thus creating a temporary world separated from everyday life.

Playing a game means stepping apart from the outside world and immersing in a self-contained system (Egenfeldt-Nielsen, Smith & Tosca, 2008). However, games are intertwined with society and should not be viewed in isolation. McKenzie (2007) asserts in his gamer theory that gamers are the bearers of society, economy, and new sociological culture, integrating digital and virtual realities with real life. Therefore, digital games dominate culture, influencing life experiences and creating a new gamer identity situated between traditional subjects and citizens (McKenzie, 2007). McKenzie's concept of gamespace depicts the world as a continuous field of unpredictable games with undefined goals. Digital games represent a unique phenomenon (Bučková, 2019: 47).

In this metaphor, gamespace symbolizes how we understand and manage everyday life, turning the world into a playing field with ever-changing rules. Huizinga's magic circle represents a microspace within this gamespace where rules are clearly defined. In *The Witcher 3: Wild Hunt* (CD Projekt, 2015), the magic circle is evident; players enter the virtual world and accept its rules. All education is part of media education (Moser, 2006: 28). Media pedagogy is not viewed from the aspect of media content because then we limit its essence as a transmitter of messages. In this sense, Huizinga's understanding of play as culture complements the contemporary understanding of media and digital games. D. Baacke (1997: 34) also asked the question why there is a certain misunderstanding, fear, of rejecting media in educational sciences. Therefore, media and digital games should be viewed more broadly.

From the perspective of the philosophy of play, Fink (2000) views play as a way in which people experience and interpret the world. According to Fink, play is an essential part of human existence, present in all aspects of society, from art to religion. In this sense, Fink's understanding of the game is like Huizing's magic circle concept, where players temporarily enter a separate world with specific rules. For Fink, the world is a magic circle where life is a game. His theory connects to gamespace, extending play to all human activities. This aligns with Jukić's (2023) view of digital games, projecting the microcosm into the virtual world, highlighting their role in understanding ethical, cultural, and educational values.

In this sense, the ideological dimensions of Huizing's argument about the magic circle should be understood in the context of another time. Digital games certainly leave their mark on real society and are not only related to digital media. Specifically, games affect our lives by substituting for other possible activities and games can make us feel satisfied, thrilled or enraged. Also, digital games are communication media and games affect our behaviour. In the context of digital games, the concept of the magic circle is particularly significant (Arkhipov, 2020), because games often blur the boundaries between the real and virtual worlds. Pervasive games, which extend the magic circle to the real world, use the player's context, including location, time, and social context, to create a richer game experience (Coelho et al., 2020). This approach allows players to engage on a deeper level, connecting the game with their real life and environment (Jukić, 2021; 2023).

R. Caillois expands Huizinga's game theory. According to Caillois (2001:12-27), there are four categories of play: *agon* (competition), *alea* (luck), *mimicry* (pretending), and *ilinx* (vertigo). *Agon* involves competition based on endurance, speed, strength, and skill. *Alea* is based on luck, with outcomes not dependent on skill. *Mimicry* involves imitation and simulation. *Ilinx* induces rapture by altering perception and causing disorientation (Table 1). The analysis of Caillois' types of digital games is discussed by Z. Kvetanová (2023), explaining the typology of games in the context of different genres. In this sense, the game represents a correlation between subjective and objective realities (Kvetanová, 2023: 98).

Table 1. Game classification in the context of digital games

Classification	Characteristics	Digital games
Agon	Competition	FIFA, NBA 2K
Alea	Chance	Gwent, Hearthstone
Mimicry	Situation	The Sims, Call of Duty
Ilinx	Vertigo	Roller Coaster Tycoon,, Need for Speed

Source: author's processing

Huizinga's theory provides a fundamental understanding of play as a cultural phenomenon, while Caillois' classification of games offers a detailed analysis of different forms and functions of play. Huizinga emphasizes the role of play in culture and society, whereas Caillois distinguishes between spontaneous and structured play. Together, their theories offer a comprehensive view of play as a key element of human nature and culture. Caillois's classification of games can overlap, so a digital game can have elements of *agon, mimicry*, and *ilinx*. This allows digital games to be analysed from various perspectives, as they combine multiple genres and mechanics. Caillois distinguishes between *paidia* (spontaneous play) and *ludus* (structured play). *Paidia* involves unstructured activities, while *ludus* includes games with clear rules and goals. This distinction helps explain the different forms and functions of play in society, complementing Huizinga's theory on the importance of rules and structure in play.

B. Sutton-Smith (2001) presents seven rhetoric of play. This rhetoric's are different perspectives through which the game can be interpreted. These

are the areas: a) progress, b) fate, c) power, d) identity, e) imaginary, f) self, and g) frivolity. All mentioned game rhetoric's can be connected by Caillois' classification and Huizinga's game theory (see Table 2). Sutton-Smith's rhetoric's of play offer a framework for understanding the various interpretations of play. For instance, digital games can be perceived as tools for learning and progress (rhetoric of progress), community-building (rhetoric of shared identity), and personal expression (rhetoric of self).

Table 2. Correlation of game theory

Concept	Huizinga	Caillois	Sutton-Smith
Nature of play	Play creates culture	Four play types	Ambiguity of the game
Agon (competition)	Competition builds community	Competitive games	Competition shows power
Alea (luck)	Games confront uncertainty	Chance games	Chance games embrace fate
Mimicry (simulation)	Simulations explore roles	Simulation games	Simulation imagines worlds
Ilinx (vertigo)	Vertigo games give release	Excitement games	Vertigo chases thrills
Structure and spontaneity	Game rules create meaning	Paidia (spontaneous) and ludus (structured) play.	Games show varied rhetoric's
Creativity and innovation	Game inspires creativity	Combinations of game types	Imaginary games inspire creativity
Social cohesion	Play fosters unity	Games unite communities	Games build shared identity

Source: author's analysis

Digital games

The term digital game is often equated with the terms *video game* and *computer game*, although not all games used a microprocessor in their beginnings, which usually implies computer games, just as not all video games are intended to be played on a computer. All video games are computer games since they use computers, regardless of the platform (Wolf,

2012:130). To distinguish these terms, it's best to consider them in the historical context of gaming. The term *video game* is often used synonymously with 'digital games' and refers to games played on screens, including televisions, monitors, and mobile devices. Video games include all types of digital games, from console games to mobile applications. The term computer game specifically refers to games played on personal computers. Computer games, a subset of digital games, often require more computing resources. Thus, digital games encompass both video and computer games.

Digital games are interactive applications played on various digital platforms, including computers, consoles, mobile devices, and other electronic devices. They combine elements of visual art, music, story, and interactivity (Mäyrä, 2008) to provide an experience that can be fun, educational, or both. Initially, the term *digital game* referred to the distribution distinction between physical (CD, DVD, Blu-ray) and digital media (*Steam, PlayStation Network, Xbox Live*). Today, 'digital game' is accepted as a common term for video games and computer games.

Juul (2011) observes digital games as rules played on digital devices, where players perform actions defined by these rules, with varying results based on the player's decisions and skills.

N. Whitton (2014) uses the *playground* metaphor to describe digital games as spaces where players can freely explore, experiment and express their creativity without fear of real consequences. In fact, through the *playground* metaphor, Whitton points out that digital games can be a powerful tool for learning and development, providing space for free play, experimentation and creative expression.

Games are popular art, claims McLuhan, adding that they are part of collective culture. Games are dramatic models of our psychological lives providing release of tensions (McLuhan, 2008:211). In this sense, McLuhan confirms that games are part of culture, building on Huizinga's game theory by adding that games are extensions of social man (McLuhan, 2008:209). If we understand games as extensions of man that relieve tension, we can connect this concept with Aristotle's (2002:17) term catharsis [κάθαρσι], i.e., purification. Digital games, like tragedies in Aristotle's sense, can evoke strong emotional reactions in players. By identifying with

characters and their stories, players experience catharsis through the successes and failures within the game.

McLuhan's concept of play as a medium for experimentation and creativity applies seamlessly to digital games. Games offer players the chance to explore various scenarios and roles (de la Hera, 2019), fostering new insights and innovations. Just as Aristotle's catharsis allows for emotional purification through art, digital games can offer a similar effect through interactive experiences. Players navigate emotional challenges and conflicts within the game, leading to a sense of relief and purification. Škripcová (2022) highlights that digital games can enhance players' media competencies unconsciously. Through interaction with media in digital games, players cultivate critical thinking and media analysis skills, which are vital in today's information-saturated society

Digital games are more than just entertainment, they are an expressive medium (Frasca, 2003) that can depict the functioning of real and imagined systems. Games allow players to interactively participate in these systems and form their own judgments. In this sense, digital games possess unique persuasive power (de la Hera et al, 2021). They can not only support existing social and cultural positions but also disrupt and change them, potentially leading to significant long-term social changes.

This builds on Ian Bogost's (2007) concept of procedural rhetoric, which describes how digital games uniquely convey messages and influence players. Procedural rhetoric refers to the use of rules, algorithms, and processes within digital games to create persuasive arguments and convey messages. Unlike traditional forms of rhetoric that rely on language and imagery, procedural rhetoric uses interactive systems and game mechanics to help players experience and understand certain ideas or attitudes.

Jukić (2021; 2023) uses this concept to explain how games like *The Walking Dead* and *Heavy Rain* can convey educational and ethical values through their mechanics and narratives. For example, these games often place players in morally complex situations where their decisions have significant consequences, encouraging the development of empathy and moral reasoning. Mäyrä (2008) defines game culture as a set of practices, beliefs and values that develop around games and play. Digital games are not only an individual activity but also a social practice. In this sense, digital games often reflect real worlds and situations, allowing players to

explore and understand complex social, philosophical, ethical and political systems (Jukić, 2022).

In the context of digital games, media archaeology helps us understand how games have evolved over time (see Table 3), how various technologies have influenced game design and experience, and how cultural and social factors have shaped the gaming industry. Media archaeology is an approach to studying media, focusing on the history and development of media technologies. Digital games often reinterpret elements of older media, such as movies, books, or even earlier video games. Many modern games use narrative techniques and visual styles inspired by classic films or literary works (Bolter & Grusin, 1999).

Table 3. Media archeology of digital games

Aspect	Description	Example	Autor's
Historical context	A survey of early video games and their platforms.	Arcade games from the 1980s, like Pac-Man and Space Invaders.	Huhtamo, E., & Parikka, J.
Technological development	The evolution of technologies that enable game development.	The game Crysis, which is known for its demanding graphics	Galloway, A. R.
Cultural influences	The influence of social and cultural factors on the development of games.	Games inspired by political events, such as Papers, Please.	Apperley, T.
Archiving and preservation	Efforts to preserve old games and hardware.	Digitization of old games, like Doom for modern platforms.	Lowood, H.
Interactivity	Development of interactive elements and user experience.	The introduction of VR technology into games, such as Half-Life: Alyx.	Juul, J.
Remediation	A process in which new media reinterpret existing media forms.	Remastering old games for modern platforms like Resident Evil 4	Bolter, J. D., & Grusin, R.

Source: author's processing

As technology evolves, old games are often adapted to new platforms and technologies. This can include remastering old games with improved graphics and sound for modern consoles or PCs. This process allows new

generations of players to experience classic games in a contemporary context (Bolter & Grusin, 1999). Games can also reinterpret cultural and social themes from the past in a new context. For instance, games addressing historical events often use contemporary perspectives and technologies to provide players with a deeper understanding of those events (Bolter & Grusin, 1999). Remediation also includes changes to the way players interact with games. For example, the development of virtual reality (VR) and augmented reality (AR) enables new forms of interactivity that reinterpret traditional ways of playing (Bolter & Grusin, 1999).

Educational and cultural values of digital games

Vuk-Pavlović's philosophy of education arises from the contemplation of educational ideas, values, and cultural context. According to Vuk-Pavlović (2007), life and education occur within the cultural environment, with culture being enriched through education. Education is viewed in a broader context because an educational being is formed through relationships with others. This is why Vuk-Pavlović's philosophy of education emphasizes the importance of the relationship between educators and students, valuing respect, recognition, and cooperation.

Education is the intention to preserve and continue to develop culture as a system of values. In this sense, educational values are related exclusively to the individual as a cultural being, so the ethical, cultural and educational values themselves are realized exclusively through education. This is why the first chapter of his philosophy of education begins with the term 'future,' emphasizing that education is a valuable experience. The future of educators arises from striving for values (Vuk-Pavlović, 2016:39). In this view, Vuk-Pavlović asserts that the concept of the future is central to pedagogy, giving rise to intellectual, moral, aesthetic, ethical, and cultural education.

However, in such education, Vuk-Pavlović especially emphasizes the concept of freedom in the context of education as a free act, i.e. when the educator wants to learn and accept educational values. This is very similar to the modern point of view of educational sciences, according to which the task of educators is to guide, encourage and respect students. However, Vuk-Pavlović goes even further and claims that freedom in education

is not the absence of coercion, but openness to the future and creativity. In other words, such education facilitates the transformation of the individual, fostering ethical, cultural, and spiritual development. This is why Vuk-Pavlović (2007) emphasizes that pedagogical authority is truly the authority of love, realized through educational values.

Understanding digital games in the context of the text as interpreted by Jukić (2023), i.e. in the context of semiotics as a sign according to Barthes (2015), educational values can be deconstructed from digital games. If we start from the assumption that education helps an individual to find himself and build his personality, then through digital games it is possible to analyse the educational values inherent in the understanding of the philosophy of education according to the Vuk-Pavlović theory. In this context, Vuk-Pavlović understands personality as an individual from which educational effects, values and values spring. Only in this sense, the ultimate purpose of education is the achievement of educational values as a special experience.

When digital games are valued for their ethical, aesthetic, cultural, and spiritual contributions, they transcend into cultural values or cultural objects. Then the digital game becomes a means of media literacy that is observed in the context of education (Gee, 2020). This builds on Vuk-Pavlović's understanding of the values and experiences of the individual. According to him, experience is what makes a leap of consciousness for the purpose of cognition. Vuk-Pavlović views experience as a duality of awareness in relation to the subject and objectivity in relation to the object.

Digital games can be viewed in a value judgment as media content and messages that are subject to cultural values. According to Kellner (2004), media culture is a dominant form of culture that socializes us and shapes our identities. Media not only provide information and entertainment but also shape our values, beliefs, and behaviours. Media culture encompasses various forms, including television, film, music, the Internet, and digital games, creating a complex system of cultural meanings.

Kellner argues that media play a crucial role in socialization, teaching individuals the norms, values, and behaviour patterns of their culture. Media offer models of identification and behaviour that people can adopt, as seen in digital games. If we consider the context of culture according to Eagleton (2016), then we understand culture as a key aspect of human

existence. Eagleton argues that culture is a vital means of enriching social life and can serve as an impetus for the transformation of society.

According to T. Eagleton (2016), the concept of culture represents a set of values, customs and symbols that shape society. Eagleton's analysis of culture can be linked to Huizinga's and Caillois' game theories, as games represent an important aspect of cultural practices that allow users to express their creativity, explore identity, and establish social connections. In the context of media culture and digital games, Eagleton's theory can be applied in several ways: as cultural reproduction and cultural symbolism. However, according to Škripcová (2022), digital games develop media competencies such as information analysis, media literacy and critical thinking. In this sense, digital games, despite their commodification and cultural reproduction, have educational and cultural potential (see Table 4).

Table 4. Educational and cultural potential of digital games

Digital games	Love	Empathy	Ethics	Freedom
The Last of Us, The Last of Us Part II	+	+	+	-
Life is Strange, Life is Strange 2	+	+	+	+
Heavy Rain	+	+	+	-
Detroit: Become Human	-	+	+	+
Hellblade: Senua's Sacrifice	+	+	+	+
God of War	+	+	+	+
The Walking Dead	+	+	+	-
A Plague Tale: Innocence	+	+	+	-

Source: author's research

As can be seen from Table 4, the values promoted by digital games are empathy and ethical virtue. This is especially evident in the examples of the game *The Last of Us,* and *The Last of Us Part II*, especially in the relationship between the main protagonists. Joel and Ellie have an extremely deep and emotional relationship. Their journey brings them closer together, transforming their relationship from a reluctant cooperation to a deep, almost father-daughter bond.

In *The Last of Us Part II*, their relationship is further tested as Ellie seeks revenge for Joel's death, leading to intense emotional and moral conflicts. Observing their relationship through the prism of Vuk-Pavlović's philosophy of education, we can notice several key elements. Vuk- Pavlović emphasizes the importance of the relationship between educators and students, which is clearly present in Joel's and Ellie's relationship.

Their relationship is based on mutual respect, recognition and cooperation, which is essential for creating educational value. In a way, Joel takes on the role of educator, providing Ellie not only with physical protection but also with moral lessons. Their shared experience enables mutual learning and development, which corresponds to Vuk-Pavlović's idea of education as a process within a cultural environment.

Ellie also influences Joel, reminding him of the human values he has lost during his years of survival. Through their relationship, we can see how educational values such as freedom, creativity and the future are realized through mutual interaction and shared experience, which ultimately contributes to their individual, ethical and spiritual development. According to Eagleton, their journeys and decisions reflect cultural norms and values within a dystopian world, showing how culture can serve survival, understanding, and emotional development.

According to L. Magová (2020), digital games have ethical and educational values. Through playing digital games, players develop media competences, ethical dilemmas and critical thinking. Jukić (2023) talks about the fact that digital games convey educational values by analysing media messages citing values such as parenting, guardianship, kindness and justice. However, the educational values shown in Table 4 are summarized by thematic analysis of digital games in accordance with the premise of Vuk-Pavlović's educational values of empathy and ethics.

The value of love encompasses the care, support, and emotional bonds that protagonists develop with others. In games like *The Last of Us* and *God of War*, love between characters (e.g., parents and children, guardians and children) forms the backbone of the plot. In terms of cultural values, the moral principles that guide our decisions and behaviour are showed in games like *Heavy Rain* and *The Walking Dead*, emphasizing difficult moral dilemmas and ethical decisions (see Table 5).

Table 5. Educational and cultural values of digital games

Digital game	Educational and cultural values
The Last of Us, The Last of Us Part II	Empathy, compassion, survival, love, family, moral dilemmas
Life is Strange, Life is Strange 2	Friendship, support, responsibility, consequences, identity, self-acceptance, social justice
Heavy Rain	Moral dilemmas, family values, human nature, parenting
Detroit: Become Human	Human rights, equality, empathy, bioethics
Hellblade: Senua's Sacrifice	Mental health, strength, mythology, identity, courage
God of War	Family ties, growing up, responsibility, identity, mythology
The Walking Dead	Survival and morality, guardianship, loyalty, friendship
A Plague Tale: Innocence	Caring for others, resourcefulness, history and courage

Source: author's research

Discussion and conclusion

In this study, digital games are explored as a subspecies of digital culture, with an emphasis on their role in media studies, educational sciences, and culture. The analysis draws on Kellner's media culture theories, Vuk-Pavlović's philosophy of education, and Huizinga's game theory, aiming to answer: how do digital games contribute to educational values and culture?

Examples of analysed games provide rich narratives with ethical dilemmas that reflect key educational values. Game like *Life is Strange* and *Life is Strange 2* focus on moral decisions and responsibility, emphasizing the importance of freedom and moral choice, which is consistent with Vuk-Pavlović's emphasis on freedom in education. Game like *Heavy Rain* and *God of War* explore paternal love and sacrifice, which reflects Vuk-Pavlović's idea of the authority of love in upbringing.

In digital game *Detroit: Become Human*, android Kara flees with Alice, facing moral decisions that test their humanity, while in *Hellblade: Senua's Sacrifice*, Senua battles psychosis and inner demons to save her beloved's soul. A game like *A Plague Tale: Innocence* focuses on survival, sibling love, and moral choices, teaching player's empathy and ethics. This emphasis on

family love and responsibility echoes Vuk-Pavlović's belief in the importance of love and care in education.

Digital games, through interactive narratives and complex characters, reflect contemporary media and cultural values. Through the prism of Kellner's media culture, we can understand how games like *The Last of Us* and *The Walking Dead* provide models of identification and behaviour, shaping moral and social norms. Vuk-Pavlović's philosophy of education emphasizes the importance of love, respect, freedom and responsibility in education. These values are clearly visible in the analysed games, where the relationships between guardians and students, as well as moral dilemmas, play a key role in the development of characters and narratives.

While games like *Heavy Rain* and *God of War* emphasize themes of paternal love and sacrifice, games like *Life is Strange* and *Life is Strange 2* focus on moral freedom and responsibility. Both types of games stress the importance of moral choices, empathy, and care, reflecting Vuk- Pavlović's educational values. However, while some games highlight personal sacrifice, others underscore the significance of making independent moral decisions, creating a diverse landscape of educational insights.

The roles of paternal figures like Kratos from *God of War*, Ethan from *Heavy Rain*, Joel from *The Last of Us*, Lee from *The Walking Dead*, and Geralt from *The Witcher 3: Wild Hunt* emphasize the critical educational values of love, protection, and guidance. These characters act as father figures or guardians, providing emotional and moral support. Their involvement underscores the importance of paternal figures in the upbringing and education of younger characters, fostering their development and instilling essential values such as responsibility, empathy, and moral integrity. This highlights the irreplaceable role of real-life mentors and caregivers in guiding and nurturing the next generation.

The relationships between guardians and their wards in *The Last of Us, The Walking Dead, The Witcher 3: Wild Hunt, Heavy Rain, A Plague Tale: Innocence*, *Life is Strange 2,* and *God of War* highlight the importance of freedom and acceptance. These characters grow and develop through moral and ethical dilemmas, with guardians providing the needed support and moral framework. This balance of freedom and guidance fosters resilience, empathy, and a strong moral compass, essential for their maturity.

For further research, the impact of digital games on different demographic groups can be analysed, as well as the analysis of new games and emerging technologies. In addition, research could include an analysis of how games affect interpersonal relationships and social skills. This study demonstrates that digital games, despite their different themes, commonly promote educational values such as love, respect, and responsibility, proving their substantial impact on players' moral and ethical development. The role of media pedagogy stems from the decoding of media messages (Miliša & Vertovšek, 2009: 14). This study analyses the educational and cultural values of digital games in the context of media pedagogy.

It should be noted that the games researched in this study are not educational games in the strict sense of the word, but rather represent a part of media education (Baacke,1997) and a part of non-formal and informal learning (Matijević, Bilić & Opić, 2015). In this sense, the context of digital games as a broader context of media studies, game studies and cultural studies opens up new questions. How best to integrate these tools? What are the limits of their influence on morality and ethics? If digital games shape moral and ethical values, does the role of educators become less relevant? Are digital games new educators or tools for holistic development? What are the limits of their influence on the dynamics of the real world?

Scholars are divided on the pedagogical values of digital games. Some warn of the dangers inherent in digital media, while others see this interactive dimension as an opportunity for learning (Matijević & Topolovčan, 2017: 122). It is crucial to note that digital games not only represent a new youth culture but also a contemporary way of thinking, having fun and learning through the digital world. After all, digital games symbolize and represent an ideology (Kellner, 2004) that reflects society and community. In this sense, the educational values of digital games can be observed in exactly the same way as the educational values of film, music, and literature.

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ULOGA DIGITALNIH IGRI U KULTURNIM I OBRAZOVNIM KONTEKSTIMA

Sažetak

Studija istražuje digitalne igre kao podskupinu digitalne kulture u medijskim studijama, obrazovnim znanostima i kulturi. Analiziraju se digitalne igre i digitalni svijet kroz odgojne i kulturne vrijednosti. Nadovezujući se na Kellnerove teorije medijske kulture, Vuk-Pavlovićevu filozofiju odgoja i Huizinginu teoriju igre, studija koristi kvalitativnu analizu sadržaja za interdisciplinarnu analizu suvremene medijske kulture. Interpretiraju se kulturna značenja metodom kritičke teorije i filozofije odgoja. Digitalne igre odražavaju medijske vrijednosti i poruke te služe kulturnoj komunikaciji. Medijska značenja predstavljaju medijsku ideologiju i promiču kulturne vrijednosti. U konačnici, digitalne igre značajan su i relativno novi fenomen medijske pedagogije koji utječe na društvo i kulturu u Eagletonovom smislu. Digitalne igre, poput onih analiziranih kroz Vuk-Pavlovićevu filozofiju, promiču etičke i kulturne vrijednosti kroz interaktivnost i narative. Ne samo da zabavljaju, već i obrazuju te oblikuju moralne i društvene norme kroz medijske poruke i pedagogijska načela.

Ključne riječi: digitalne igre, odgojne vrijednosti, medijska kultura, medijska pedagogija

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SUSTAINABLE UNIVERSITY: THE POWER OF STRATEGIC COMMUNICATION OF PUBLIC UNIVERSITIES IN THE REPUBLIC OF CROATIA

Original Paper
https://doi.org/1059014/YOUG4538

Abstract

Institutions of higher education are becoming more and more significant in society, and their success largely depends on the practical implementation of strategic public relations and two-way symmetrical communication. Higher education institutions and other stakeholders must maintain positive connections and constant, open communication since doing so promotes respect and goodwill among the general public and helps to shape society. Public relations has become essential for educational institutions to operate effectively in the current environment, where they frequently confront several obstacles.

In the context of public universities, this study examines the function, structure, and potential of public relations, with a focus on tactics that support their competitive edge and long-term viability. Strategic communication and public relations are essential components for upholding and improving institutions' reputations, drawing in students, and resolving the financial and spatial obstacles that higher education faces in today's world.

The aim of this paper is to investigate how public relations strategies can contribute to the sustainability of public universities in the Republic of Croatia, by examining the challenges they face as well as the potential that this type of communication offers. Through the lens of sustainability, we will analyze how strategically managed public relations can assist universities in overcoming challenges and achieving long-term success in the ever-changing educational landscape.

The research will be based on a qualitative methodology. We will explore current theoretical considerations and analyze the diverse experiences of public universities

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in the Republic of Croatia. The aim is to look deeper into the complexity and context of specific situations that impact public relations at public universities. The method of analysis and synthesis will be used to thoroughly investigate and connect information from various sources. In contrast, the comparative method will be employed to compare different approaches to public relations at public universities, identifying similarities and differences and drawing lessons from successful experiences.

Keywords: analysis and synthesis method, sustainability, public universities, public relations strategy, qualitative research

Introduction

Today's universities face the challenge of integrating sustainability into their strategies and practices to meet the needs of present generations without compromising the ability of future ones to meet their own needs. The paradox of economic growth and its impact on the ecological system requires careful management to ensure the environment preservation for future generations. This paper studies the role of strategic communication among nine public universities in the Republic of Croatia in promoting sustainable development. The global community is confronted with the challenge of finding a balance between economic growth and environmental protection. While economic growth improves the standard of living, it simultaneously contributes to pollution and the depletion of natural resources. The concept of sustainable development, which emerged as a response to this paradox, is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (The Brundtland Report, 1987.). Sustainable development and its dimensions have a profound impact on the education system, as upbringing and education are considered crucial drivers of sustainable development. In line with this, the research hypothesis of this study aims to examine the relationship between the implementation of sustainability principles and the competitiveness of universities. Furthermore, the research will explore the impact of strategic communication on university sustainability, assuming that universities with strong strategic communication achieve better sustainability outcomes compared to those with weaker communication. Additionally, the study will observe the level of engagement in international cooperation and investment in human resources as factors influencing university sustainability. Integrating these

aspects into the research will provide a deeper understanding of the connection between strategic communication and university sustainability.

Sustainability in Education: Strategic Communication and Public Relations in University Development

The concept of sustainable development was first defined in the report known as *Our Common Future* in 1987, published by World Commission on Environment and Development, better known as *Brundtland Report*.[39] In that report, concept of sustainable development is defined as: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (Our Common Future, 1987, 37). This definition has become the most accepted interpretation of the concept, although it has been subject to numerous criticisms and different interpretations.

Universities play a crucial role in promoting sustainable development. Higher education institutions bear a significant responsibility toward societal development, particularly in educating future leaders and raising public awareness of sustainability. As institutions, universities should lead by example, promoting practices that align with environmental protection and principles of equality to support sustainable development. Sustainability in higher education was first addressed in 1972 and gained global momentum with the 1992 Rio de Janeiro conference, culminating in Agenda 21. The 2030 Agenda for Sustainable Development builds on these foundations, setting 17 global goals, including education as a key driver of sustainability. Comparing Agenda 21 and 2030, Agenda 21 laid the foundation for understanding the importance of education for sustainable development, while the latter builds on that foundation and offers a more concrete plan to achieve sustainable education for all.

In the past two decades, the understanding that public relations are a key part of the management function, responsible for identifying and maintaining the relationship between the organization and its social environment, has become extremely important for organizing theory and practice

39 The report is named after the president of the commission, Norwegian minister Gro Harlem Brundtland, who signed this important document.

in the field of public relations. In the context of universities, the role of public relations in promoting sustainability becomes crucial for creating awareness of the importance of environmental protection, encouraging actions aimed at sustainable development, and integrating ecological values into all segments of university activities.

The foundations of the ecological point of view in public relations were laid by S. M. Cutlip and A. H. Center through the concept of the "conciliatory and adaptive model of public relations" (Cutlip and Center, 1952, according to Tomić, 2016, 507). This view emphasizes the

key role of public relations in helping organizations recognize and adapt to changes in their environment. The ecological view also includes the "symmetrical application model", developed by J. E. Grunig and T. Hunt in 1984. The central theoretical context of public relations is the two-symmetrical model of public relations, which embraces important ecological assumptions in its claims. A systematic understanding of the environment in which the organization operates is crucial for the success of public relations. In models of public relations that rely on an ecological approach, where the relationship between the organization and its environment is the central focus, it is crucial to recognize the role of public relations in identifying the demands of the environment and developing programs that enable adaptation between the organization and its social environment. In these ecological approaches to public relations (Figure 1), the term "organizational fit" is a key concept that denotes the ideal state for the relationship between the organization and its environment (Everett, according to Heath, 2001, 313.)

Figure 1. Organizational adjustment and public relations change programs (Source: created by author, according to Tomić, 2016)

Previous Research on Strategic Communication in the Context of Universities

Strategic communication in higher education is an increasingly common research topic due to the growing challenges of global competition and the demand for excellence. Universities are no longer competing solely on a local level but also in the international market, where brand recognition and perceived quality are often reflected through global rankings, performance, and reputation. As Stensaker (2007) and Paradeise & Thoenig (2013) point out, higher education institutions must adapt their communication strategies to meet the demands of quality standardization and ranking. Aula and Tienari (2011, 7) analyzed the case of a university merger in Finland, where strategic communication played a key role in creating the image of a "world university". Their study shows how strategic communication campaigns can become a powerful tool for motivating employees, attracting new students, and aligning with international standards. Organizations increasingly embrace social media as a key tool for strategic corporate and organizational communication, including public relations (Macnamara & Zerfass, 2012). They are considered a transformative tool that enables brands to establish and maintain engaged relationships with stakeholders (Mogaji, Farinloye, and Aririguzoh, 2016). Social networks provide many possibilities, including audio, video, and interactive content, often at minimal cost (Hrdinová, Helbig, & Peters, 2010). Different social media platforms serve different purposes, and institutions must carefully choose the platform on which to communicate with their stakeholders. The following table analyzes five social media platforms that universities frequently use, based on descriptions by Spencer (2019) and Worthy (2019) of Hootsuite:

Table 1. Social networks as a tool for strategic communication of universities

Facebook	Facebook allows universities to build a strong online community through official pages sharing announcements, events, news, and content such as photos and videos. This platform enables two-way communication with users who follow the university's websites, including students, prospective students, alumni, and the general public.
Instagram	Universities use this platform to share visual stories and content. Through creative and interactive content, the platform builds relationships with students, prospective students, and the community.
Twitter	Twitter is known for tracking current topics and news in real-time. Universities can post tweets, retweet content, and communicate via direct messages.
LinkedIn	Universities can use LinkedIn to publish information about job openings, collaborate with the business sector, and promote their professional activities.
Youtube	Universities can use YouTube to publish educational and promotional videos and create their channels for communicating with the public.

Source: according to Spencer (2019) and Worthy (2019)

Each platform provides different engagement opportunities with stakeholders, and the choice depends on the institution's communication goals.

Research

The methodological framework of this work is based on qualitative research, specifically through the content analysis of publicly available documents on the official websites of nine public universities in the Republic of Croatia. The sustainability of nine public universities in the Republic of Croatia will be analyzed through 10 key points that contribute to the sustainability and competitiveness of universities. The emphasis will be on the importance of strategic communication in promoting sustainability within these points.

1. *Activities in recruiting domestic and international students* are crucial for the university's sustainability, as they ensure a stable flow of students and financial resources.

2. *New contemporary programs are innovative programs* that respond to social and economic needs, ensuring the relevance of education for the future.
3. *International rankings (visibility)* are an important tool for increasing the university's visibility globally. This enables the attraction of international students, researchers, and collaborators and ensures its competitiveness internationally.
4. *Quality management* at universities is a key element to ensuring high standards in teaching, research, and university management. Maintaining high-quality standards is essential for preserving the university's reputation and satisfying students and other stakeholders.
5. *International relations* are key to developing partnerships with other universities, research institutions, and industries worldwide. This includes establishing collaborations by exchanging students, teachers, and researchers to promote cultural diversity and academic innovation.
6. *Human resources* play a key role in ensuring the high quality of education and research, and the long-term sustainability of the university system. The increase in the number of teaching staff, assistants, and professional staff enables better fulfillment of the university's academic and research needs, thus ensuring the continuous growth and development of the institution.
7. *Innovations* and its encouragement is crucial to promoting research work and the development of new technologies that can contribute to solving the global challenges of sustainable development. Sustainable integration of research and innovation at universities is essential for their long-term competitiveness and contribution to social and economic progress.
8. *Contribution to the social community through doctoral studies* represents a key aspect of the university's sustainability. It stimulates research that solves social challenges and problems.
9. *Green University (management)* in the context of university sustainability, implements sustainable resource management policies and practices that are essential to ensure the long-term sustainability of the university environment. Green management of a particular university includes, in all university functions

(departments) and all university activities, the consideration of all interactions between nature and the social environment and the responsible inclusion of that environment in decision-making processes (Müller, 2004).

10. *Scientific productivity* represents a key dimension that contributes to the development of knowledge and innovation and creates the foundations for long-term social and economic progress. Increasing the number of scientific papers and publications is essential for promoting research work and cooperation with other research institutions to ensure the continuous generation of new knowledge and the solution to current social and economic challenges. It ensures the university's sustainability as an institution that plays a key role in developing society and creating scientific foundations for future progress.

Analysis of the sustainability of nine public universities in the Republic of Croatia through these 10 points will give us an insight into their strengths and weaknesses and the possibilities for improvement. Strategic communication can significantly contribute to achieving university sustainability through information, education, encouraging cooperation and promoting good practices.

In relation to the defined purpose and goal of the research work, the following hypotheses were formulated:

HYPOTHESES

H1: The level of engagement in international relations affects the sustainability of the university.

H2: Investment in human resources is essential for the long-term sustainability of the university. H3: Contribution to society through doctoral studies affects the sustainability of the university.

H4: The implementation of green policies and practices is essential for the sustainability of the university environment.

H5. High scientific productivity and an efficient quality management system together contribute to the business excellence and sustainability of the university.

Activities in recruiting domestic and foreign students

According to the collected data of the National Bureau of Statistics, in the winter semester of the academic year 2022/2023, 151,827 students were enrolled in higher education institutions in the Republic of Croatia.[40] The University of Dubrovnik, in cooperation with renowned scientists, has been organizing a summer school for years, offering scholarships to foreign students. The positive activities of the University of Dubrovnik are confirmed by the record number of exchange students in the academic year 2023/2024. This indicates the positive reputation of the university among the international student population and the successful implementation of the exchange program. Many universities actively participate with educational agencies, e.g., Study in Croatia, which contributes to the promotion of Croatian study programs abroad.

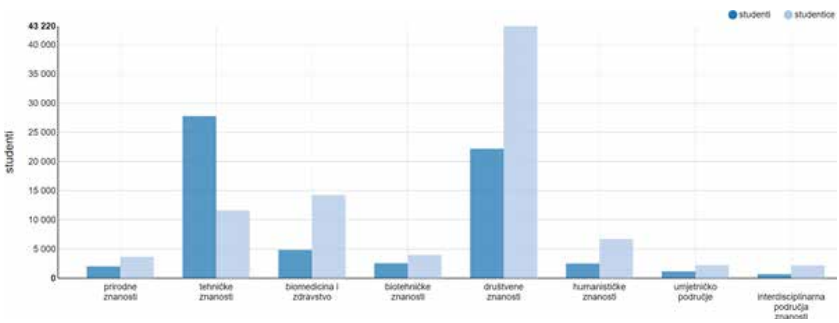

Figure 2. Students enrolled in higher education institutions according to scientific and artistic fields of study and gender, ac. year. 2022./2023.[41]
Source: https://podaci.dzs.hr/2023/hr/58225

Programs in English represent a key initiative of the university to attract foreign students to the Croatian higher education market. In Zagreb, Split, Rijeka, Dubrovnik and Osijek, a significant number of programs are available in English, which further encourages the diversity and availability

40 https://podaci.dzs.hr/2023/hr/58225

41 According to the scientific and artistic fields to which the study programs refer, the most represented is the field of social sciences (43.1%), followed by the field of technical sciences (26.0%), the field of biomedicine and healthcare (12.6%), the field of humanities (6.1%), biotechnical sciences (4.3%), natural sciences (3.7%), arts (2.3%), and interdisciplinary sciences (1.9%).

of such study options. The Ministry of Science and Education reported that according to data from the University Computing Center (SRCE),[42] the number of foreign students enrolled in Croatian faculties increased to 1,715, which represents an increase of 20 percent compared to the previous year. Through these activities, universities strengthen their sustainability by attracting foreign students, thus improving their reputation and competitiveness in the global higher education market.

New contemporary programs

Applied cognitive science is an innovative joint degree program conducted by the Faculty of Electrical Engineering and Computing and the Faculty of Humanities of the University of Zagreb. The studies are designed to respond to the needs of the future and create qualified professionals capable of dealing with the challenges of the modern work environment. This approach ensures that graduates of the program are equipped with the relevant skills and knowledge necessary for a successful career in the field of applied cognitive science, while promoting the sustainable development of society by fostering innovation and progress.[43] The Faculty of Transport and Traffic Sciences of the University of Zagreb has launched a new study program in English called Logistics and Mobility Management. This university graduate study program is carried out in cooperation with experts from the Faculty of Organization and Informatics and the Faculty of Mechanical Engineering and Naval Architecture of the University of Zagreb, and the goal is to educate students in the transport and logistics sector who will be competitive on the labor market of the Republic of Croatia and the European Union with their knowledge and skills. By implementing the study program in English, the aim is to attract as many international students as possible, which increases the mobility and transfer of knowledge, as well as the recognition of the University of Zagreb.

At the University North, introducing the Digital Economy and Innovation study track, their commitment to sustainable development through education adapted to the needs of modern society stands out. This new program encourages the development of digital skills among students,

42 https://www.srce.unizg.hr/

43 https://www.fer.unizg.hr/studiji/diplomski_studiji/primijenjena_kognitivna_znanost

which is not only crucial for their competitiveness in the labor market, but also for promoting sustainable economic growth. Furthermore, the new university undergraduate study Digitalization and Innovations in Metallurgical Engineering at the Faculty of Metallurgy of the University of Zagreb, but the accreditation process of the Agency for Science and Higher Education is still ongoing.

The University of Rijeka is also implementing a new study program, Urban Studies. It is an innovative study program of spatial and strategic design of urban systems and processes at a time of political, ecological and technological transformations. The goal of this study is the development of students' knowledge and skills necessary for the design of open, inclusive and resilient urban systems and processes in the context of significant challenges of contemporary political, ecological and technological transformations.[44]

Accordingly, the postgraduate specialist study program Quality Management and Sustainable Development in Tourism is a new study at the University of Dubrovnik. A study program that updates the issue of quality management of work processes in tourism companies and management of sustainable development processes will enable students to acquire the necessary competencies that they can apply in practice and contribute to the improvement of business processes, primarily in tourism, but also in other sectors related to tourism.[45]

Through the implementation of these new programs, universities contribute to the creation of qualified professionals ready for the challenges of the future, encourage innovation and progress, and ensure competitiveness on the labor market. They thereby contribute to the sustainability of society by creating an environment that supports economic, social and environmental progress.

44 https://gradri.uniri.hr/otvoren-natjecaj-za-upis-na-urbane-studije/ (accessed on 9 April 2024)

45 https://www.unidu.hr/upravljanje-kvalitetom-i-odrzivim-razvojem-u-turizmu/ (accessed on 9 April 2024)

International rankings (visibility)

Times Higher Education (THE), a respected British journal specializing in topics from the field of higher education, has published a list of the most prestigious world universities for 2024 – Times Higher Education's World University Rankings 2024, which includes the University of Zagreb, Split and Rijeka. The University of Zagreb is ranked in the category from 1001 to 1200 and is the best ranked Croatian university. As a result of the above, the University of Split is in the position of 1,201-1,500. places, while the University of Rijeka is in the overall position of 1,501+. The ranking takes into account 18 indicators grouped into five areas: teaching, research environment, research quality, industry and international recognition. With this year's ranking, the University of Zagreb for the first time ranked in the first half of the ranking list, more precisely at 41.15% of the total ranked higher education institutions. With this position, the University of Zagreb achieved the best result since it was ranked on that ranking list, more precisely since 2016, when the total number of ranked institutions is taken into account.[46]

Furthermore, the Center for World University Rankings (hereinafter: CWUR)[47] published its ranking list of the best universities in the world for the year 2023, and the four largest universities in Croatia were among those listed. The University of Zagreb took the 528th position in this ranking, which places it in the 2.6 percent of the best universities in the world. The University of Split is placed in the 837th position, thus entering the top 4.1 percent. The University of Rijeka is ranked at 1,588th place, falling into the 7.8 percent of the best. At the same time, Josip Juraj Strossmayer University in Osijek took the 1,925th position, placing in the best 9.4 percent in the world according to the CWUR calculation. According to ShangaiRanking Consultancy, which is considered one of the most relevant rankings of the quality of higher education in the world, the University of Zagreb is the only Croatian educational institution that regularly figures in this research, mostly moving between the 401st and 500th places, which is also the case in the latest research. In the context of the sustainability of public universities, these results show the importance

46 https://www.unizg.hr/nc/vijest/article/veliki-uspjeh-sveucilista-u-zagrebu-na-medunarodnom-rangiranju-times-higher-educations-world-un/ (accessed on 9 April 2024)

47 https://cwur.org/2023.php

of continuous efforts to improve the quality of education, research, and management. Although the ranking may change from year to year, constant work to improve the quality and competitiveness of universities is crucial for long-term sustainability and success.

Quality management

The quality policy of the University North is based on European standards and guidelines for quality assurance (ESG), ISO norms, the Law on Quality Assurance in Science and Higher Education, and recommendations for quality assurance, as well as other relevant laws and documents. As an important strategic commitment of the University North, the vision of the management and quality assurance system is to improve and ensure the quality of the education process and enable the University to develop faster and more efficiently on the way to achieving business excellence in education. The goals and areas of application of the management and quality assurance system are clearly described and defined in the Quality Management System Guidelines of the University North[48] published and available at the University's website.

Modern principles of quality that this University singles out as strategically important are: *focus on students, process approach, decision-making based on evidence, involvement of all employees and other interested parties, and constant improvement.* In addition to the above, internal and external quality assurance is based on principles such as: *responsibility of employees and students, good organizational structure, protection of public interests, satisfaction of needs, demands and expectations of students, employees and other interested parties, publicity and objectivity of actions, encouragement of creativity and innovation and the development of quality awareness and culture.*

University of Zagreb as a basic feature of the quality assurance system, it emphasizes preserving the University's academic values and achieving academic standards, and accordingly establishes a suitable quality assurance system. The implementation of a culture of quality in the operation of the University is an important strategic task of this higher education

48 https://www.unin.hr/wp-content/uploads/Priru%C4%8Dnik-upravljanja-kvalitetom-Sveu%C4%8Dili%C5%A1ta-Sjever.pdf (accessed on 10 April 2024)

institution, and it rests on the following principles of quality: the establishment of work methods and standards that will lead to the improvement of the quality of teaching, research and artistic work, as well as activities that contribute to the development of the economy and society in accordance with the strategic development objectives of the University of Zagreb and its components, implementation of quality assurance system activities in accordance with the strategic documents of the University, legal regulations in the Republic of Croatia, ESG standards and criteria for external evaluations of the Agency for Science and Higher Education, developing a monitoring system for quality improvement indicators in order to were used in the process of decision-making and strategic planning and the implementation of the quality system in cooperation with all stakeholders of the University: students, employers, the social community at the local and national level, the competent ministry and national agencies. As part of the Quality Management Office, all activities of the quality management system of the University of Zagreb are implemented and coordinated.

Josip Juraj Strossmayer University in Osijek promotes a quality policy based on the following activities and tasks: improving the quality of teaching, scientific research, artistic and professional work of the University and promoting excellence, student-centered learning and involving students in University activities , by continuously monitoring and strengthening the satisfaction of all stakeholders of the quality management system (students, employees, academic community, economy, local community), by popularizing science and art at the local, national and international level, by modernizing existing and introducing new study programs with the aim of harmonizing with the needs of the market work and better positioning of students on the labor market, by promoting and continuously supporting the internationalization of the University, by carrying out the activities of the quality assurance system in accordance with the strategic documents of the University, legal regulations in the Republic of Croatia, European standards and guidelines for quality assurance in the European area of higher education (ESG) and criteria for external evaluations of the Agency for Science and Higher Education, transparency and ethics in work, and conscientious and responsible business operations.[49] The quality

49 https://www.unios.hr/kvaliteta/dokumenti-i-propisi/politika-kvalitete/ (accessed on 10 April 2024)

policy, as with the aforementioned universities, is a public document of the University of Osijek available on the University's website.

The quality assurance system of the University of Rijeka is based on the internal assessment procedure of the quality assurance system of the University's components and on the results of the analysis of various qualitative and quantitative data. When implementing the quality policy, the greatest attention is paid to feedback from students, whereby they are actively and continuously included in the educational process and other activities of the University. The main goal of quality assurance at this University is the construction of mechanisms for systematic evaluation and coordination of initiatives for the purpose of promoting high standards of professional and professional development of all stakeholders of the University.

The fundamental principles of the establishment of the quality assurance system of the University of Split are clearly defined in the *Quality Policy of the University of Split*[50] of which we highlight the following: continuous assurance and improvement of the quality of the teaching, scientific, artistic and professional work of teachers, scientists and associates, as well as the professional work of employees of professional services at the University, as well as monitoring the quality of study programs and studying at the University, promoting and encouraging the development of a quality culture of all internal and external University stakeholders, continuous improvement of study programs and lifelong learning programs, teaching, study conditions, knowledge of teachers and associates, monitoring student progress and acquiring new and increasing existing competencies and transferring them through the teaching process.

Finally, the quality assurance policy and system were formally established and implemented at the remaining public universities in **Zadar, Dubrovnik, Pula, and Slavonski Brod**. The strategic goals and objectives of the quality assurance system of the universities mentioned

above imply the continuous improvement of all aspects of educational, scientific, and artistic activities as well as professional and administrative

50 https://arhiva.unist.hr/DesktopModules/Bring2mind/DMX/API/Entries/Download?language=hr-HR&EntryId=506&Command=Core_Download&PortalId=0&TabId=1584 (accessed on 10 April 2024)

activities to promote high standards of professional and professional development of stakeholders in all areas of university activity.

International relations

Public universities are increasingly aware of the importance of the Erasmus+ program and the realization of inter-institutional agreements, bilateral agreements (EU, non-EU, and internal agreements), and membership in international associations in the context of sustainability. This collaboration is a means to promote academic excellence and knowledge exchange and a key mechanism to support the sustainable development of university communities. The University of Slavonski Brod stands out for its exceptional cooperation with the economy, a key element in strengthening regional development and advancing the University's innovations. Among the important partners are institutions such as the *Regional Center for Biotechnology Research and Development BPŽ, Natura Slavonica, KP project, Ergo klamerice, Chromos-svjetlost, IngArt, Entrepreneurial Center Pleternica, PP Medvednica, Regional Coordinator of Sisak-Moslavina County*, and *Technical School Slavonski Brod*. In addition to local partnerships, the University of Slavonski Brod also nurtures a vast cooperation network with prominent scientific and higher education institutions throughout Europe and neighboring countries. Cooperation with the economy enables the University to access new technologies and research projects and create opportunities for students and researchers to apply their knowledge in practice, thus encouraging regional development and innovation. The University of Split has been actively participating in the Erasmus program since the very beginning of its implementation in the Republic of Croatia in 2009. Through more than 600 Erasmus bilateral agreements with partner universities, the University provides students and staff with opportunities for international mobility, thus encouraging the exchange of knowledge and experience in a global context. In addition, the University of Split is a member of several university networks and international associations that promote cooperation, innovation, and sustainability: *European University Association, Euro-Mediterranean Network Universities, Association of Universities of the Adriatic-Ionian Area, Alps-Adriatic Rectors' Conference, Observatory Magna Charta Universitatum, European University Foundation, SGroup – Universities in Europe*. The University North

has been implementing Erasmus+ programs for many years. It thus contributes to the increase of the network of foreign partners and the internationalization of the education and competencies of the teaching and non-teaching staff of the University North. The University has achieved bilateral international cooperation within the framework of the ERASMUS program with universities in the following countries: Finland, Hungary, Portugal, Romania, Slovakia, Slovenia, Turkey, Poland, the Czech Republic, Spain and others.

Human resources

Comparison of the number of teachers and teaching assistants at public universities between the academic years 2020/2021 and 2021/2022. provides insight into changes in human resources at these institutions. In the academic year 2021/2022, the number of teachers and teaching assistants employed based on employment contracts or hired based on work contracts increased to 18,892, compared to 18,056 in the previous academic year. This indicates the continuous growth of human resources at universities, which can be positive for educational processes and research sustainability. At the same time, the equivalent of full employment/engagement also increased from 12,690.6 in the academic year 2020/2021 to 13,195.2 in the academic year 2021/2022. The share of teachers and assistants in teaching based on employment contracts decreased by 0.2%, while the share of those based on work contracts increased by 0.2% (State Statistical Office, 2021, 2022). The increase in the total number of teachers and teaching assistants is a positive trend in the context of sustainability because it means that resources are being invested in human capital. The decrease in the share of teachers and teaching assistants based on employment contracts is a negative tendency because these employees provide more stability and enable long-term planning in higher education institutions. On the contrary, the increase in the share of teachers and teaching assistants engaged based on work contracts can be considered a negative tendency. Such employees often need more stability and opportunities for inclusion and long-term participation in the academic community.

Innovations

Innovations in sustainability at universities in the Republic of Croatia include activities aimed at encouraging research, development of new technologies, and cooperation with the economy and the public sector. The University of Zagreb appointed a vice-rector to encourage innovation, technology transfer, and collaboration with the economy. At the same time, the University Innovation Network was launched to strengthen the innovation system through inter- institutional exchange of experiences and support. Furthermore, the support of the Government of the Republic of Croatia to the University of Rijeka in the application for the Community of Knowledge and Innovation for the area of water, marine and maritime sectors and ecosystems additionally confirms the university's commitment to promoting sustainable innovations. An example of awarded innovations of the University of Zagreb: Method for determining the permeability of poorly permeable deposits by optimizing the duration of the pressure rise test (Faculty of Mining, Geology and Petroleum); Innovative Al-Mg-Li alloy with improved properties for the aviation and space industry (Faculty of Metallurgy); Biocomposite wood material (Faculty of Forestry and Wood Technology), Model for determining the volume of the water reservoir in the urban water supply system (Faculty of Geotechnical Engineering), 3D system for detecting the curvature of the spine (Faculty of Electrical Engineering and Computing) (ARCA and AGRO ARCA, 2017).

The results of work on technological projects and applied research should be set as one of the key criteria for advancement in academic titles. This approach would encourage research productivity, stimulate innovation and encourage university employees to participate in applied research projects to create useful solutions for society and industry. An example of such a model can be found in the United States of America, where one patent is valued at 10 CC.[51] Furthermore, last academic year, the University North took an extremely significant step towards innovation and progress in education by introducing the new elective course "New technologies and robotics in medicine".

51 CC work – work indexed in Current Contents.

Contribution to society through doctoral studies

The contribution of doctoral studies to the social community is a key aspect of the university's sustainability, as they provide opportunities for in-depth research to solve social challenges and problems. Universities in the Republic of Croatia, such as the University of Zagreb, Osijek, Split, Rijeka, Zadar, North, the Croatian Catholic University in Zagreb, and the University of Slavonski Brod, have a significant number of doctoral students who contribute to research that is of vital importance to society.[52] The University of Zagreb absolutely dominates the number of PhDs, while the University North has the largest share of female PhDs. Data on the percentages (Figure 3) of doctoral dissertations by field of science can provide insight into research priorities at universities and their orientation towards different aspects of sustainability.

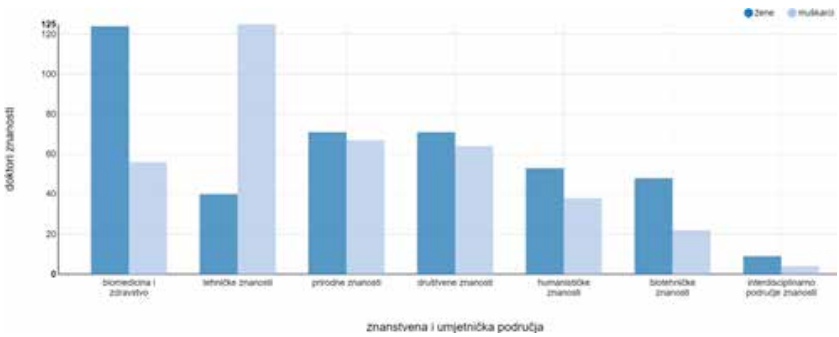

Figure 3. Doctors of science according to the scientific and artistic field of the doctoral dissertation and gender in 2022
Source: National Bureau of Statistics, https://podaci.dzs.hr/2023/hr/58241

For example, the representation of biomedicine and healthcare is crucial for sustainability because it deals with solving global health problems and improving the quality of life, etc. Doctoral studies are becoming an important mechanism for realizing the social responsibility of universities

52 Out of a total of 792 PhDs, 67.6% received their doctorates at the University of Zagreb, 11.1% at the University of Osijek, 8.1% at the University of Split and the University of Rijeka, 4.0% at the University of Zadar, at University North, Koprivnica, 0.8%, at the Croatian Catholic University, Zagreb, 0.2% and at the University of Slavonski Brod, 0.1% (National Bureau of Statistics, 2022).

and for creating a positive impact on society, while promoting sustainability through research and application of scientific knowledge for the benefit of the community.

Green university (management)

Implementing environmental management in universities is considered a reasonable effort; however, sustainability management requires organizations to go beyond merely achieving ecological performance and integrate environmental and social objectives into all aspects of decision-making (Richards and Gladwin, 1999). Integrating organizations with environmental and social systems requires considering the triple bottom line of ecological, social, and economic outcomes (Shriberg, 2002b). Furthermore, universities are a unique type of organization because they need to address not only all three dimensions of sustainability (economic, environmental, and social) but also five dimensions of their organizational activity (education, research, operations, community engagement, and reporting). Posner and Stuart (2013) used a systems thinking approach to identify key influence points for actions that would improve sustainability on campus. Systems thinking can help in understanding how certain operational activities affect the entire system and thus improve its sustainability, as well as understand the role of the organization in the larger system to which it belongs.

The University of Rijeka has decided to take steps towards a more sustainable and environmentally conscious approach through the "Plastic-free University" initiative. This initiative includes a series of measures to reduce plastic use on the university campus. As part of this initiative, the Environment working group was established in the University of Rijeka student center. Their goal is not only to reduce the use of plastic but also to ensure adequate disposal of plastic that cannot be avoided. In February 2024, the same university launched the energy renovation project of the University Library.[53] The expected results are savings in energy consumption (this will significantly reduce energy costs for the University Library and contribute to environmental protection), energy efficiency improvement,

53 https://min-kulture.gov.hr/vijesti-8/12-milijuna-eura-za-novih-9-projekata-energetske-obnove-zgrada-sa-statusom-kulturnog-dobra/25509

and renewable energy sources. At the same time, the University North renovated two buildings and thus saved almost 50 percent compared to the state before the renovation.[54] The Faculty of Economics of the University of Rijeka is an example of sustainable practices through its waste recycling initiative among its employees and students. On each floor of the faculty there is a space for recycling, equipped with bins marked in blue, yellow and green.[55] Examples such as the energy renovation project of the University Library in Rijeka and the waste recycling initiative highlight the steps taken by universities towards sustainability. However, it can be critically noted that greater initiatives and engagement are needed to achieve comprehensive changes towards sustainability. The integration of environmental practices and awareness should become a core value of the university, not just an additional initiative.

On the other hand, many faculties offer study programs focused on ecology and sustainable development and have undergraduate studies: Applied Ecology (University of Dubrovnik), Ecoengineering and Nature Protection (University of Slavonski Brod), Applied Ecology in Agriculture (University of Zadar) and graduate studies: Ecology and nature protection (University of Zagreb), Ecology and marine protection (University of Split), Nature and environmental protection (University of Osijek), Packaging, recycling and environmental protection (University North). Although there is a wide range of study programs focused on ecology and sustainable development at various universities, there is a lack of adequate implementation of ecological practices through university activities. Many universities know the importance of environmental awareness, which is reflected in the variety of study programs offered. However, the lack of concrete measures and programs to integrate environmental practices into university processes and operations limits the university's actual impact on sustainability.

54 https://www.zgradonacelnik.hr/jip-javno-i-poslovno/sveuciliste-sjever-energetski-obnovilo-dvije-zgrade-usteda-energije-je-50-posto/1158

55 https://www.efri.uniri.hr/hr/recikliranje/1050/169

Scientific productivity

By publishing and disseminating the results of scientific work, the University North promotes the importance of scientific disciplines in the national and international public, striving to influence the development of society through scientific productivity. The analysis of the University's scientific productivity is publicly available within the *Scientific – Research and Artistic Strategy of the University North* for the period 2021-2027.[56] in which the publication of scientists' works in journals of a high level of international recognition is visible (Table 2). It is important to emphasize that the University continuously provides financial support to every teacher and associate for the needs of research work and, in accordance with the *Rulebook on rewarding published scientific works, visibility of scientists and accepted patents of employees*, financially rewards the authors/inventors of published scientific works, i.e. accepted patents at the University, as well as international recognition of scientists. The challenge in terms of scientific productivity for this University is to strengthen scientific productivity by increasing the number of papers per year for scientific and teaching staff published in internationally recognized journals indexed in the *Web of Science* and *SCOPUS* databases. Also, one of the University's challenges in terms of strengthening scientific excellence and the visibility of scientists is increasing financial resources for research and building a scientific-research structure.

Table 2. Indicators of the implementation of the scientific activity of the University North (the field of natural, technical, biotechnical sciences and biomedicine)

Indicators of implementation of scientific activity	2015	2016	2017	2018	2019
Number of scientific papers published in journals indexed in the Web of Science database Science	0	15	64	96	121
Number of contracted national competitive scientific projects	0	2	1	0	0

56 https://www.unin.hr/w0p-content/uploads/ZNANSTVENO-ISTRA%C5%BDIVA%C4%8CKA-I-UMJETNI%C4%8CKA-STRATEGIJA_2021.-2027..pdf (accessed on 11 April 2024)

Number of contracted international competitive scientific projects	0	0	2	0	0
Scientific books	5	2	3	8	1
Number of incoming mobilities (longer than a month)	0	0	0	1	0
Number of outgoing mobilities (longer than one month)	0	0	0	0	0
The number of contracted projects of the institution with the economy (including international projects), state administration bodies, and local administration and self-government units, civil sector and non- governmental associations	0	1	2	2	0
Science popularization activities	1	2	1	1	3

Source: Scientific – research and artistic strategy of University North for the period 2021-2027

The presentation of the scientific productivity of the University of Split is based on data from the *Web of Science Core Collection* (hereinafter WoSCC) database with associated citation indexes: *Science Citation Index Expanded*, *Social Sciences Citation Index*, *Arts & Humanities Citation Index*, *Conference Proceedings Citation Index (SCI & SSH)*, *Book Citation Index (SCI & SSH)*, *Emerging Sources Citation Index* and covers the five-year time period from 2018 to 2023.

According to Table 3, it can be seen that 6471 papers were published in the specified period. Furthermore, 795 scientific papers entered the category of 10 percent of the most cited papers comparing papers in a certain subject category, of the same type of documents in a certain year. According to the same criteria, 123 scientific papers fall into the category of 1 percent of the most cited papers. A total of 72 papers (1.1 percent) by Split scientists are in the highly cited papers category. The international cooperation of scientists of the University of Split has maintained continuity over the years, and every year approximately half of the works are published in cooperation with foreign authors.

Table 3. Scientific productivity of the University of Split from 2018 to 2022 in the WoSCC database

Year	Number of papers	CNC	Number of citations	First 10%	First 1%	Highly cited papers	International cooperation (%)
2018	1013	1,17	20,961	13,52 %	1,58 %	7	565 (55,77 %)
2019	1047	1,31	19,652	14,80 %	2,29 %	10	600 (57,31 %)
2020	1038	1,05	15,278	13,29 %	2,02 %	8	541 (52,12 %)
2021	1136	1,33	16,716	11,80 %	2,20 %	22	578 (50,88 %)
2022	1103	1,17	8,099	11,33 %	1,54 %	13	581 (52,67 %)
2023	1134	1,11	3,034	9,35 %	1,76 %	12	583 (51,41 %)

Source: https://www.unist.hr/znanstveni-utjecaj/65 (data sources InCites and WoSCC)

Conclusion

A sustainable university is not only a goal but also a journey. Public universities in Croatia have a unique opportunity to use the power of strategic communication to initiate and accelerate change towards a sustainable future.

In this research, Hypothesis 1 was confirmed, which points out that the intensity of engagement in international relations and collaboration significantly affects the sustainability of universities. Global cooperation provides access to new knowledge, resources, and development opportunities and contributes to universities' long-term stability and resilience. Increased participation in international networks and programs such as Erasmus+ enables universities to expand their academic horizons, improve research capacities, and strengthen regional and global influence, thereby significantly improving their long-term sustainability. Hypothesis 2, which emphasizes the importance of investing in human resources for long-term sustainability, was also confirmed. Quality personnel are key to continuous development, innovation, and competitiveness, making universities more resistant to environmental changes. Hypothesis 3, which refers to the contribution to society through doctoral studies, was confirmed as crucial for the university's sustainability. Doctoral studies play a vital

role in solving social problems through in-depth research on community challenges. The University of Zagreb leads in the number of PhDs, while the University North stands out for its high proportion of female PhDs. Hypothesis 4, which refers to the implementation of green policies and practices, was confirmed through the results showing that universities that implement environmentally conscious initiatives significantly improve their sustainability and reduce operating costs. These studies emphasize that implementing green policies at universities, such as energy renovation of buildings and waste recycling, contributes to reducing the ecological footprint and brings economic benefits. Universities such as the University of Rijeka and the University North have shown concrete steps towards sustainability. However, although examples such as energy recovery and recycling show positive developments, there is a need for broader integration of environmental practices into university activities. Green management should become a core value of all universities, not just an additional initiative. Finally, Hypothesis 5, which links scientific productivity and quality management systems with business excellence and sustainability, was confirmed through results showing that high scientific productivity and an effective quality management system are key to the competitiveness and reputation of universities. The analysis shows that universities that actively promote scientific excellence and implement quality management practices improve their visibility and influence and contribute to the sustainable development of their communities. According to data from the Web of Science database, the University of Split shows a high level of scientific productivity and citation of works. At the same time, cooperation with international authors is essential in strengthening global visibility. A similar approach to promoting quality in scientific work is followed by Josip Juraj Strossmayer University in Osijek, which actively improves the quality of teaching and research and includes students and other stakeholders in its activities. The University of Rijeka also demonstrates its commitment to maintaining high-quality standards through regularly collecting feedback and implementing an internal assessment system. Through these initiatives, the University strives to promote high standards of professional development and professional work of all stakeholders. All the above examples highlight the importance of integrating scientific productivity and quality management as key factors in achieving business excellence and sustainability. Establishing and maintaining a

high level of quality in scientific and educational work and active quality management represent the foundations for the long-term success and influence of universities globally.

All the mentioned hypotheses indicate that a sustainable university is not only a goal but a process that requires a constant focus on international cooperation, human resources, environmental responsibility, and scientific excellence. Public universities in Croatia have the opportunity to become leaders of change through strategic communication and the implementation of sustainable practices and thereby ensure their long-term sustainability.

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ODRŽIVO SVEUČILIŠTE: SNAGA STRATEŠKOG KOMUNICIRANJA JAVNIH SVEUČILIŠTA U REPUBLICI HRVATSKOJ

Sažetak

Visoka učilišta imaju sve važniju ulogu u društvu, a njihov uspjeh u velikoj mjeri ovisi o uspješnosti primjene strateških odnosa s javnošću i dvosmjerno simetrične komunikacije. Održavanje dobrih odnosa, stalna i otvorena komunikacija visokih učilišta s različitim dionicima osobito je važna jer doprinosi razvoju društva, ali i naklonosti i poštovanju javnosti. U kontekstu današnjeg društva, gdje obrazovne institucije često nailaze na brojne izazove, odnosi s javnošću postaju ključni za njihovo uspješno funkcioniranje.

U fokusu ovog rada provest će se istraživanje uloge, organizacije i potencijala odnosa s javnošću u kontekstu javnih sveučilišta, s posebnim naglaskom na strategije koje doprinose održivosti tih institucija i njihovoj konkurentnoj prednosti. U suvremenom društvu, gdje se visoko obrazovanje suočava s nizom izazova, strateška komunikacija i odnosi s javnošću postaju ključni elementi za održavanje reputacije sveučilišta, privlačenje studenata te suočavanje s financijskim i prostornim izazovima.

Ovaj rad ima za cilj istražiti kako strategije odnosa s javnošću mogu pridonijeti održivosti javnih sveučilišta u Republici Hrvatskoj, istražujući izazove s kojima se suočavaju, ali i potencijale koje ova vrsta komunikacije pruža. Kroz prizmu održivosti, analizirat ćemo kako strateški vođeni odnosi s javnošću mogu doprinijeti sveučilištima u suočavanju s izazovima i ostvarivanju dugoročnog uspjeha u promjenjivom okruženju obrazovanja.

Istraživanje će se temeljiti na kvalitativnoj metodologiji. Proučit ćemo aktualna teorijska promišljanja i analizirati različita iskustva javnih sveučilišta u Republici Hrvatskoj. Cilj je dublje razmotriti kompleksnost i kontekst specifičnih situacija koje utječu na odnose s javnošću u javnim sveučilištima. Koristit će se metoda analize i sinteze kako bi se temeljito istražile i povezale informacije iz različitih izvora, te metoda komparacije kako bismo usporedili različite pristupe odnosa s javnošću u javnim sveučilištima, identificirali sličnosti i razlike te izvukli pouke iz uspješnih iskustava.

Ključne riječi: javna sveučilišta, kvalitativno istraživanje, metoda analize i sinteze, održivost, strategija odnosa s javnošću

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ECOLOGICAL CRISIS IN THE MEDIA

Original Paper
https://doi.org/1059014/SGZY2175

Abstract

The importance of conveying relevant information in the media on environmental topics (regarding climate, temperature, sustainability etc.) represents primacy in informing the public, given that the consequences of the same are reflected on human lives and, as such, on human rights in general. The information transmitted in the media promote raising public awareness of environmental issues with the aim of preserving the quality of life. Media portals, as representatives of the media, quickly convey information to the public and thus contribute to the formation of public opinion and the preservation of human rights to timely and relevant information. The basic task of portals is to present contents that will convey true information. During crises, potential crises and accidents, the media become the most important source of information for citizens and have the task of presenting timely, objective and accurate information. The aim of this paper is to investigate how internet portals approached the reporting of an event prefixed as an event that potentially had an impact on the environment and residents, and how much they contributed to the formation of public opinion. Using the method of thematic analysis of the content, a sample of 150 articles on nine media portals (national and local level) was included. The results of the research provide an insight into how internet portals approached the reporting of an event with an implication of a possible impact on the environment. This research indicates the importance of environmental awareness of the public and the need for reporting on environmental problems and crises in the media space.

Keywords: communication, environmental crisis, human rights, media, public.

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Introduction

In recent decades, and especially with the accession of the Republic of Croatia to the European Union, the area of ecology and ecological consequences for humanity has been emphasized more and more. Environmental awareness of society is becoming an increasingly current topic in the media. The reason for this is the media itself, which is becoming more and more influential and has an ever-widening range of effects through different domains, and its availability has become far-reaching. Considering the role of the media as a creator of the way of thinking, the media play a big role in environmental crises as well as in any other type of crisis. Media reporting is a type of two-way communication with the public and can easily create a relationship of (dis)trust. Communication in any type of crisis has an important place, and the institutions that manage a crisis must take care of creating trust when determining the measures to rehabilitate a crisis and its consequences (Jugo, Skoko and Petrović, 2021).

Today's world, in which environmental and climate changes represent an increasing danger, has been fighting for a healthier and more environmentally friendly environment for decades. Acceptance and understanding of the importance of an ecologically and climatically clean environment began in 1972 when the UN Conference on the Human Environment in Stockholm (UN Audiovisual Library of International Law, https://legal.un.org/avl/ha/dunche/dunche. html/) was held, which resulted in the adoption of the Declaration of the United Nations Conference on the Human Environment, adopted by the United Nations Conference on the Human Environment, Stockholm, June 16, 1972 (see U.N. General Assembly Resolutions 2994/ XXVII, 2995/UVII and 2996/XXII of 15 December 1972). After this Conference, the principles of good environmental management written in the Stockholm Declaration and the Action Plan for the Environment (Handl, 2012.) were adopted, which for the first time focused on environmental concerns at the world level. Because of this Conference, the United Nations Environment Program (UNEP) was established as a global authority and advocate for environmental care. The next extremely important event that marked historic steps in the preservation of environmental protection was the Conference held in Rio de Janeiro in 2012, which also marked the 20th anniversary of the UN Conference on Environment and Development from 1992 and the 10th anniversary

of the World Summit on Sustainable Development from 2002, which was attended by more than 45,000 people, making it the largest UN conference ever held (Nekić and Krajinović, 2014). The number of participants is a clear indicator of the growing concern and awareness of the need to preserve the quality of the environment and thus the protection of human health as one of the fundamental human rights.

Even today, more than 50 years after the adoption of fundamental documents on environmental protection and constant concern about the changes that environmental disasters and climate change bring us, it has been concluded that it is time for urgent changes. Since the European Parliament declared a climate crisis in 2019, the goal has been to make the European Union climate neutral by 2050. The Treaty on the Functioning of the European Union ("Official Journal of the European Union", C 202/1, 2016 – consolidated text) stipulates in Article 11 that environmental protection requirements must be included in the determination and implementation of the Union policies and activities, especially with the aim of promoting sustainable development. With this, environmental protection is placed in the service of sustainable development, established as an established policy of the EU, which is also applied to the legal acts of the Member States, respecting the principle of subsidiarity. Certainly, the most important part related to the research area and the topic of this paper is the part of the Treaty on the Functioning of the EU, which constitutes an entire title: *Title XX* – Environment and Articles 191 to 193 are dedicated exclusively to EU environmental policy. Therefore, it is particularly important to emphasize perhaps the key part stated in Article 191, paragraph 2, which determines that

> "*...Union policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Union. It shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay.*"

The policy that the EU introduced into the document at the level of a binding legal act for the Member States is based on a high degree of protection and preventive action as primary principles but respecting the diversity of the EU regions. According to the above, it can be concluded that

even more than half a century after the very beginnings of the foundation of thoughts and policies on environmental protection and sustainability, the world, including the EU, still struggles with the endangered environment, even though legal regulations have offered solutions and tools for prevention and the fight for preventing environmental destruction and promoting sustainability.

As a member of the EU, Croatia is obliged to harmonize its legal regulations with the binding acts of the EU, including in the field of environmental protection. One of the first documents adopted by the Croatian Parliament back in 1992, in which the importance of sustainable development is mentioned, is the Declaration on Environmental Protection of the Republic of Croatia (Official Gazette, No. 34/92), in which Article V regulated, for the first time in the independent Croatia, that the state will ratify, i.e. accede to, international agreements in the field of environmental protection.

However, environmental protection in Croatia is primarily governed by the Environmental Protection Act (Official Gazette, No. 80/13, 153/13, 78/15, 12/18 and 118/18), which is applied on the basis of 21 directives from the field of EU legal documents related to the environment and which were thus transferred by this Act into the legal order of the Republic of Croatia, and its framework is regulated on the basis of five EU regulations and the provisions of the UN Environment Programme (Article 2 of the Act). According to this Act, in Article 3(1). environmental protection is regulated and that it ensures

> "*...integrated preservation of environmental quality, conservation of biological and landscape diversity, and geodiversity and rational use of natural assets and energy in an environmentally sound manner, as basic conditions for healthy living and the concept of sustainable development.*"

and in paragraph 2 of the same Article that "*The environment represents an asset of interest to the Republic of Croatia and enjoys its special protection*." In Article 4(1) this Act defined the environment as

> *"...the natural and any other surrounding of organisms and their communities including man, which enables their existence and their further development: the air, water, soil, lithosphere, energy and material*

> *assets and cultural heritage as part of man-made surroundings, in their diversity and totality of mutual interaction...*"

In the context of this paper, it is of particular importance to the authors to state the definition of the term *major accident* established by the Act, which is defines as

> "*...an event or uncontrolled occurrence caused by a major emission, fire or explosion and the like, resulting from uncontrolled developments during the operation of an installation in which dangerous substances are present, whereby one or more of those dangerous substances and/or their compounds, resulting from the event or uncontrolled occurrence, present a serious threat, immediate or delayed, to human health and/or life, material assets and the environment inside or outside the installation...*" (Article 4, point 82).

In addition to the Act, upon joining the European Union in accordance with the pre-accession negotiations, the Republic of Croatia also adopted some new strategic documents and laws in the field of environmental protection and passed a number of legislations to solve environmental problems and fulfil the obligations and requirements arising from the accession negotiations (Nekić and Krajinović, 2014). Thus, it adopted two very important documents that determine the direction of environmental policy and sustainable development: the Strategy for Sustainable Development of the Republic of Croatia ("Official Gazette", No. 30/09) and the National Development Strategy of the Republic of Croatia until 2030 ("Official Gazette", No. 13/21). Therefore, it is justified to conclude that the legal network of regulations is very strong and sensitized to possible problems arising because of environmental crises, which are often not transparently presented in their factual state.

The role of scientists in promoting environmental awareness and presenting relevant information on the consequences of accidents that caused numerous crisis situations and left consequences for the further survival of humanity is also evident by looking at the published research so far. In addition to scientists and experts dealing with the field of sustainability, protection of the Earth and humanity, a particularly important segment is the media, i.e., the media that present information on accidents so that the public can receive timely information about the possible consequences and ways to act in a crisis.

This paper presents research focused on the review of media articles published on national and local portals during the accident caused by a fire in the vicinity of Osijek. With the goal of a more comprehensive approach, this research tries to integrate existing theoretical and empirical knowledge about the influence of the media on the public during a crisis, as well as the content presented on media portals.

The first research question answered by the research in the paper is whether media interest in the environmental crisis is decreasing considering how much time has passed since the accident, and the paper present a hypothesis that environmental crises lose importance on media portals with the passage of time. Following this are research questions that will be answered in this paper on how the media content presented on news portals is aimed at presenting information, i.e., how the credibility of the content in the media articles was approached, as well as whether the articles stimulate the reader's interest through sensationalism. From the above, the hypothesis that the factual theory prevails in media articles during environmental crises emerges.

Based on the conducted research and the discovery of new knowledge in the research presented in this paper, an attempt is made to present the knowledge that has been reached to point out the importance of communication in an ecological crisis through the media with an emphasis on monitoring events after a certain time has passed since the accident.

Environmental crisis vs. environmental problem

The term crisis denotes an unstable situation in social, economic, political, biological and ecological circumstances, and it can be stated that it has a close connection with "a certain critical moment when it is necessary to look at assumptions, hypotheses, predictions and creatively evaluate a crisis" (Ivanović, 2014, 10).

We define a crisis as a comprehensive disturbance in the life of an individual or the functioning of society with strong and more or less severe and permanent consequences (Hrvatska enciklopedija, https://www.enciklopedija.hr/clanak/leksikografski-zavod-miroslav-krleza). A crisis as such denotes a significant or decisive point or situation, a critical moment or a turning point. Furthermore, we can define a crisis "as a state or situation

in which events or phenomena, naturally occurring or caused by human activity, lead to a great loss of people's lives, their property or prevent the operation of government institutions and the economy, and it is necessary to engage considerable resources of numerous institutions to deal with them" (Vučak and Zelić, 2009,118). It is important to emphasize that a crisis can happen at any moment, and crises can last for a long time (Koprek, 2013). Therefore, in effective crisis communication, speed and openness play an important role; thereby creating a relationship of trust in sources and institutions, while on the contrary, untimely and non-transparent communication creates a loss of credibility (Jugo et al, 2020). In the case of environmental crises, it is extremely important to have insight and knowledge of the legal tools that govern environmental protection at the international, European and national level. The media would gain significant credibility if they were citing legal tools of protection and even sanctions provided by legal acts, which would result in reporting based on facts adopted at the highest levels of government. This would also give reporting a different direction, in which trust would be established by indisputable facts on which the text on the real crisis would be built.

Today, we often talk about the importance of ecological awareness with the aim of raising people's awareness about nature and the environment, but also because of the fear of environmental crises that lead to environmental problems. The causes of environmental pollution can be found in population growth, urbanization and the environment, irrational use of natural resources, industry and traffic, waste from production and consumption, along with other causes (Črnjar, 1997). All the above can consequently lead to numerous environmental problems and crises.

An environmental crisis occurs in cases of a "disturbance of the ecological system, for example by inappropriate reproduction or invasion of another species, bad weather, lack of sources, inappropriate temperature, etc." (Pečjak, 2009, 478). The same author states that "an environmental crisis was triggered by harmful and toxic substances that humans release into the air and water, and bury in the ground" (Pečjek, 2009, 479). The consequences of migration can also lead to environmental crises, because they lead to social conflicts, segregation, and indirectly the decline of individuals on the social scale. The first works on the topic of predicting migration caused by climate change were published in the 1980s. Such predictions were prompted by the appearance of the first evidence of climate change as

a result of anthropogenic emissions of greenhouse gases and the contemporary humanitarian crisis in underdeveloped countries. These crises were often caused by environmental damage and overpopulation, for example in the case of famine and conflict in the Sahel, where desertification was a significant factor in the crisis (McLeman, 2014). In his book, Udovičić claims that oil and gas drilling, exploration, testing, preparation of wells for production, as well as the production and preparation itself, along with the transportation of oil and gas carried out for the purpose of obtaining fuel, also represent technological processes that affect the environment (Udovčić, 2009).

Therefore, it is inevitable to point out that an environmental crisis arises as a result of human action, regardless of whether we are talking about the influence of industry, technology, agriculture or another cause. This is what leads to environmental problems that affect "changes in the state of the physical environment that occurred due to human activity that disrupt that state, and has effects that society considers unacceptable in terms of accepted ecological norms" (Črnjar, 2002, 25). Faced with crises in the world and aware of the consequences caused by various pollutions, the population of the world starts numerous actions, initiatives and projects in the global process of fighting environmental crises, with the aim of raising awareness of the public to act on environmental awareness as promptly and expeditiously as possible. Rootes states that it is important to know that

> "A better scientific understanding of the harmful impact of human activity on the environment, the increase of a highly educated population and the increasing presence of this topic in the media, would enable easier dissemination of information, contribute to greater awareness of problems and concerns about environmental damage" (Rootes, 1995, 613).

In the legal regulations that are responsible for prevention, recovery and information in crises in Croatia, the Civil Protection Act ("Official Gazette", No. 82/15, 118/18, 31/20, 20/21 and 114/22) play a significantly important role since, in addition to other important definitions, it provides a definition of disaster, important for the context of this paper and research. According to the Act, a disaster is defined as

> "*...a state caused by a natural and/or technical-technological event which, by its scope, intensity and unexpectedness, threatens the health and lives of a significant number of people, property of greater value and the environment, and the occurrence of which cannot be prevented or its consequences eliminated by the action of all operational forces of the civil protection system of the regional self- government in whose area the event occurred and the consequences caused by terrorism and war activities*" (Article 3(1), point 8).

From the above, it can be established without question that this is a definition that would also refer to an ecological disaster according to all the criteria and the given description. The part that refers to the very core of the paper is determined in the Act, Title XI – Informing the public. Articles 67 and 68 of this Title of the Act provide information on media coverage and ways of informing the public. These articles regulate who are the bodies and services that inform the public about the possible occurrence and development of a disaster, namely: the competent Ministry, competent services of other state administration bodies, bodies of local and regional self-government units and other professional services in their area of jurisdiction (Article 67(1), and that in the event of a major accident and disaster, public information is carried out by civil protection headquarters – Article 67(3). As mentioned earlier in the theoretical discussions, the availability of information in factual form is an undeniably important part of media content marketed to the public and on which the direction of creation, as well as the movement of information and communication with the public, depends significantly. Article 67(2) states that "*Informing the public from paragraph 1 of this article must be timely and accessible to everyone*." For information to be disseminated to the public in a timely and equally accessible manner through media and communication networks, it is determined by Article 68 of the Act that the media through which information on a crisis or disaster is published must, in cases of major accidents or disasters, provide their communication network services free of charge in order to transmit information and official announcements. The same article clearly states that in cases of major crises or disasters, the media are not only placed at the service of timely and accessible information, but also as stakeholders and creators of official communications with the public. Following the above, the next chapter emphasizes the importance

of the media influence as a transmitter of a message, especially when these messages are targeting crises.

Media and crises

The terms crises and disasters, at a time of ever greater and more frequent environmental pollution, are becoming synonyms that characterize today's world, which, despite the increasingly frequent adoption of documents on environmental protection and increasingly ambitious agendas, continues to fight against crises that threaten the environment, health and human rights in general.

"Mass media are an indispensable part of mass communication, which in turn determines modern civilization. The world is globalized, networked and everything that happens becomes news that the mass media conveys to its consumers" (Malović, ed., 2007, 10). "We most often define them as a means of communication or conveying news. Depending on who interprets the media (scientific, business or political interests), views on the media and their roles differ" (Jurčić, 2017, 128). The role of the mass media during natural disasters is that the media becomes identical to personal contact (Perez-Lugo, 2004).

From the above, we can conclude that the media as transmitters of events are indispensable during various crises, and that the media greatly contributes to the creation of the public's perception of a certain situation or event. Walter Lippmann (1995) spoke about how the media create their own image of reality, or what he calls "media reality", which has a great influence on human behaviour. Reporting in the media is based on media theories depending on the area of reporting and the application of the advocated theory. When stating the term accident, disaster or crisis, the authors consider it extremely important to present objectivity, impartiality and relevance of information in the media during crises. Barović states the importance of factual theory in reporting on a crisis. The advantages of this theory, according to him, are objectivity, a uniform approach to everyone, to the problem itself, but also the importance of reasoning and presenting only facts when reporting. He states that "the journalists' task is to find out the factual situation, not to sympathize with the victims, while not excluding a humane attitude towards them" (Barović, 2010,

122). The authors Chakravorty and Tilak (2020) in their work speak in support of this theory and state that it is the duty of journalists to inform on an environmental problem, but also to educate about various solutions, considering that they study different aspects of environmental problems.

Research has shown that, regardless of the type of crisis communication, the message sent by the media is extremely important, because their message is a source of information for the majority of the public and plays a major role in effective crisis communication (Eriksson, 2018). Eriksson further states that research can be of great use in practice in the form of recommendations that would use the potential of social media in crisis situations and that there is a need to increase research on crisis communication. From such research, we can conclude that life in today's world, which is based on the preservation of human rights, is also constantly fears new crises in which the media literally play the role of communicators with the public. Therefore, it is important to act preventively and prepare the media for the role of (re)transmitters of information, even in an official role (as foreseen by the Croatian Civil Protection Act). Scientific research has only recently begun to deal with this issue, and although it has been resolved at the level of legal regulation, it is not sufficiently represented in recent literature. There are relatively few guidelines that can help in practice in the organization of cases of crises and the selection of appropriate strategies as a response to crises, therefore the need for research of this type is increasing, since there is a real danger that traditional theories on crisis communication may not be sufficient in the future in order to correctly set the context of social media in the role of crisis communicators (Rosahan et al, 2016). It can be seen that although the world uses legal awareness to fight against various crises and disasters in order to preserve the environment and health, the era of globalization also brings a time of ever- increasing challenges posed to all of humanity in the fight against ecological crises that set the scale of protection at the level of protecting human life endangered by such crises. Environmental and other crises and crisis communications are of variable risk nature; thus media reports are also tools that can be used in such cases. However, they can also be great challenges in application, therefore different researchers in different countries are of particular importance in order to create a framework for the use of social media for communication in risk and crisis situations and to serve as guidelines for the effective use of

social media to help governments and emergency services or crisis management (Wendling, Radisch and Jacobzone, 2013).[60]

The role of the media in conveying information in crises appears as an increasingly important factor in successful communication. Appreciation of scientific research and education as preventive steps could avoid the risks that environmental and other crises bring. Such risks are often irreversible and have a long-term or permanent negative effect on the environment and the health and/or lives of people. Therefore, the research of existing cases could be turned into a positive practice that would help create new guidelines and documents that would be used in crisis management.

Methodology

The research conducted using the thematic content analysis method included a sample of nine media portals with an aim of determining how internet portals approached the reporting of an event with a prefix of a possible impact on the environment. For the sake of greater transparency on the representation of content, the content of four portals at the national level and five portals at the local level were analysed. For the purposes of the paper, articles were analysed immediately after the fire at Drava International company, i.e., from October 2023 to December 2023, when the topic was almost not represented on media portals. Articles corresponding to the keywords air pollution, fire, Osijek, October, November, December were analysed.

The aim of the paper is to investigate the contents of media articles and to analyse the presentation of media contents on Croatian portals focused on possible environmental problems and consequences caused by the fire. For the purposes of the paper, 150 articles from 9 different portals published in the specified period, containing key words, were analysed. The codebook used in this research includes 14 items that were analysed in 150

60 This report addresses risk and crisis communications, a key policy area for the High Risk Forum. It is based on the outcome of discussions held at a workshop jointly organized by the OECD and the International Risk Management Council (IRGC), in Geneva (Switzerland), on 29 June 2012, with the theme "Risk and crisis communication: the challenges of social media". This workshop brought together participants from 12 OECD countries, academia, the private sector and international organizations to discuss the challenges facing emergency services and public relations managers in relation to the emergence of social media.

online articles. The items are divided into two parts. The first part related to general information about the article, the time of publication, the level of the article and the source of the article. The second part referred to two thematic units, which also includes items aimed at confirming and refuting factual reporting, and one thematic unit, which was related to the interest of readers via the reaction on the portals. All collected data were processed using statistical software IMB SPSS Statistics, and descriptive statistics were used as statistical methods. The qualitative method of thematic analysis of the content was analysed through three thematic units of media transmitted information, sensationalism in media content, and reader reactions.

Results and discussion

The research analysed 150 articles at the national and local level. Of these, content analysis was conducted on 77 (51%) articles published on national portals Dnevnik.hr, Indeks.hr, Telegram and 24sata. Regarding local portals SiB, Glas Slavonije, OsijekNews.hr, OsijekExpress.hr and Osijek031, which are included in this research, content analysis was carried out on 73 articles (49%). Of these, most articles in the entire period were published on Indeks.hr portal (19.3%).

Table 1. Number of published articles at the national and local level by portals

Name of the publishing portal					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Index.hr	29	19,3	19,3	19,3
	Telegram	15	10,0	10,0	29,3
	Dnevnik.hr	16	10,7	10,7	40,0
	24sata	17	11,3	11,3	51,3
	Glas slavonije	23	15,3	15,3	66,7
	SiB	20	13,3	13,3	80,0
	OsijekNews.hr	10	6,7	6,7	86,7
	OsijekExpress.hr	13	8,7	8,7	95,3
	Osijek031	7	4,7	4,7	100,0
	Total	150	100,0	100,0	

Source: table drafted by the authors, 2024.

Descriptive analysis of the articles determined the difference in terms of interest in the topic between individual portals, which is not statistically significant considering the portals operating at the national and local level. The results show that the analysed media portals featured 27.3% of articles immediately after the announcement of the accident, 58% of articles within a week of the accident, and 14.75% of articles more than a week after the accident. The analysis of the items revealed a difference in the interest in the topic, considering how time has passed since the accident in question, which supports the hypothesis that the media's interest in ecological crises decreases as time passes after accidents.

Table 2. Number of published articles according to three periods of time

When were the article and corresponding comment published?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	24 hours after the outbreak of the fire	41	27,3	27,3	27,3
	Within a week after the outbreak of the fire	87	58,0	58,0	85,3
	Week or more after the outbreak of the fire	22	14,7	14,7	100,0
	Total	150	100,0	100,0	

Source: table drafted by the authors, 2024

Further analysis, which includes two thematic units, attempted to answer the research questions of how the media content presented on news portals is aimed at presenting information, i.e., how the credibility of the content in media articles was approached, as well as whether the articles stimulate the reader's interest through sensationalism.

The first thematic unit **Media transmitted information** was processed through five codes**: air/soil quality report after the accident**, which is represented in 72% of the written articles (*New air quality measurements results in the area of Osijek, Brijest and Antunovac showed that toxic and irritating compounds are still present in the affected area, announced the Institute*

of Public Health of Osijek-Baranja County.[61]*, Measurements at two measuring stations in the city show that the air quality is moderate and acceptable.*[62]*),* **expert statements** 44% of articles (*Lovrić claims that currently there is no great danger for citizens from those two compounds, but he cannot claim whether there are other dangerous compounds*[63], "*It is very difficult to say how much pollution there is and how harmful it will be in the future without analysis" says Hackenberger*[64]), **informative character of media content** 94% (*Public manifestations in Osijek also cancelled due to the fire*[65]*, Another good news is that a special means for extinguishing fires of this material and of this scale has arrived, which mixed with water should give better results in stopping the spread of fire on baled plastic.*[66]) and **the objective nature of media content** 86.7% (*Due to the consequences of a plastic fire at Drava International company, a state of major disaster was declared on Saturday, and a request was sent to the Government to declare an ecological disaster, said Osijek-Baranja prefect Ivan Anušić,*[67] *During the day, fire-fighters actively worked to extinguish a large amount of plastic in an open area, during which three fire-fighters were injured, one of whom received serious injuries. The burning of plastic produced a large amount of smoke and toxic gases*[68]*),* **the article content and title are linked** 95% (*A major accident declared for the area of the county, caused by a plastic fire in a company in Brijest!*[69]*, Backfilling of the fire-scene has begun! In addition to city companies, certain private companies join the fight!*[70]*).* Following the research questions, and on

61 https://sib.net.hr/vijesti/osijek/4393885/novi-rezultati-kvalitete-zraka-u-osijeku-i-dalje-prisutni-stetni-i-nadrazujuci-spojevi/, accessed on 01/04/2024.

62 https://dnevnik.hr/vijesti/hrvatska/objavljena-nova-analiza-kvalitete-zraka-u-osijeku-a-zbog-pozara-ne-rade-skole---806280.html, accessed on 01/04/2024.

63 https://dnevnik.hr/vijesti/hrvatska/toksikolog-o-pozaru-potrebno-sto-prije-saznati-kakva-je-sve-plastika-bila-tamo---805874.html, accessed on 01/04/2024.

64 https://www.glas-slavonije.hr/533327/1/Na-tlu-ce-se-taloziti-cestice-neke-bi-mogle-biti-toksicne, accessed on 01/04/2024.

65 https://sib.net.hr/vijesti/osijek/4392321/zbog-opasnog-dima-otkazuju-se-manifestacije-i-nastava-u-skolama-stanje-je-iznimno-ozbiljno/#google_vignette, accessed on 01/04/2024.

66 https://www.osijekexpress.com/2023/10/04/bolje-vijesti-s-pozarista-otvorena-cesta-stiglo-sredstvo-za-gasenje-ali-vatrogasci-kazu-nije-jos-dobro/#google_vignette, accessed on 01/04/2024.

67 https://dnevnik.hr/vijesti/hrvatska/izgorena-plastika-uzasno-smrdi-u-osijeku-gradonacelnik-upozorio-na-zabrinjavajucu-stvar-gradjani-pozvani-da-ne-izlaze-van---806178.html, accessed on 01/04/2024.

68 https://osijeknews.hr/plastika-i-dalje-gori-a-vjetar-sada-puse-prema-gradu-osijeku/, accessed on 01/04/2024.

69 https://www.osijekexpress.com/2023/10/07/proglasena-velika-nesreca-za-podrucje-zupanije-uzrokovana-pozarom-plastike-u-tvrtki-u-brijestu/, accessed on 02/04/2024.

70 https://www.osijekexpress.com/2023/10/05/pocelo-zatrpavanje-pozarista-na-raspolaganje-se-

the basis of the obtained results, it can be confirmed that the results obtained by the thematic analysis support hypothesis 2 because the contents transmitted in the media were of an informative and objective character, and they presented relevant information obtained by the relevant stakeholders (experts, staff members) is determined.

The second thematic unit, **sensationalism in media content**, is processed through three codes: the title of the article is of a sensationalist character 38% (*Apocalyptic scenes from Osijek,*[71] *Are we facing an Ecocide? We see a big cloud of smoke with toxic particles of burnt plastic*[72]), **the main news was published in a sensationalist manner** 18% (*The air quality at the measuring station in Osijek was bad. Biologist: It's not because of the fire,*[73] *New air quality results in Osijek: Harmful and irritating compounds still present*[74]), **fear of ecological disaster** 12.7% (*The fire in Brijest is the biggest ecological disaster in Osijek in recent history,*[75] *Approximately two hundred citizens gathered on Saturday at Trg Slobode in Osijek from 5 a.m. to 12 p.m. in a peaceful protest rally called "For the health of us and our children", seeking the names of those responsible for the environmental disaster that occurred after the fire at Drava International plastic processing plant*[76]). The thematic analysis of the content indicates that there is a presence of sensationalism through the mentioned codes, but insufficient to claim that the articles published on portals were sensationalist in nature. From the above, it can be concluded that the factual theory that emphasizes the importance of objectivism and does not give priority to emotions is predominant in the articles, which is in favour of H2.

In order to answer the research question, how much readers' reactions will the articles cause with regard to the content they reported on, the third

u-pomoc-uz-gradske-dale-i-neke-privatne-firme/, accessed on 02/04/2024.

71 https://www.24sata.hr/news/video-apokalipticne-scene-iz-osijeka-ovo-su-prve-snimke-s-mjesta-katastrofalnog-pozara-938908/, accessed on 02/04/2024.

72 https://osijeknews.hr/prijeti-li-nam-ekocid-vidimo-veliki-oblak-dima-s-otrovnim-cesticama-izgorene-plastike/, accessed on 02/04/2024.

73 https://www.index.hr/vijesti/clanak/kvaliteta-zraka-na-mjernoj-postaji-u-osijeku-je-bila-losa-biolog-nije-zbog-pozara/2503832.aspx/, accessed on 02/04/2024.

74 https://sib.net.hr/vijesti/osijek/4393885/novi-rezultati-kvalitete-zraka-u-osijeku-i-dalje-prisutni-stetni-i-nadrazujuci-spojevi/#google_vignette/, accessed on 02/04/2024.

75 https://sib.net.hr/vijesti/osijek/4392631/pozar-u-brijestu-najveca-je-ekoloska-katastrofa-u-osijeku-u-novijoj-povijesti/, accessed on 02/04/2024.

76 https://dnevnik.hr/vijesti/hrvatska/mirni-prosvjed-u-osijeku-na-kojem-se-trazila-objava-krivaca-za-ekolosku-katastrofu---807396.html/, accessed on 02/04/2024.

thematic unit was also analysed. The third thematic unit, the reader's reaction, was processed through three codes: positive comments 1.3 % (*None of the fire-fighters and civil protection staff have appropriate masks. Be safe, lads, it's not worth your lungs or your eyes,*[77] *Well done, finally something positive. I'm surprised that Bede isn't at the hearing. The man who was putting out the fire is fighting for his life. The fire- fighters inhaled toxic gases and who knows how that will affect their health. The population of Osijek and its surroundings live behind closed windows and doors, and the workers refuse to give up their boss. Incredible*),[78] **negative comments** 35% **(***They are lying, I don't trust anyone,*[79] *And then we will have nice family farms or eco plastic fruits and vegetables*[80]*),* **feeling of fear in the readers' comments** 6% *(The people of Osijek have no idea what kind of danger they are in, this is worse than the atomic bomb and Chernobyl because people don't even know what are the consequences of these toxic gases, which normally result from the burning of plastic waste, nothing is worse than that…!!! If the Government was responsible and took care, the entire population of the city would have moved out long ago at least 50 km from the centre of the fire…, I wonder where the experts, chemists and similar experts are, to explain to people what is really happening…???? Why are they silent…??,*[81] *It's all OK to cover it with earth... but what will happen when the first rain falls, and it ends up in the ground!*[82]). It is considered important to point out that both codes relating to comments did not have any represented comments under the published articles in a high percentage of 64%.

77 https://www.index.hr/vijesti/clanak/pozar-u-osijeku-planuo-pod-cudnim-okolnostima-epidemiolog-ne-jedite-hranu-iz-vrta/2500836.aspx/, accessed on 03/04/2024.

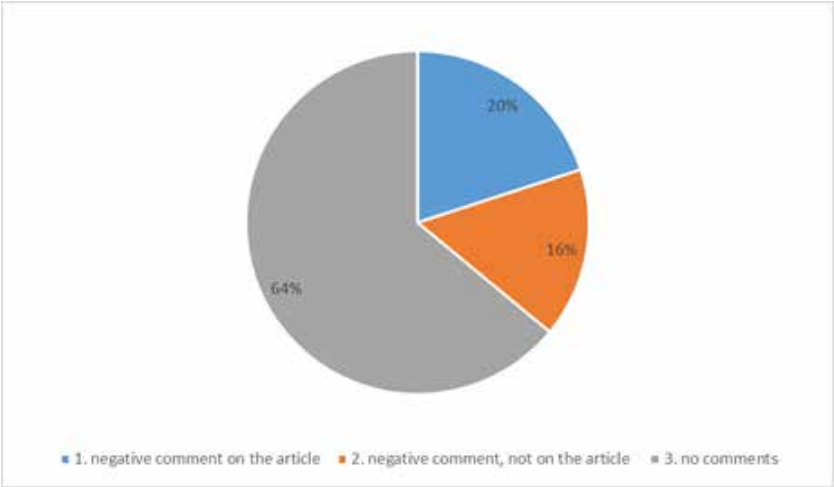
78 https://www.telegram.hr/vijesti/anusic-potvrdio-za-telegram-podnio-sam-kaznenu-prijavu-protiv-vlasnika-drave-bede-prijavit-cu-ja-njega/, accessed on 03/04/2024.

79 https://www.24sata.hr/news/analizom-voca-i-povrca-iz-osijeka-potvrdeno-je-da-nema-rizika-za-zdravlje-potrosaca-944045/komentari/, accessed on 03/04/2024.

80 https://www.24sata.hr/news/strucnjaci-o-pozaru-zagadenje-je-strasno-a-najgore-je-sto-ce-s-prvom-kisom-sve-otici-u-tlo-939094/komentari/, accessed on 03/04/2024.

81 https://www.index.hr/vijesti/clanak/los-indeks-zraka-u-jednom-dijelu-osijeka-detektiran-formaldehid/2501977.aspx/, accessed on 03/04/2024.

82 https://www.index.hr/vijesti/clanak/stanje-u-osijeku-se-zakompliciralo-u-zraku-ima-spojeva-kojih-ne-bi-smjelo-biti/2502339.aspx/, accessed on 03/04/2024.



Graph 2: A breakdown of readers' reactions to articles published on portals
Source: graph drafted by the authors, 2024

The above confirms that environmental topics in the media still do not arouse enough public interest according to readers' reactions to published articles. Vandrick points out in his research that people need credible sources of knowledge and information about how to contribute to the development of environmental awareness and that the public is increasingly focusing on digital news (Vandrick, 2011). Although the influence of the media is one of the most important factors that drive environmental awareness, the importance of accessibility to new technologies as well as people's interest in environmental topics should not be ignored (Saikia, 2017).

Research limitations

The research has certain limitations primarily because it was conducted on a limited sample (150 in total) following only one event in the Republic of Croatia that constituted an environmental crisis. However, this is acceptable because it is a convenient sample that included 9 portals at the national and regional/local level. It is believed that the limitations of this research do not affect the objectivity of this research and its credibility.

Research implications and contributions

It is clear from the review of previous research in the Republic of Croatia that there is a lack of research that studies the representation of environmental problems in the media, and that the contribution of the research is reflected in the fact that this is one of the few studies that deals with research on the influence of the media and recognition of the media as a key communicator in environmental crises in the area of the Republic of Croatia.

Conclusion

The media are key transmitters of information, regardless of the form in which they come out with information in a crisis. Their consistency, objectivity and timeliness in presenting information is the most important indicator to the public on environmental problems and environmental crises that surround us. It can be concluded that the media still approach ecological problems and ecological crises insufficiently by implementing them in the media, which was also confirmed by this research, because the media lost interest in the topic over time. The results showed that the public's interest in the reactions of readers is almost imperceptible, which indicates an additional problem in overestimating the importance of environmental problems, crises in the media. This research can be a starting point for further communication research on the importance of the media in environmental protection processes, environmental problems and crises in order to contribute to public awareness of the importance of environmental protection, but also to prevent the emergence of new ecological crises.

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EKOLOŠKE KRIZE U MEDIJSKOM PROSTORU

Sažetak

Važnost prenošenja relevantnih informacija u medijskom prostoru o ekološkim temama (s obzirom na klimu, temperaturu, održivost..) predstavlja primat u izvještavanju stanovništva s obzirom da se posljedice istih odražavaju na ljudske živote te kao takvi i na ljudska prava općenito. Upravo informacije koje se prenose u medijskom prostoru pomažu u osvješćivanju javnog mnijenja o ekološkoj problematici s ciljem očuvanja kvalitete života. Medijski portali kao predstavnici medija na brz način prenose informacije prema javnosti i na takav način doprinose kreiranju javnog mnijenja i očuvanju ljudskih prava na pravovremene i relevantne informacije. Temeljna zadaća portala je iznositi sadržaje kojima će se prenositi istinite informacije. Tijekom kriznih situacija, mogućih kriznih situacija te nesreća mediji postaju najvažnijim izvorom informacija građanima te imaju zadatak prikazati pravodobne, objektivne i točne informacije. Cilj ovoga rada je istražiti na koji su način internetski portali pristupili izvještavanju o događaju s predznakom mogućeg utjecaja na okoliš i stanovnike te koliko su doprinijeli kreiranju javnog mnijenja. Metodom tematske analize sadržaja obuhvaćen je uzorak 150 članaka na devet medijskih portala (nacionalna i lokalna razina). Rezultatima istraživanja daje se uvid na koji su način internetski portali pristupili izvještavanju o događaju s predznakom mogućeg utjecaja na okoliš. Ovo istraživanje upućuje na važnost ekološke osviještenosti javnosti i potrebe za izvještavanjem o ekološkim problemima, krizama u medijskom prostoru.

Ključne riječi: ekološka kriza, javnost, komunikacija, ljudska prava, mediji

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SUSTAINABILITY OF CROATIAN LOCAL RADIO STATIONS IN CONTEMPORARY MEDIA ENVIRONMENT

Original Paper
https://doi.org/1059014/MZHE8034

Abstract

Despite being part of traditional media, which has seen declining audiences, radio has experienced a resurgence in recent years. This can be attributed to several factors: listening to the radio does not require basic literacy; it allows for multitasking; and its content is often entertaining, particularly music. Additionally, radio has successfully adapted to new media trends by incorporating formats such as streaming and podcasts, appealing to younger audiences. In Croatia, local radio stations play a significant role in communities, offering access to information, entertainment, and education, with nearly 160 radio channels – almost 90 percent of which are local. However, these stations often struggle with financial resources, staffing, and technological infrastructure.

The aim of this paper is twofold. First, drawing on publicly available secondary data from the Agency for Electronic Media (AEM), the Ministry of Finance, the State Statistical Office, and the Croatian Association of Market Communication Agencies (HURA), the paper will examine the current business conditions of local radio stations and identify challenges that may pose a threat to their sustainability. Second, through a survey and in-depth interviews with owners and editors of local radio stations, the paper seeks to identify how these challenges and obstacles affect the competitiveness, audience, and advertising revenue of local radio stations, with particular attention to the role of digital technologies as key strategic tools for the sustainable development of radio stations.

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The research results show that local radio stations in Croatia, despite their importance for media pluralism and local communities, face significant economic challenges due to a lack of financial resources, outdated technological infrastructure, and the strong influence of local and regional governments on their ownership. Although digitalization is a long-term goal, local stations currently show little interest in transitioning to digital platforms, primarily due to the high infrastructure costs and lack of state support.

Keywords: digitalization, local radio stations, media environment, radio, sustainability

Introduction

Local radio stations play a crucial role in fostering community engagement and providing a platform for diverse voices. However, these stations frequently encounter significant challenges that threaten their sustainability. Financial constraints, limited human resources, and inadequate technological infrastructure hinder their ability to operate effectively. The ongoing digital transition has further exacerbated these issues, fundamentally reshaping the media landscape in which these stations operate.

As listener preferences evolve, local radios face declining audiences and heightened competition from online music services, which offer personalized and on-demand content. Additionally, changing listening habits, driven by the rise of digital platforms and mobile applications, compel traditional broadcasters to rethink their strategies to remain relevant. This paper aims to explore the sustainability of local radio stations in the context of these challenges, examining potential strategies for adaptation and resilience in an increasingly competitive media environment. By understanding the unique obstacles and opportunities facing local radios, it can be identified pathways to support their ongoing viability and contribution to community life and promotion of cultural values.

Sustainability challenges for development of radio stations

Due to the previously mentioned constant and major changes in the new media environment, which are significantly reflected to radio as a medium, several studies have been carried out in the last decade in different

parts of the world related to the sustainability of different types of radio, among which a few significant ones stand out.

One of the first comprehensive reviews of the contemporary situation of local radio stations in Europe was done by Evens and Paulussen in 2012. They investigated policy options for a sustainable sector in the domain of radio, by analyzing local radio policies in three European countries – Great Britain, the Netherlands and Belgium. They specifically studied six important areas: recognition and legal status; funding and financing; concentration and diversity; regulation and control; sectoral self-organization, and digital switchover. As they concluded, improving conditions in each of the mentioned areas should ensure sustainable growth of the sector and its bright future, as local radio stations would be significantly strengthened in that manner (Evens & Paulussen, 2012). In their research, focused on community radio in Europe, Correia, Vieira, & Aparicio (2019) concluded that, despite the different legal frameworks and structure under which radio stations operate around the world – including local and community radio stations – they mostly face similar challenges in terms of sustainability. This particularly refers to technological conditions and methods, as well as manners of content production (2019: 30, 36-38).

Several recent studies conducted on the African continent show that the sustainability issues of local radio stations are not typical only for European countries. Using different methods and sources, Spurk & Dingerkus (2017) scrutinized local radio stations in Tanzania, whose numbers exceeded 100 in a short time. As they concluded, due to various reasons – wrong market models, lack of management departments, limited content quality of radio program, and others – "Tanzanian local radio stations are in crisis regarding their economic and financial sustainability" (Spurk & Dingerkus, 2017: 56). Mixed-methods research design was also the way Mudanya & Wenye (2019) conducted their research. Using survey questionnaires and in- depth face-to-face interviews with a total of 56 employees (radio managers, technical personnel, producers/presenters and marketing personnel) of five selected FM local radio stations in Bungoma County in Kenya, they investigated the challenges they faced in their daily work. According to the findings of their study, the sustainability of the analyzed radio stations, not at a high level at the time, could have been improved by increasing motivation and appropriate training of staff,

in parallel with the creation of quality educational and informative radio content (Mudanya & Wenye, 2019).

Contextual background – Croatian radio market

The media landscape in Croatia has developed within a complex historical, political, and social context, reflecting broader transformations in Central and Eastern Europe. Local radio stations, initially established in the 1960s for political purposes, played a crucial role in the promotion of political ideologies and cultural enrichment, particularly in rural areas (Mučalo, 2010b). Although they were under strong state influence, their importance was highlighted during the Homeland War (1991–1995), when they were pivotal in breaking the media blockade through the "connected vessels" model (Sapunar, 2001). In the post-socialist period, the Croatian media market underwent nationalization, privatization, and marketization, which introduced private radio stations after a 50-year hiatus, accompanied by challenges in creating adequate media regulation (Peruško, 2013).

Today, Croatia's media system aligns with the European dual media model, in which both public and private sectors coexist, though often in unequal competition (Đukić, 2015). Local radio stations, despite their essential role in promoting local culture, civil society, and media literacy (Mučalo, 2010a) face significant economic challenges. These include weak financial resources and a market dominated by commercial interests, which undermine their sustainability and journalistic independence (Đukić & Levak, 2018; Zenzerović & Nenadić, 2022). Furthermore, despite government efforts to promote media pluralism through the Pluralism and Media Diversity Fund, these measures have not yielded significant results, as both small and large radio stations receive the same benefits, regardless of profitability (Mučalo, 2020).

The radio market in Croatia in 2023 comprised 140 radio stations broadcasting a total of 157 channels. Of these, 9 stations hold national licenses, including 3 channels operated by the public broadcaster HRT, and 11 channels hold regional licenses, 9 of which are also operated by HRT. The remaining 137 stations are local, with broadcasting concessions limited to smaller geographic areas such as districts, cities, and metropolitan

regions[86] (EMA, 2023). Based on their organizational status, radio stations in Croatia are classified as public, non-profit, or commercial (State Statistical Office, 2023). More specifically, they can be privately owned, shareholder-owned, jointly owned, or owned by local governments and institutions. Unless explicitly classified as non-profit, radio stations operate on a commercial basis, primarily funded through the sale of advertising space and other radio-related activities (Ministry of Culture and Media, 2015: 14-15). Among the 137 local stations, only 14 (10%) are non-profit, while the majority operate commercially, reflecting the predominance of a market-driven radio system.

One of the critical issues in this media ecosystem is the significant ownership of local radio stations by local and regional governments, which control a substantial share of the market. According to the Electronic Media Agency (2023), 64 radio stations are majority-owned by regional or local governments, with 26 being fully government-owned. This ownership structure affects the independence of these stations and raises questions about the long-term viability of the local radio sector in Croatia.

Methodological framework

Given the specific development context of local radio stations in Croatia, the aim of this paper is twofold. First, drawing on publicly available secondary data from the Agency for Electronic Media (AEM), the Ministry of Finance, the State Statistical Office, and the Croatian Association of Market Communication Agencies (HURA), the paper will examine the current business conditions of local radio stations and identify challenges that may pose a threat to their sustainability. Second, through a survey and in-depth interviews with owners and editors of local radio stations, the paper seeks to identify how these challenges and obstacles affect the competitiveness, audience, and advertising revenue of local radio stations, with particular attention to the role of digital technologies as key strategic tools for the sustainable development of radio stations.

86 Given that the research is part of a wider survey of local radio stations that includes Slovakia, Portugal and North Macedonia, as local radio stations the study examined the ones that are registered in the Book of Radio Broadcasters with a concession for the county area, city and wider city area, as well as the municipalities and islands area.

In order to verify whether local radio stations still face the same challenges that were identified in previous, albeit insufficient, research of the radio market in Croatia, the research was carried out using two different methods. For this purpose, an online survey questionnaire and in-depth face-to-face interviews were conducted among radio professionals – managers, editors and journalists of several Croatian local radio stations. The aim was to determine the sustainability of local radio stations in the new media environment and the extent to which they can adapt to the current situation and contemporary media trends.

In September 2023 an online survey was conducted based on a prepared questionnaire sent to all local radio stations in Croatia (N=137). The research covered the following areas: 1) Specific obstacles faced by local/regional media with emphasis on financial constraints, human resources and technological infrastructure 2) Impact of the shift to digital media on market competition, audience, and advertising income; 3) Examples and data illustrating the decline in traditional media formats. Since the initial response was quite low, as has been shown in many surveys of journalists, because participation in surveys may be treated as a low priority (Molyneux & Zamith, 2020: 4) or professional values may make journalists more sceptical of others and of academic research (Barkho, 2017), additional supportive measures were taken follow-up calls to journalists, editors, and radio stations, as suggested in Molyneux & Zamith's (2020) study. Although the follow-up calls increased the response rate, only a total of 10 local radio stations completed the survey as planned. In addition, there were 6 radio stations that responded but indicated that they did not participate in this type of survey or that it was against their policy to disclose their business information.

In order to gain a deeper insight into the local radio market, and in view of the low response rate to the survey among local radio stations, which is partly due to the low level of transparency and willingness to disclose business data, in October 2023 an in-depth interview was conducted with four local radio stations in eastern Croatia whose licenses cover larger city or county broadcast areas (Hrvatski radio Vukovar – Respondent 1; Radio Laganini – Respondent 2; Radio Baranja – Respondent 3; Radio Dunav – Respondent 4).

Research results and discussion

Specific obstacles faced by local/regional media

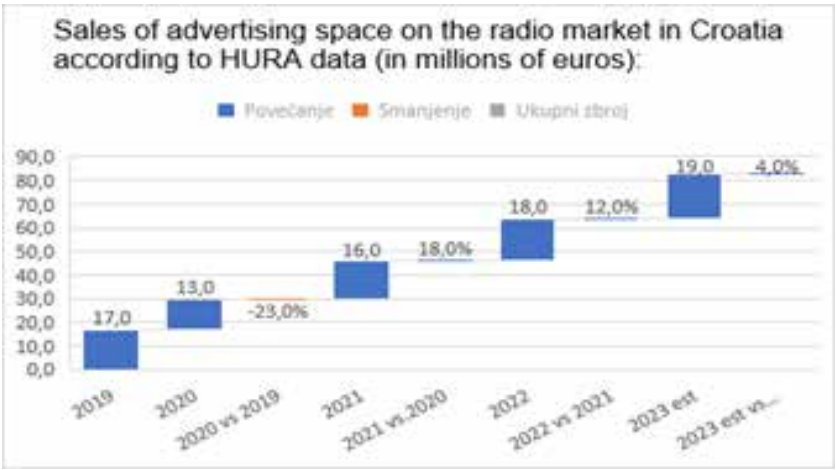
Limited financial resources

The limited financial resources of Croatian local radio stations in the last decade are one of the main obstacles to their further development. The usual models of financing traditional media, which included more or less stable public funding in addition to market revenues, but also various forms of public support for commercial media, were insufficient for a long time (Đukić & Levak, 2018). The need to change the established models of funding local radio stations was also highlighted in the research on the financial challenges of local radio stations in Eastern Croatia, which was conducted on a sample of 37 local radio stations. The main financial challenges were the decrease in advertising revenues, insufficient level of state support as a traditional instrument for co-financing and supporting the development of local media, and a small number of employees unable to produce competitive content (Đukić & Levak, 2018). Changes in the media environment have led to declines in advertising revenues across all sectors, with the first signs of recovery in the radio market not seen until 2022. This is supported by data from the Reuters Digital News Report for 2022, which highlights that news publishers were particularly affected by COVID-19 as they have few paying subscribers and are largely dependent on single copy sales and advertising. Total advertising spending in 2021, at €200 million, is only two-thirds of what it was in 2008 (Reuters Institute Digital News Report, 2022). According to the HURA Media AdEx analysis of media consumption for media space rental, the radio sector (-23% in 2020 compared to 2021) had the biggest drop in revenue, along with the print media sector, due to the economic crisis, the Covid crisis and accelerated technological change. Table 1 shows the development of advertising investments in the radio sector over the last 5 years in Croatia, where a slow recovery can be seen, although it is still an unattractive market for advertisers when looking other media outlets.

Second problem is unequal competition in the market between "small" (local) and large (regional and national) radio stations given their different signal coverage (Mučalo, 2020) and then also the potential interest of advertisers. It is assumed that a larger and stronger signal will always

"cover" smaller areas, but the regional radio station may broadcast in a less economically developed area than the city where the local radio station broadcasts (Mučalo, 2020). The problem is that, as the owners and editors of local radio stations interviewed in this research point out, most of the marketing "pie" is taken away from local media by national media because, for example, despite the fact that the radio station has a franchise for one district (an area larger than the city), it can have a strong signal covering an even larger area, almost regionally, which is much more attractive to advertisers and makes it much easier to get their attention (Respondent 1).

Table 1. Sales of advertising space on the radio market in Croatia according to HURA data (in millions of euros):



Source: Authors according to data from HURA (2023)

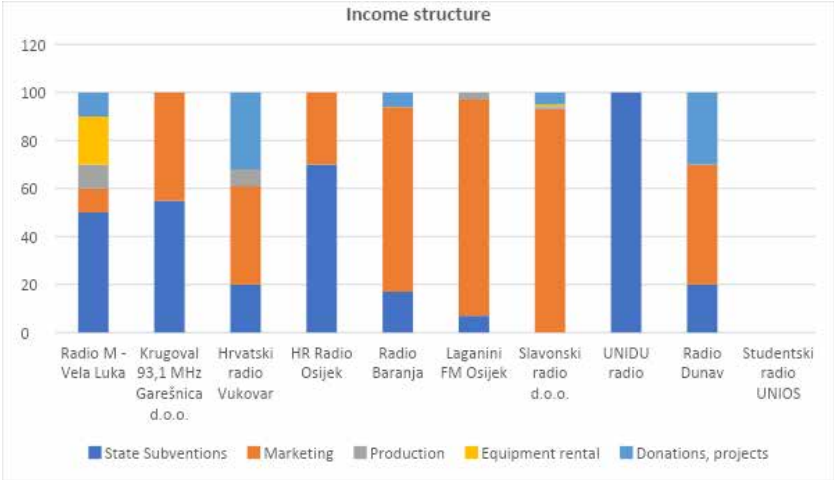
Each concession area has different market opportunities or shortcomings, but AEM research shows that the main disadvantage of radio is the lack of funds due to the small number of advertisers (AEM, 2015: 65). This was also confirmed through this research, given that local radio stations emphasize that most often their concession area includes too few companies that advertise at the local level, and the marketing potential is, of course, lower than the national one. Therefore, there is a constant struggle of local radio stations because large companies that should be the flywheels of the economy at the local level do not invest in marketing on local and regional

radio stations, but exclusively on national ones (Respondent 2). This is supported by the results of the survey questionnaire (Table 2), where it is evident that local radio stations are mostly financed by market revenues through marketing, followed by state subsidies as the second most common source of income. Average percentage of income from marketing is 43.6%, but if we separate two public radio stations with a county radio concession and two public radio stations owned by two universities, then the share of marketing income rises to 60.8% (if we take into consideration only commercial local radio stations).

State subsidies account for 33.9% of revenue. However, if we exclude two public radio stations with a county concession and two local radio stations owned by the university, then the share of state subsidies drops to 26%. It is interesting that equipment rental and production make up a symbolic share of the income of all radio stations. Despite the dominance of commercial media in the Croatian radio landscape, the concept of sustainable journalism in Croatia cannot be reduced to market principles alone (Đukić & Levak, 2018). The government's measure to encourage public interest content for the local community by allocating public funds to co-finance their production through the Fund for Pluralism and Diversity seeks to provide local media with a stable source of income, which is extremely important for the long-term sustainability of local media, as well as maintaining the number of employees. The stability of income from the Fund can be seen by looking at the annual reports to the Croatian Parliament on the work of the Council for Electronic Media and the Agency for Electronic Media (2022, 2021, 2020, 2019). According to this data, radio providers annually receive grants for production of public interest programs in average of 2.000.000,00 euros although the number of radio stations that apply for this grant is rising every year.

The financial dependence of local radio stations on the fund also has a negative impact on the content of the broadcasts. As the interviewees note, the Pluralism Fund prescribes the topics, categories and type of programming that radio stations must fulfil in order to be co-financed by public money, and this amounts to producing quantitatively more programs of longer duration in order to receive more funding, while at the same time being uninteresting to the audience. (Respondent 3).

Table 2. Income structure of local radio stations in Croatia



Source: Author's own research (September 2023)

This is confirmed by the National Statistical Office, according to which radio stations in Croatia produce 96% independent programs. In 2022, 110 local radio stations produced 906,159 hours of their own radio programs, of which 65% were music programs, 13% information programs and 10% entertainment programs, while areas such as education, religion, sports, game programs and promotions were represented between 0.5 and 4% in in- house production (State Statistical Office, 2023). This statement is consistent with previous research that has shown that short informative programs and announcements are the most desirable content of radio programming because they have an emphasis on timeliness, typified language, and a mostly neutral interpretation that allows listeners to draw conclusions, form opinions, and make judgments on their own. (Mučalo, 2010a: 10). The unquestionable importance of the Fund for local media is recognized also in earlier researches of local radio stations (Šalinović *et al.*, 2014; Đukić & Levak, 2018) regardless of the share of the Fund's co- financing in the publisher's total income. However, criticisms are still present, given that most local media in Croatia are of a commercial nature and that privately-owned commercial media are financed with public money according to the same criteria as non-profit media (Mučalo, 2020). Out of 14 non-profit local radio stations, only 8 of them were financed through the Fund in 2022 with an average amount of EUR 16,332.00,

while at the same time 108 of them were financed out of 137 local commercial radio stations with an average amount of EUR 17,673.00 (AEM, Report on the work of the Council for Electronic Media, 2022). However, the respondents continue to emphasize that there are too few resources in relation to the needs and the real situation, and above all because it is not competitive content (Respondent 3). The second line of criticism relates to the ownership structure, but also to the financing of local radio stations by the local self-governments. Local radio stations are more often exposed to pressure from politicians or business people, who often finance their work. This was also confirmed by the study by the Electronic Media Agency (2018). "This pressure doesn't lead to a lower quality of these stations, but to a lower objectivity in the sense that the programs they broadcast are of high quality, but they do not, for example, present news that could be harmful or negative for the people or companies that finance them." (AEM, 2018: 7).

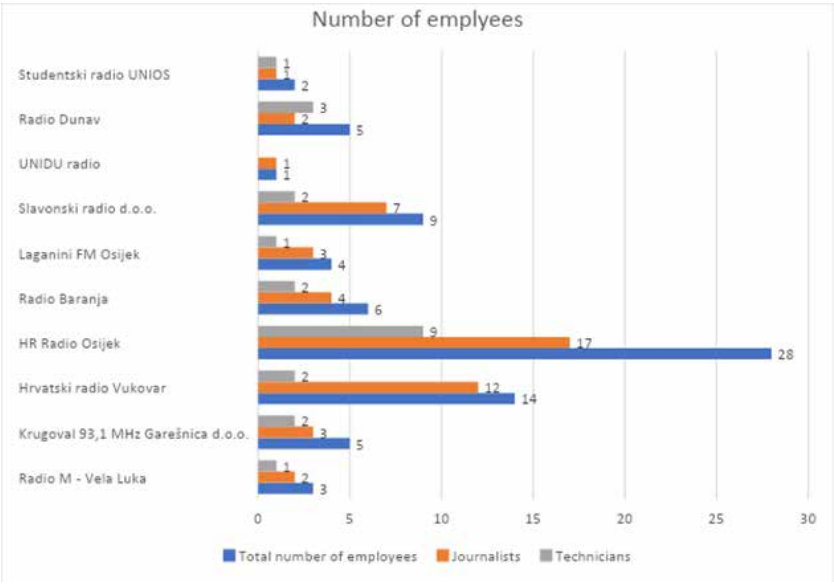
Limited human resources

The financial resources determine the number of employees and the way each radio station operates and consequently affect the content of the radio station. Therefore, the popularity of a radio station in a particular local area is determined by the dynamics of the program, the content, the speed and credibility, the music and a quality presenter who contributes with knowledge and skills to the atmosphere on the air. The problem arises when local radio stations employ non-professionals due to insufficient resources and don't invest in their training and media skills (AEM, 2018). The average number of employees in radio stations is nine (Central Bureau of Statistics, 2023), but it should be considered that such large number is not a real picture of the radio market, since these data also include radio stations with national concession, as well as the radio network of the public service, which includes 3 national radio stations and 11 regional branches. Also, the data on the number of employees is based on the Annual Radio Report, which radio broadcasters are required to submit, but the report for 2022 was submitted by 129 radio stations, of which 110 were local radio stations (State Statistical Office, 2023), which doesn't correspond to the number of registered radio broadcasters by Agencies for electronic media.

It isn't possible to present a more detailed presentation of the number of employees in the radio (broadcasting) sector over the years, given that the methods of monitoring by the State Statistical Office have changed due to the separation of company *Odašiljači i veze* from the public service system – HRT in 2020. However, the results of the survey of local radio stations have shown that the average number of employees in smaller local radio stations is 4.5, almost double the average number of nine at national level. An exception are the local radio stations with a county concession where the number of employees is higher (HR Vukovar – 14 and HR Osijek – 28), because they are public radio stations, but are also listed in the Book of Radio Publishers of Croatia as commercial local radio stations.

Although the research shows that the biggest costs for local radio stations are staff salaries (60.8% on average) and financial costs (22.3%), "minimum staff salaries", "the impossibility of investing in training existing staff and the impossibility of recruiting" stand out as one of the problems that require new young, creative staff (Respondent 1,2,3,4). Capacity and manpower are thus the second biggest challenge for the operation of local radio stations. Age structure of local radio stations indicates an older generation of employees. Indeed, in the age structure, a large part of the staff is older (> 50 39.2% and > 41 65.8% on average), and among young people, if they are interested in radio journalism, they are usually not satisfied with the conditions and the way of working after the trial period. The need for new, creative and well- trained staff is great and radio stations recognize the need to adapt, but the problem of low interest of young people in working in different areas, both journalistic and other areas such as selling advertising space, technology, production and the like is low (Respondent 3). Even in the local radio stations where there are enough staff, there are still many middle-aged and older people who haven't completed journalism studies or related studies (on average, 34 % of employees have only high school education. Out of the total number of highly educated, only 40.8% have completed higher education in the field of journalism and related studies), and in Croatia there are not enough institutions or associations that continuously take care of the education of already employed people (mostly middle-aged and older generation) in the field of journalism, media literacy, new technologies, etc. (Respondent 2).

Table 3. Number of employees in local radio stations in Croatia



Source: Author's own research (September 2023)

Slow and expensive digitization process

The problem of limited human resources is exacerbated by the generational gap among local radio station staff. The interviewees agree that the main problems stem from the perception of radio as a traditional medium among young people. Namely, young people would rather be social network administrators than traditional radio presenters (Respondent 3) because the analogue format of broadcasting radio content, which is the only one in Croatia, is not attractive enough for young people. The gap between generations is also evident in the fact that young people don't know much about daily political issues and people, they don't follow these events enough, while on the other hand older employees have problems with modernization and technology. Moreover, older people who have basic knowledge and experience are slower, while younger people are faster but don't have enough knowledge and experience (Respondent 2). One of the ways to overcome digital inequality from a social role perspective is to educate citizens about the importance of acquiring the skills to use modern technologies and, in this context, to encourage particularly vulnerable

groups, such as the elderly and people with a low level of education, to use new technologies (Fistrić, 2018).

The financial challenges of operating local radio stations don't allow for investment in training existing staff, new technological equipment and hiring new staff, and the legal framework for digitization in Croatia is still in its infancy.

Digital Audio Broadcasting (DAB+), a terrestrial technology offering more channels and multimedia content compared to FM, was first tested in Croatia in 2017, when 15 commercial stations began experimental digital broadcasting. The estimated cost of DAB broadcasting was 430 euros per month, with participants covering other costs (Mučalo, 2020). The experiment aimed to prepare for the commercial launch of digital radio, test the technology, and promote the platform to broadcasters and citizens. By 2022, the trial ended, and the Electronic Media Agency reported that over 90% of Croatia's population was within the digital signal range, achieving all test objectives (AEM, 2022). However, no official feedback from participants is available, and media coverage was insufficient for the general public (Mučalo, 2020). A survey by Mučalo and Šulentić (2021) found that radio stations were satisfied with signal quality but noted high costs (around 650 euros per program) and low listener numbers due to the limited availability of digital receivers. A national-level study showed that DAB+ was not economically viable, with public interest identified in only one region. In 2022, out of 4 national and 10 regional concessions, only 1 national and 2 regional DAB+ concessions were awarded due to limited bidder interest (AEM, 2022). Currently, only one station, Radio Tvornica, is registered with a digital concession in Croatia (AEM, 2023).

The lack of interest in DAB+ licenses was highlighted in a survey of local radio stations, where financial barriers to transitioning to digital broadcasting emerged as the primary issue. While all local stations acknowledge the necessity of digitization, they point out that fully digital radio remains prohibitively expensive. Although DAB+ allows broadcasting over multiple channels, most local stations lack the staff to even manage one channel (Respondents 1, 2, 3, 4). The investment required for digitization exceeds the resources of local stations, as profit margins in their cost structure average only 1.8%. For some, switching to digital signals could lead to closure (Respondent 2). Additionally, investment in equipment is minimal

and irregular, with some stations using technology over 20 years old, while only a few, such as HR Osijek, Laganini FM, and Radio Dunav, purchased new equipment in 2023. Investment in vehicles and facilities is similarly negligible, with only HR Osijek acquiring a new vehicle in 2022, indicating the absence of a strategic investment plan. Although reducing the digital divide should be a national priority, respondents express scepticism about the current framework for digitization. They argue that co-financing from the state or European Union is the only viable path to digitization, citing past failed initiatives like digitization vouchers, which excluded media from applying. As a result, local stations see continued reliance on FM as inevitable unless transitioning to digital becomes a legal mandate, accompanied by financial support. Despite these challenges, all local stations identify digitization as a long-term goal driven by current industry needs.

Impact of the shift to digital media on market competition, listenership, and advertising income

Changes in the media market have shifted advertising spending from traditional to digital media. While television remains the medium with the highest advertising revenue, the internet is seeing the fastest growth, with online advertising in Croatia increasing by 21% and reaching EUR 110 million in 2022 (HURA, 2023; IAB, 2023). Local radio stations confirm this trend, noting they cannot raise ad prices due to local businesses' reluctance, leading advertisers to favor cheaper social media options (Respondent 3).

Technological changes have also altered Croatian media consumption habits. In 2010, television was the most important news source, but by 2022, online media, including social networks, became the leading source for 87% of respondents (RIDNR, 2022). Radio is no longer a significant news source but remains the most trusted medium in Croatia (46%) and the EU (56%) (RIDNR, 2022). However, radio stations face challenges in attracting younger audiences, who prefer digital platforms like streaming and YouTube (Respondent 4). The majority of local radio audiences are middle-aged or older, and stations (60%) mainly offer local, regional, and national content (Respondent 3). Local radio stations in survey see digital radio as a way to offer everyone the same opportunities in terms of audibility and reach, which will make competition in the market and

in attracting listeners more balanced and from which local radio stations can also benefit.

Despite limited research on radio audiences, data shows a gradual decline in EU listenership, from 53% in 2011 to 46% in 2019 (Statista, 2020). Local Croatian radio stations typically have weekly audiences of less than 50,000, though some compete with national stations in larger regions (Riportal.net, 2023).[87] The top 12 most-listened-to stations in 2022 included five local stations from major cities (DeFacto production, 2023).[88]

Considering the local reach and especially the older listeners, most of whom are not able to follow a fully digitized radio program that requires adapted technical equipment and an internet connection (e.g. for listening in the car), better accessibility and improved competitiveness should entail major changes to the program that require financial resources. Especially considering that driving is the most common situation for consuming radio content (Edison Research 2019a, AEM 2015a), and according to data from Richter (2020), drivers mostly use traditional FM (52%) and online to access radio programs in real time (12%), while 15% have their own sources saved as playlists in smartphones or on USB.

Local radio stations struggle with digitization due to limited financial resources. The transition to digital technology was expected to improve creative capacities and strengthen programming, but in Croatia, it has led to mergers and reduced content quality (Mučalo, 2020). A survey showed that only 50% of local stations use news-sharing platforms, citing a lack of human and technological resources, as well as financial constraints, as the main barriers. Expensive platforms, such as the Croatian News Agency, also lack sufficient local content.

Examples and data illustrating the decline in traditional media formats

The Croatian radio landscape experienced significant growth between 1995 and 2005, with the number of private radio stations increasing from 78 in 1995 to 136 in 2005 due to frequent broadcasting concession tenders (Mučalo, 2000). However, over the next decade, the number of stations

87 In the Istria region, for example, a local radio station with an average daily audience of 22,000, i.e. a reach of slightly less than 30,000, is in first place (Riportal.net, 2023).

88 De Facto radio listener survey for 2022, in which 5 local radio stations with concessions for the greater area and the districts of the major Croatian cities (Zagreb, Split) were among the top 12 most listened to radio stations at national level.

remained relatively stable, with 136 stations in 2015 (Đukić and Levak, 2018), 143 in 2021, and 155 in 2023. Currently, there is no mandatory digital platform for radio stations in Croatia, and participation in DAB+ remains optional, with limited interest from local radio stations due to high infrastructure costs from the national provider, Odašiljači i veze.

In contrast, the number of e-radio stations, which operate exclusively online, has grown rapidly, from 17 in 2020 to 40 in 2021 (Šulentić, 2022). E-radio is cheaper to establish and operate than traditional FM stations, and many local radio stations are adopting digital solutions such as live streaming via websites and mobile apps. Despite the growing presence of internet radio, critics argue that it is simply an extension of traditional radio, not a new format (Mučalo, 2010).

To adapt to changing audience preferences, especially younger listeners who increasingly turn to national stations like Otvoreni and Narodni radio, local stations are investing in editorial changes and utilizing social media (Respondent 4). Research shows that 90% of local stations use platforms like Facebook, Instagram, and their own websites for promotion. This aligns with findings by Bilić *et al.* (2022) on the dominance of Facebook and Google in Croatia's digital advertising market. According to the survey respondents, radio will continue to be predominantly consumed in its traditional form by older audiences, while modernization through digitalization remains a long-term objective for all local radio stations.

Conclusion

In conclusion, the sustainability of local radio stations in Croatia faces numerous challenges, including financial constraints, limited human resources, and inadequate technological infrastructure. These barriers significantly affect their ability to adapt to changing media landscapes and digitalization trends. Despite these difficulties, the research provided valuable insights into the current state of local radio stations and highlighted the ongoing efforts toward modernization. However, certain limitations, such as the small sample size, response bias, and reliance on self-reported data, must be considered. These factors may have led to an incomplete representation of the challenges faced by local radio stations, as stations might have overstated their success.

For future research, it is recommended that a more extensive and in-depth study be conducted to offer a clearer and more precise understanding of the sustainability of local radio stations. This should involve a larger and more diverse sample of respondents, as well as the use of independent data sources to verify the accuracy of self-reported information. Additionally, further research should explore the role of digitalization, audience preferences, and market dynamics to develop strategies that support the long-term viability of local radio stations in an increasingly competitive and digital media environment.

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ODRŽIVOST HRVATSKIH LOKALNIH RADIJSKIH POSTAJA U SUVREMENOM MEDIJSKOM OKRUŽENJU

Sažetak

Iako pripada tradicionalnim medijima, koji bilježe uglavnom opadajuću publiku i popularnost u suvremenom medijskom okruženju, radio je u posljednjih nekoliko godina doživio uzlet. Postoji nekoliko razloga za to: za slušanje radija nije potrebna osnovna pismenost; praćenje radijskog sadržaja ne zahtijeva potpunu pažnju i koncentraciju; program je bogat zabavnim sadržajem (prvenstveno glazbom) i slično. Radio se također uspješno prilagodio novim medijskim trendovima, konvergirajući klasične radijske forme u nove, zanimljive mlađoj publici, poput streaminga i podcasta. Zbog toga danas radijske postaje igraju važnu ulogu u društvenim zajednicama, omogućujući pristup informacijama, zabavi, a ponekad i obrazovanju, što je posebno izraženo kod lokalnih radijskih postaja. Njihova zastupljenost u Hrvatskoj iznimno je velika – trenutno postoji gotovo 160 radijskih kanala, od kojih su gotovo 90 posto lokalne radijske postaje, prema njihovoj usmjerenosti i dosegu. Međutim, ove postaje često se suočavaju s izazovima u pogledu financijskih resursa, ljudskih kapaciteta i tehnološke infrastrukture. Cilj ovog rada je utvrditi održivost lokalnih radijskih postaja u novom medijskom okruženju te u kojoj se mjeri mogu prilagoditi trenutnoj situaciji i suvremenim medijskim trendovima. U tu svrhu provedeni su dubinski intervjui licem u lice i online anketni upitnik među radijskim profesionalcima – menadžerima, urednicima i novinarima nekoliko hrvatskih lokalnih radijskih postaja. Istraživanje se fokusiralo na tri glavne komponente: 1) Specifične prepreke s kojima se suočavaju lokalni/regionalni mediji; 2) Utjecaj prelaska na digitalne medije na tržišnu konkurenciju, publiku i prihode od oglašavanja; 3) Primjeri i podaci koji ilustriraju pad tradicionalnih medijskih formata. Glavni rezultati istraživanja, najbolje prakse i stečene spoznaje, kao i preporuke za poboljšanje rada lokalnih radijskih postaja, predstavljeni su u završnom dijelu rada.

Ključne riječi: digitalizacija, lokalne radijske postaje, medijsko okruženje, održivost, radio

Milica Jevtić[89]

COLLABORATIVE JOURNALISM IN POLARIZED MEDIA AGENDAS: CASE STUDY OF THE PANDORA PAPERS IN SERBIA[90]

Review Article
https://doi.org/1059014/PCPU4562

Abstract

Collaborative journalism is a key aspect of investigative reporting, enabling in-depth research through teams of journalists across countries. It allows local journalists, often facing economic and political pressures, to conduct thorough investigations that would be difficult to manage independently. However, in a polarized media environment, collaborative journalism often reflects the agendas of both sides of the media divide. This paper examines how the Pandora Papers (2021) became part of Serbia's polarized media agendas, focusing on the exposure of Serbian officials' offshore business activities through KRIK's investigative network. The analysis compares the perception of these findings in two opposing media outlets (anti-government N1 and pro-government Informer) as well as the public broadcaster RTS, revealing how the findings were interpreted to align with ideological stances. The results indicate that the findings of investigative journalists were interpreted in ways that aligned with the ideological matrices of one or the other side of the media divide.

Keywords: collaborative journalism, investigative journalism, KRIK, media polarization, Pandora papers

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90 The paper has been presented at the 6th International Scientific Conference European Realities – Sustainability held on 11th and 12th of April, 2024

Introduction

Major journalistic stories, those that have sparked significant events and inspired films such as *All the President's Men*, *Spotlight*, or *Good Night, and Good Luck*, are part of journalistic outputs from large media editorial teams willing to support the investigative process, fund the work of investigative teams, maintain confidentiality, and ultimately—protect their journalists. However, in an era where we talk about the crisis of journalism, even its demise (McChesney & Pickard, 2011; Zelizer, 2009), editorial teams are increasingly reluctant to allocate funds for such investigative stories, and often find themselves trapped in media consortiums whose market ownership interests define the only measure of journalism. In this context, the growing phenomenon of polarized media environments (Kulić, 2021), the global rise of populism (Noury & Roland, 2020), and the general global crisis of trust in the media (Kohring, 2019) must also be considered. In a polarized media environment, it is commonly believed that critical journalistic texts, even when of public interest, are segments of a "commissioned" narrative and orchestrated attacks on representatives of the opposing political agenda (Kulić, 2021). Simultaneously, in the era of populism, journalists are perceived as political opponents (Vranić & Kulić, 2021), within the current context of post-truth, an era marked by misinformation in which belief often trumps understanding (Carlson & Farhall, 2018).

In recent years, major editorial stories have been successfully replaced by large inter-editorial investigations, known as networked cross-border investigative journalism or collaborative journalism. This form of journalism is traditionally defined as editorial collaboration between media organizations, non-governmental and non-profit organizations, universities, and other participants working together to create stories that would be impossible to investigate otherwise (Alfter, 2016). These stories, however, are the products of strong editorial teams and quality journalists, as well as the strength of the established network that, in some way, protects each media organization individually. Some of the most notable such stories have included the Panama Papers, the FinCEN Files, the Paradise Papers, the Cartel Project, and others (Mesquita & Lima Santos, 2021; Abraham, 2020; Sambrook, 2018).

This paper will examine the role of collaborative journalism in a media-polarized environment, using Serbia as a case study, where two journalistic and ideological poles are in an irreconcilable antagonism. The paper aims to answer the question: How do pro-government and critically oriented media in Serbia treat findings related to public office holders in the country, which were uncovered by journalists through international investigative consortia? The analysis is based on the case study of the Pandora Papers from 2021, particularly the documents released through the international consortium by the Serbian investigative team KRIK. The paper will analyze how these documents were reported in October 2021 by the pro-government tabloid Informer, the critically oriented television N1, and the public service broadcaster Radio- Television of Serbia (RTS). The aim of this analysis is to demonstrate how these findings were used to reinforce media and political orientations and fulfill agendas on both sides of the media spectrum, as well as to examine how investigative journalists utilized the findings to support their own media agenda. This does not imply that these poles are equal—neither in terms of market reach, quality, nor position within Serbia's media landscape—but they are irreconcilably at odds, even to the point of attempting to delegitimize the opposing media pole (Kulić, 2021). The paper will first theoretically discuss the concept of collaborative journalism, then explore how such journalism operates in media-polarized societies, serving as a litmus test for detecting ideological matrices. This relationship will be further contextualized through the media landscape of Serbia, offering a framework for the case study that is the subject of the analysis. The analysis will provide a snapshot of the reporting by Informer, N1, and RTS during the given timeframe, and will also incorporate an in-depth interview with RTS journalist Anica Telesković, who, in her coverage of this topic—attempting to present both sides—became a target of media polarization, and later, a media witch-hunt from both sides of the media and

political spectrum.

Collaborative Journalism – Theoretical Framework

Collaborative journalism is not a new phenomenon, but in recent years it has taken a central role in the debate on how journalism drives societal

change at the local, regional, and global levels (Mesquita & Lima Santos, 2021). Authors Mesquita and Lima Santos have extensively studied collaborative journalism in Latin American countries, which are nationally diverse but share similarities in terms of media systems, making them suitable for analysis and the application of this type of journalism, which is significant for each country individually. They remind us that journalists have been collaborating for various reasons since the 19th century, but today in our seamlessly interconnected world "the alliances between different journalists were spurred on due to technological advances, which have facilitated the communication between them" (Mesquita & Lima Santos, 2021, p. 545)

Although collaborative journalism is not a new term, it is part of a broader array of "journalisms" that authors aim to either integrate into or separate from the traditional journalistic profession (Kulić, 2022). Historically, the first and most famous form of "collaboration" dates back to 1846, when five daily newspapers in New York joined forces to form the Associated Press (AP) agency, sharing the costs of covering the Mexican-American War (Hartstone, 2018). Collaboration is also a component in the definitions of civic and/or participatory journalism, depending on whether these terms are considered synonymous or distinct (Jevtić, 2017; Nip, 2006). However, collaborative journalism, as it is interpreted in this paper, does not refer to collaboration with citizens, but to collaboration among professional journalists.

This form of journalism is also rooted in Castells' concept of the "network society", particularly in the segment where its democratic potential is emphasized (Carlson & Farhall, 2018; Castells, 2013). Such journalism is particularly important when "ordinary" local journalism, due to its limitations, is insufficient or not possible. This means that stories uncovered by investigative journalists working together surpass the political and economic constraints imposed on local journalists. These constraints should not be confined solely to political pressures, in the sense that political pressures are the only factors that limit journalists from producing quality journalism or "true journalism". Corporate pressures, which demand journalism in the interest of the company, are equally present, where the "public interest" is aligned with the interests of the owners.

A prime example of collaborative journalism, in terms of its scale, is the Panama Papers. This project brought together 400 journalists from around the world, who synchronized and secretly searched 11.5 million files detailing the activities of various individuals and companies, mostly through "tax havens." The secrecy and information protection required in this project is not characteristic of journalists who seek to publish information first, but the close cooperation between journalists and editors on a global level, along with oversight to prevent any errors in the analysis, led to a new paradigm in which the Panama Papers created a global newsroom based on trust, rules, and the cooperation of several hundred journalists (Naskidashvilli, 2017). The outcome of such journalism was "government investigations in more than 80 countries around the world and help recover $1.2 billion in 22 countries". (ICIJ, 2016).

Collaborative Journalism in a Polarized Environment

Collaborative journalism acts as a countermeasure to the state of media polarization that is visibly present in both Western European countries and the countries of the Western Balkans. Media polarization is a condition that represents the most manifest form of social and political polarization, where the media take sides in political blocs and, within those parameters, report and perceive both themselves and the public interest. Collaborative journalism in local practice is carried out by investigative centers and media that are, by nature, critically oriented, as they focus on investigating corruption, misuse of funds, malfeasance, and the abuse of political and social power. "Critically oriented media" is the broadest term that encompasses this type of watchdog journalism. However, "critically oriented" media, when journalists are selective and uncritical of all political process participants, is often an insufficient term, and "oppositional media" may sometimes be a more accurate description.

Regarding the case of Serbia, which is the subject of this analysis, the media market is strongly polarized (Krstić, 2024; Kulić, 2021), with significant influence from the ruling Serbian Progressive Party in a large portion of the media – through five national television stations and much of the daily press (Milojević & Krstić, 2018). The state's influence is also visible through private TV channels on the state-owned cable operator Telekom,

as opposed to the critically oriented television stations of United Media Group (N1, Nova S) on the cable operator SBB. The latest media freedom index report placed Serbia at 98th place, noting that "although there is quality journalism in Serbia, awarded for its investigations into crime and corruption, it is caught between rampant fake news and propaganda" (RSF, 2024). In the years covered by the analysis in this paper, Serbia was ranked 93rd (in 2021, when the Pandora Papers revelations were made), and 56th (in 2016, linked to the Panama Papers revelations).

Analysis: The Pandora Papers and Their Media Representation

This analysis is based on a case study of the publication of the Pandora Papers in Serbian media from October 4th to 10th, 2021. The focus of the analysis is on the segment disseminated to the public by KRIK journalists (part of the international network of investigative journalists, ICIJ). Unlike the Panama Papers (2016), which were also published through the International Consortium of Investigative Journalists, but allowed journalists worldwide to independently search and analyze data via the publicly accessible Panamanian business registry, in the case of the Pandora Papers, KRIK journalists performed editorial selection, and independent verification was not equally feasible. Specifically, investigative journalists presented to the public the names of several (initially two political figures, followed by one connected to politics) out of 14 Serbian citizens who own companies and operate through offshore companies. The most important figure for the public was Serbian Finance Minister Siniša Mali, followed by Socialist Party of Serbia official Novica Tončev, with Nikola Petrović, the then- director of Elektromreža Srbije, also mentioned, as he was close to the political elite.

The analysis focuses on articles published in the daily newspaper *Informer*, television segments aired on RTS (including news reports, voiceovers, and TV packages), and the media representation of the case in the central evening news program *Dnevnik* at 7 PM on N1 television. The daily *Informer* is taken as a representative of pro-government media and the ruling political party, providing strong support to the ruling party, announcing government actions, and promoting state and/or party positions. N1, a

cable TV station, is considered the most critical of the ruling majority (i.e., the Serbian Progressive Party). It is a station broadcasted on the SBB cable network, meaning its reach is somewhat limited, but it plays a significant role in mobilizing opposition-oriented public opinion and politicians. The public service broadcaster was observed in its basic role as a professional service to the citizens, which is the criterion by which its professionalism was measured. However, European analyses, monitoring reports, and expert evaluations indicate significant influence from the ruling party on the public broadcaster's operations (SSM, 2023).

In this case study, the author will first focus on the content, presence, and focus of the presentation of the Pandora Papers findings, after which these findings will be compared and contextualized.

Analysis of N1's Coverage of the Pandora Papers

On the first day after the release of the Pandora Papers, N1 did not place the topic at the center of its *Dnevnik* (evening news), but it is important to note that the number of COVID-19 cases had significantly increased, which was a dominant topic on that day. However, in the following days, the Pandora Papers gradually took the spotlight. On October 6th, the first block of *Dnevnik* (8 minutes, roughly a third of the program) covered COVID-19, followed by information about the trial of Andrej Vučić (the brother of President Aleksandar Vučić). Only as the third segment did they air two investigative reports from KRIK journalists, totaling 8 minutes. The first report focused on Finance Minister Siniša Mali, while the second one was about Nikola Petrović, the director of a state-owned company.

The tone of the first segment and the anchor's introduction emphasizes the lack of response in Serbia to the Pandora Papers revelations: "In many countries, this triggers investigations, but not in Serbia; the prosecutor's office is silent, and President Aleksandar Vučić dismisses it as 'ordinary political attacks.'" This segment is highly opinionated, and the reporting deviates from presenting straightforward facts. The television package starts by stating: "After the documents revealed that Finance Minister Mali indeed owned 24 apartments in Bulgaria, the Prosecutor's Office, relevant institutions, and the minister should have reacted. This would show that we live in a state with the rule of law," which is the introductory statement

in the first off-screen narration. The report features five interviewees, four of whom argue that the prosecutor's office should react (drawing examples from Serbia and Montenegro), while one quote from President Vučić, taken from TV Pink, dismisses the matter as "political attacks."

However, despite the interview with a KRIK journalist, the report fails to provide specific details from the Pandora Papers.

In the second report, the journalists focus on Nikola Petrović, who, while serving as head of a state-owned company, owned an offshore company that he failed to report to the Anti- Corruption Agency—a breach of the law that could result in imprisonment. This segment also lacks factual precision and relies on analogies and conclusions that do not necessarily follow from the evidence. Instead of providing solid proof, the package highlights a supposed connection to other figures, which, according to the journalists, implies suspicion about the process.

On October 7th, N1 dedicated the central news to the Pandora Papers. The first report covered Novica Tončev, an official from the Socialist Party of Serbia (SPS), who was implicated in the new revelations from the Papers. The second segment returned to Finance Minister Siniša Mali. In the Tončev segment, the journalists interviewed him, and he denied the allegations, claiming that while he had opened an account associated with the offshore company, he had not conducted any business through it and, therefore, had not reported it to the Anti-Corruption Agency. The rest of the report discussed individuals connected to Tončev, but without a clear explanation for why his actions constituted a legal violation. However, the segment hinted at the "what's behind the story" through a teaser for a special broadcast featuring an investigative journalist.

In the second segment, N1 shifted focus to the opposition, specifically a statement by Dragan Đilas, leader of the Party of Freedom and Justice (SSP), who criticized the pro- government media for focusing on him despite his name not appearing in the Pandora Papers. N1 devoted considerable airtime to Đilas's statement, which, in line with the polarized media landscape, was largely directed at the N1 audience and did not provide a balanced representation for audiences following pro-government media like *Informer* or TV Pink.

On October 8th, when *Informer* began its coverage of the so-called "Veritas Papers," N1 placed the Pandora Papers findings further down in its

agenda, after 7:30 minutes. The focus shifted to Prime Minister Ana Brnabić's refusal to hold Finance Minister Siniša Mali accountable, with Brnabić arguing that it was irrelevant what someone had accumulated before entering government service. The N1 reporter countered with facts, citing when Mali became a government official and his roles since then. The segment included analysis by Vuk Cvijić, a journalist-analyst specializing in crime and corruption, maintaining an analytical tone without jumping to conclusions. The rest of the broadcast briefly addressed the Pandora Papers through a case from Montenegro.

On October 9th and 10th, when *Informer* was intensively covering the "Veritas Papers," N1 shifted its focus away from the Pandora Papers. The central stories were instead about the Jovanjica case, where government and police officials were accused of involvement in organized crime. On October 10th, in a brief mention during a report about the Veritas Papers, the N1 broadcast noted that for Prime Minister Brnabić, "Veritas Papers from *Informer* are more important than the Pandora Papers, which involved 600 investigative journalists from around the world."

Overall, N1's coverage of the Pandora Papers was nuanced and focused on the revelations in a critical light, especially the involvement of high-ranking government officials. However, the network was also mindful of maintaining a balance by offering space for the opposition to respond. The coverage was more in-depth compared to other media outlets, offering investigative insights, but it was also selective in its approach, often contextualizing the revelations within the broader political landscape of Serbia.

Analysis of Informer Daily's Coverage of the Pandora Papers

On the first day following the release of the Pandora Papers, which highlighted that Finance Minister Siniša Mali owned 24 apartments in Bulgaria, *Informer* published a text directly denying the allegations. The tone of the article is evident in its front-page headline: "Vučić Has No Secret Accounts," with two subheadings: "That's Why They Recycle Old Lies About Siniša Mali" and "The Tycoon Ordered His People Back in May to Find Any Financial Scams They Could Link to the President, but After 5 Months, They Have Nothing." The article's main message is clear:

President Aleksandar Vučić, who is not mentioned in the Pandora Papers, does not possess any assets or companies in this context. The article also denies the allegations against Mali, while the burden of proof is shifted onto opposition leader Dragan Đilas, who is accused of instructing investigative journalists to publish the information. The tone of the article is opinionated, far beyond simple fact-based reporting. Journalists are called "Đilas's 'investigative' journalists," their articles labeled "old lies under the guise of Pandora Papers," and their claims are dismissed as "reheated scandals." The article also references an investigation by a Bulgarian prosecutor, claiming that Mali had submitted a report from a graphologist proving that the signature on Bulgarian documents was forged.

By October 8th, *Informer* shifted focus to Dragan Đilas. The headline on the front page reads: "Đilas Confessed: I Pay to Be Praised," accompanied by unusually long subheadings: "SSP Leader Confirmed That Through His Company Multikom, He Loans Millions to Journalists, Politicians, and Analysts," "'Veritas Papers' – *Informer* Will Publish Tomorrow Who, How, and How Much Dragan Đilas Pays," "How the Tycoon Loaned 201,504,000 Dinars to Those Who Pretend to Be Independent Analysts, Politicians, and Journalists," and "How He Directly Finances Hate Media." The article's focus is on how the opposition leader finances media outlets to publish information that could benefit him politically. The investigative approach is based on a question posed by an *Informer* journalist at a press conference regarding whether Đilas's company, Multikom, had loaned 201,540,000 dinars to his close associates and independent journalists. Đilas responded by stating: "I would need to look at the exact figures. Multikom has loaned money to many, and as far as I know, it always gets paid back." The *Informer* journalist then added that the newspaper could only have obtained these figures "illegally" from the Tax Administration. The focus of the article moves away from the Pandora Papers, instead centering on Đilas's alleged media financing activities, with Đilas presented in an extremely negative light. The ruling party is not mentioned in the text at all.

In the following issue (October 9–10), *Informer* dedicates significant space to discussing who and how much Dragan Đilas's company, Multikom, has paid to various individuals. The article claims these are "fake loans," as money has only been repaid in one instance, concluding that "obviously, Đilas uses these loans to control the media-political space in the country."

Without delving into the accuracy of the information or the journalists' right to investigate money flows and media financing—both from the government and opposition— *Informer* employs a familiar tabloid tactic: linking any critical media coverage to opposition or foreign instructions. This tactic shifts the focus away from the factual subject of the Pandora Papers to a different narrative that may not be false but certainly diverts attention from the main issue. This practice has been used in many other situations to frame the narrative in a way that aligns with the government's interests.

Analysis of RTS's Coverage of Pandora Papers

On October 4, in the evening news segment (Dnevnik 3), RTS (Radio Television of Serbia) briefly mentions the Pandora Papers, framing the issue as a global scandal affecting high-profile figures worldwide, including Serbian officials. The news anchor introduces the story by highlighting the names of global figures such as former British Prime Minister Tony Blair, the King of Jordan, and pop star Shakira, and then proceeds to mention Serbia.

The broadcast does not delve deeply into the issue, but simply reports that the Pandora Papers reveal that Finance Minister Siniša Mali allegedly owned 24 luxury apartments on the Bulgarian coast. Mali has repeatedly denied these claims, asserting that he owns only one apartment in Bulgaria. The report also mentions Nikola Petrović, former director of Serbia's state-owned Electric Power Company (Elektromreža Srbije), as a person connected to the papers. However, RTS avoids a more detailed discussion of these revelations, opting instead to place the Serbian officials within the broader context of the international figures involved, thus not addressing the matter in any depth.

On October 6, RTS briefly revisits the topic of the Pandora Papers in the context of the National Assembly's session. The news anchor notes that Minister Mali explained a set of financial laws, and while answering questions outside the chamber, addressed the Pandora Papers allegations. The segment includes a brief statement from Mali denying the claims made by the KRIK investigative network, which reported that Mali owned 24 apartments in Bulgaria. Mali responded, saying: "I would ask those

discussing this topic to stop lying, because what they are doing doesn't make any sense... I have one apartment that I duly reported, and for ten years I have been going there with my children for vacation."

Despite presenting the allegations, RTS does not engage deeply with the topic or offer a more in-depth investigation into the claims involving high-ranking Serbian officials. In the days following the initial coverage, the Pandora Papers were not mentioned in the central news programs. The only program where the issue received more extensive treatment was the show *Oko Magazin* (aired on RTS1 at 18:20), where a segment of 17 minutes explored the topic further.

The focus of the Oko magazin was on the selective publication of names, rather than following the example of WikiLeaks, which made all available data public. In this regard, the question arose as to why only three individuals from Serbia were publicly named in connection with the Pandora Papers, while fourteen individuals were reportedly implicated. This was explained by KRIK editor Stevan Dojčinović, who stated: 'We are journalists, WikiLeaks is not, we must be cautious with the data.' Simultaneously, Dojčinović emphasized that 'he does not know who the source of information for the consortium of journalists was, but the journalists received a portion of their data.' Critics, primarily Ivan Radosavljević, recognized for sharing views with the current authorities, criticized the existence of 'centers of power within the profession,' which are 'impossible to identify and determine who they work for.' They also noted the 'strange absence of American citizens' in all the leaked documents. The segment also featured statements from Siniša Mali and Prime Minister Ana Brnabić, who ironically 'congratulated KRIK journalists on their professionalism,' as they did not attend a press conference held by Minister Mali, where they could have posed questions to him and substantiated their investigation. KRIK representatives claim that they were unaware of the press conference and further argue that the assertion that the opposition is absent is incorrect, as they had already published financial reports and topics serving as a basis for criticizing the opposition on their website.

In an in-depth interview for this segment, journalist Anica Telesković, who had been investigating the topic for years, including as a journalist for *Politika*, discussed her work on the Panama Papers. This project, launched

by KRIK in collaboration with the International Consortium of Investigative Journalists, allowed Telesković to freely search Panama's public business registry by country of origin or company founder's name, and publish the full information. She cross-referenced data from both Serbian and Panamanian registries. Telesković emphasized that while offshore business is not illegal, its legitimacy is questionable, especially when figures like the Serbian Minister of Finance are implicated. She also noted that while the Pandora Papers marked the sixth leak of offshore documents by the American Consortium, data leaks from U.S. offshore zones are extremely rare.

> "Unlike WikiLeaks, which made all documents publicly available to everyone, the International Consortium of Investigative Journalists did not follow the same approach. KRIK operated in a similar manner. Furthermore, the data provided was selectively published, with the editorial team deciding to disclose the names of individuals deemed to be of public interest. Additionally, in one of the cases involving data leaks from offshore zones (the FinCEN leaks), KRIK published a response to a denial but did not publish the denial from the Mineko company. As a result, the Press Council ruled that KRIK violated the journalistic code of ethics in this specific case."

The preceding context clearly addresses the principles of journalistic work and raises the questions this paper examines. First and foremost, the publication of information and data of public interest, in a timely and comprehensive manner, is the essence of journalistic work and represents the 'elite' aspect of journalism. However, the perception of such information in an environment that has become extremely polarized introduces a new topic and a new phenomenon, where even elite investigative journalism can fall into the trap of instruction, external agendas, and misuse. Simultaneously, it highlights the perception of the 'other' in a media-polarized environment, where principles of work, safety, freedom, and detection of pressure are demanded only for journalists within one's own media spectrum, from both sides of the media divide.

Everything that happened at that time was pressure. From both sides of the media spectrum. This proves that pressures do not only come from the government or the opposition, but also from colleagues and social media. It started with one of the KRIK journalists greeting the RTS team

at the editorial door with the words, 'Welcome, we've been waiting for you for six years.' Then there was the case where another KRIK journalist, despite my refusal to take a photo for Twitter in the KRIK newsroom, as proposed by Dojčinović, secretly photographed me and the cameraman. She then posted this on Twitter, after which, before the segment aired, insults were directed at us, along with threats that the cameraman and I would end up like Milanović.[91] Furthermore, pro-government tabloids questioned RTS's right to invite Stevan Dojčinović to the show before the segment aired, while opposition media, after the segment was broadcast, questioned RTS's right to invite Ivan Radovanović, a columnist for *Informer*. Pressure came from both sides of the media spectrum, both before and after the segment. In the segment, I also cited an example of *Washington Post* journalists, who, while reporting on this topic, always mentioned that they found the name of Jeff Bezos, the owner of Amazon, in the offshore zone, who is also a co-owner of their company. Of course, journalists from United Media, while reporting on data that leaked from Luxembourg, did not mention that their co- owner was also conducting business through an offshore zone.'

Among the items that do not constitute the work of 'good journalism,' Telesković considers that she did not personally investigate the accusations related to the Minister of Finance. Instead, she merely relayed the claims from KRIK and his response, without providing clear evidence as to what exactly was true.

> "I didn't complete the investigative work properly because the pressures from both sides intensified before the segment aired. We aired the story quickly, sacrificing quality to avoid reputational damage. This segment highlighted media polarization: pro-government media saw it as targeting foreign intelligence, while opposition media viewed it as focusing on regime collaborators. Both sides misinterpreted the piece, but ultimately, both KRIK and *Informer*, along with Ivan Radovanović and Stevan Dojčinović, are part of Serbia's media landscape. It is my right to record both of them".

91 Former director of Radio Television of Serbia, Dragoljub Milanović, who was confronted by demonstrators during the protests on October 5, 2000, and who served a ten-year prison sentence for his responsibility in the deaths of 16 RTS workers during the NATO bombing on April 23, 1999 (editor's note).

Conclusion

Investigative stories produced through collaborative journalism offer particular value to journalists and countries where media outlets lack the resources to conduct such in-depth investigations on their own. However, in the current environment in Serbia, the analysis of reactions to investigative content reveals the extreme form of media polarization, where even "elite" journalism can fall into the trap of being manipulated by external instructions, agendas, and misuse.

Pro-government and critically-oriented media, which were subjects of analysis in this case, employed familiar media strategies to underscore their ideological positions or media agendas. The pro-government tabloids, following an established pattern, worked on creating parallel narratives (even through fabricated "Veritas" documents) and employed the principle of reverse burden of proof, targeting the opposition. They claimed that opposition members and their media either "ordered" the investigative documents or were involved in illegal activities themselves. On the other hand, the principle of the critically-oriented media was based on affirming the available documents without critically analyzing them or questioning their content and integrity, focusing only on the individuals implicated in the Pandora Papers, rather than on the broader context or the full scope of the documents.

Finally, the behavior of investigative journalists toward the one side attempting to present the views of all relevant parties in this matter reflects a serious breach of professional standards and contributes to creating an atmosphere for media witch-hunts from those who should be the least expected to engage in such practices. These are journalists who are frequently the targets of such witch-hunts orchestrated by the government.

In this way, any information entering the media spectrum is shaped to reinforce or support the existing media narratives. This leads to a societal awareness where events become mere tools to confirm media and political positions, often accompanied by journalistic bias. The divide between the polarized media factions deepens, dragging journalists and professional standards of journalism into the void, leaving room for professional corrections, but also for continued scholarly and expert analyses.

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KOLABORATIVNO NOVINARSTVO U RALJAMA MEDIJSKE POLARIZACIJE: SLUČAJ PANDORA PAPIRA U SRBIJI

Sažetak

Kolaborativno novinarstvo predstavlja ključan aspekt istraživačkog novinarstva, omogućujući dubinsko istraživanje kroz timove novinara diljem različitih zemalja. Ovaj model rada lokalnim novinarima, koji su često izloženi ekonomskim i političkim pritiscima, omogućuje provođenje temeljitih istraga koje bi bilo teško ostvariti samostalno. Međutim, u polariziranom medijskom okruženju, kolaborativno novinarstvo često reflektira agende obje strane medijskog spektra.

Ovaj rad analizira kako su Pandora Papiri (2021.) postali dio polariziranih medijskih agendi u Srbiji, s posebnim naglaskom na razotkrivanje offshore poslovnih aktivnosti srpskih dužnosnika putem istraživačke mreže KRIK-a. U analizi se uspoređuje percepcija tih otkrića u dva suprotstavljena medijska izvora – opozicijski nastrojenom N1 i provladinom Informeru, kao i u izvještavanju javnog servisa RTS-a. Cilj je otkriti na koji su način istraživački nalazi interpretirani kako bi se uskladili s ideološkim pozicijama različitih medijskih aktera.

Rezultati pokazuju da su otkrića istraživačkih novinara bila tumačena na načine koji odgovaraju ideološkim matricama jedne ili druge strane medijskog spektra.

Ključne riječi: kolaborativno novinarstvo, istraživačko novinarstvo, KRIK, medijska polarizacija, Pandora papiri

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TRANSFORMATIVE IMPACT: THE EVOLUTION OF RADIO PROFESSIONAL PROFILES IN THE ERA OF ARTIFICIAL INTELLIGENCE

Review Paper
https://doi.org/1059014/JRDC5405

Abstract

The use of artificial intelligence (AI) in the realm of radio has experienced significant growth, transforming the way radio content is produced, distributed, and consumed. This shift presents challenges and opportunities for professionals in the field, who must adapt to the convergence of human creativity and the innovative capabilities of AI.

The main objective of this research is to comprehensively analyze existing literature on artificial intelligence and professional profiles in radio. The aim is to identify emerging patterns, trends, and perspectives that shed light on how AI has influenced the definition of competencies and roles in this specific sector. The ultimate goal is to provide a deep understanding of the changes that AI has introduced to the radio workforce.

The methodology employed in this study is based on a content analysis of specialized literature in artificial intelligence and radio. A thorough review of research, academic articles, and relevant publications in specialized journals was conducted. Selection criteria were applied to ensure the inclusion of relevant and recent studies specifically addressing the interaction between AI and professional profiles in radio.

The results revealed substantial changes in radio professional profiles with the incorporation of AI. Technological skills were highlighted as fundamental, with a growing demand for knowledge in algorithms, data analysis, and the management of AI tools. Additionally, a trend towards the redefinition of roles was observed, freeing professionals from routine tasks to focus on creativity and innovation in radio production.

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While the results indicated clear benefits, they also pointed out challenges, such as the need to address ethical issues and ensure a smooth transition for workers into an increasingly digitized environment.

This study concludes with the recognition of the need for ongoing adaptation in radio professional profiles in response to the influence of artificial intelligence.

Keywords: AI Integration, artificial intelligence, professional profiles, radio, role

Introduction

The convergence between artificial intelligence (AI) and radio is leading to a revolution in how radio content is produced, distributed, and consumed. Thus, the symbiosis between technology and communication has generated a series of innovative applications that are transforming the landscape of the radio industry at a time that demands a clear decision between "adapt or perish," as pointed out by Galindo (2019).

One of the most prominent aspects of AI application, also in radio, is the automation of tasks such as search, classification, and information processing (Lemelshtrich, 2018). In this regard, algorithms and computer systems are playing an increasingly important role in the automated generation of content. From scriptwriting to music selection and real-time program production, AI is enabling greater efficiency and personalization in radio programming. Furthermore, AI is enhancing the user experience on radio through personalization. Recommendation algorithms help listeners discover new programs or content tailored to their interests, thereby increasing audience loyalty and engagement. Radio could become an even more interactive and participatory medium thanks to AI tools facilitating real-time feedback and audience involvement in content creation (Reuters Oxford Institute, 2022).

As a result, a series of challenges and opportunities arise for industry professionals. These professionals must find ways to effectively integrate AI into their creative process, leveraging these innovations to enrich content and improve their relationship with the audience. This requires the acquisition of new skills and technological resources, as AI is significantly transforming professional practices and writing processes (Crusafon, 2022).

However, these advancements are not without obstacles, as they raise concerns about the information conveyed (Fieiras-Ceide *et. al.*, 2023).

Additionally, it is vital for radio professionals to be aware of these risks and work to ensure the objectivity and diversity of radio programming.

Research Objectives

The main objective of this research is to comprehensively analyze the existing literature on artificial intelligence and professional profiles in radio. The ultimate goal is to provide a deep understanding of the changes that AI has introduced into the radio workforce. In addition to this objective, this research has the following specific aims:

- Explore the various applications of AI in the radio industry.
- Analyze the impact of AI on the radio production process and its influence on professional roles.
- Examine the ethical challenges associated with the use of AI in radio.

Methodology

The methodology employed in this study is based on a content analysis of specialized literature on artificial intelligence and radio. A systematic literature review (SLR) of academic articles and relevant publications in specialized journals was conducted. Systematic literature review is a type of secondary research that follows a structured methodology to identify, analyze, and interpr*et. al*l relevant information (Zhang and Alibabar, 2011). This method has been used in various fields, such as sociology (Kitchenham and Charters, 2007).

To conduct the systematic literature review, selection criteria were applied to ensure the inclusion of relevant and recent studies specifically addressing the interaction between AI, radio broadcasting, and professional profiles in radio. First, a search and collection of studies, articles, books, and other relevant resources on artificial intelligence and radio were carried out. Google Scholar, Scopus, and Web of Science databases were used. In this way, the most important documents related to the topic were identified. Once collected, the most relevant and updated documents for the research were selected. Thus, a review of abstracts, keywords, and

content was conducted to determine the suitability of each document. Subsequently, content analysis of the documents was carried out through detailed and systematic reading, identifying themes, trends, methodological approaches, key findings, and relevant information related to the study object. After completing the readings of the selected documents, the findings were interpreted, and the information was synthesized to draw significant conclusions.

Results

The Radio Industry Revolution: Automation, Production, and Personalization in the Digital Era

The technological revolution in the journalism industry has led to the implementation of artificial intelligence (AI) in various aspects of the communicative and informational process.

AI is transforming how news and content are produced, distributed, and consumed. This revolution is not confined solely to the realm of written or televised journalism but is also profoundly impacting the radio industry.

Efficiency in content production has been one of the primaries focuses of AI. The automation of information in radio has ushered in a new era in journalistic coverage, where algorithms and robots play an increasingly important role in news generation and distribution (Ufarte-Ruiz *et. al*., 2023; De Lara *et. al*., 2022). AI has become widespread in areas such as sports results, stock quotes, news bulletins (Crusafon, 2022), or international event coverage (Rojas, 2019).

However, it is not only used in newsrooms to automate and expedite processes or in natural language processing to generate stories but also in content labeling, subtitle creation, subscription assistance, or interview transcription (Crusafon, 2022; Newman, 2022). This automation offers significant improvements in efficiency and productivity, especially in content generation. AP and Reuters agencies were pioneers in applying AI for automatic news writing (Rojas, 2019); and the BBC and The Guardian have utilized similar techniques to semi- automatically generate stories, enabling them to increase the speed and scope of their production (Bronwyn and Rhianne, 2019). The Washington Post began using Heliograf

to write around 300 short reports and alerts during the Rio Olympics in 2016 (Galindo, 2020). Other radio media are beginning to experiment with electronic editing assistants like Tansa and Grammarly to automate editing tasks, streamline editing processes, and improve consistency in labeling.

Another notable aspect of AI application in the radio industry is the creation of synthetic media, an innovative way to create digital content. These media, such as voice clones and voice skins, can generate audio, video, characters, and virtual environments through algorithms. Although still in an early stage of development, they are expected to play a fundamental role in future extended reality (XR) experiences, such as the Metaverse (Crusafon, 2022).

Furthermore, artificial intelligence technologies such as Machine Learning (ML), Deep Learning (DL), Natural Language Processing (NLP), and Natural Language Generation (NLG) have been integrated into all aspects of the radio industry in recent years. These tools are used to make production processes more efficient, such as automated summaries, voice text, and automated subtitles (Newman 2024). Another interesting utility employed in the radio medium is automatic transcriptions, which have become routine in newsrooms. Thus, Zetland, a Danish media outlet, has created a speech-to-text transcription tool focused on journalists, aimed at facilitating the transcription process for minority languages. The Finnish broadcaster Yle provides a service tailored to Ukrainian refugees, offering information that is automatically translated by artificial intelligence and then supervised by an expert in Ukrainian. But it's not the only translation into other languages that this media offers, as during the COVID-19 pandemic, it provided news in languages spoken in the Middle East and North Africa such as Arabic or Persian (Reuters Institute, 2023). The BBC has also delved into automatic language translation and improving voice synthesis technology to advance its Japanese video service, although currently live broadcasting is done manually.

Another artificial intelligence tool being applied in the radio field, anticipating significant changes in how news is produced and consumed, is ChatGPT (Reuters Institute, 2022).

ChatGPT belongs to 'generative AI', which allows the creation of all kinds of content (text, images, audio, videos, data, code, designs, simulations, etc.) with just a few brief instructions.

Interaction and Personalization in Radio: Innovative Strategies to Satisfy the Audience

Furthermore, AI is being employed to enhance audience interaction through chatbots, personalize or verify content, and automatically generate content from organized data (De Lara *et. al*., 2022; Fieiras Ceide *et. al*. 2022a). To improve listener satisfaction and maintain constant engagement with their audience, radio stations have begun to adopt strategies based on analyzing their listeners' behavior. This approach allows production teams and hosts to identify the topics that most interest their audience, thus adjusting their programming to meet those demands. Like other media, radio is harnessing the power of technology to better understand its audience. For example, some programs have implemented unsupervised machine learning algorithms to anticipate topics that will resonate most with listeners in the future. These tools help producers make informed decisions about the content they offer, thereby maximizing the impact of their broadcasts (Reuters Institute, 2023; Newman, 2023).

Additionally, new ways of interacting with the audience are being explored through the use of artificial intelligence. For example, Yle was one of the pioneers in experimenting with personalization through its news app (Fieiras-Ceide *et. al*. 2022b). Additionally, some stations are considering the implementation of personalized subscription systems offering extra content (Newman, 2020). This not only gives listeners the opportunity to directly support their favorite programs but can also help top programs increase their revenues.

On the other hand, AI is helping to personalize and deliver more effective content to increase audience engagement. One of these tools used by the media is Sophi, and along with others, they are successfully employed to automate the vast majority of web pages, resulting in a 17% increase in click-through rates (Reuters Institute, 2023). Additionally, these tools are also employed to manage social media posting and dissemination, determining the best time to post or crafting the most suitable headline (Fieiras-Ceide *et. al*., 2023; Newman, 2024).

Impact of AI on Professional Roles in Radio

Artificial intelligence (AI) is breaking new ground by evolving the roles of professionals in radio, expanding beyond the written format to on-demand audio and video. This advancement is transforming how the audience consumes information, offering flexibility and nonlinear access. Furthermore, this impacts the communication model by introducing new ways to interact with the audience and distribute content.

Thus, the role of different professions is affected by AI, and radio is no exception to this trend. While initially it may seem that AI could be used to drive further job cuts due to the automation of certain tasks, media executives are optimistic and believe it will benefit the profession (Newman, 2020). Thanks to automation, in the medium term, the creation of audio and video from a volume of data will be possible (De Lara *et. al*., 2022; Carvajal *et. al*., 2022; Fieiras Ceide *et. al*., 2022a). Indeed, roles in newsrooms are changing through the augmentation of current functions. In the same vein, Túñez-López *et. al*. (2021) note a shift in the journalist's role, with less emphasis on routine tasks replicable by machines and a greater focus on generating unique cognitive value for news production, moving away from routines or styles easily imitated by artificial intelligence. Despite concerns raised by automation in newsrooms, media outlets employ it due to its profitability and its ability to free up time for journalists (Rojas Torrijos, 2019; De Lara *et. al*., 2022). Likewise, AI has proven useful in tasks such as transcription and translation, but it is still unsatisfactory in story writing (Newman, 2020; Canavilhas, 2022). Therefore, it seems that AI does not imply the elimination of journalistic jobs but rather allows journalists to dedicate their time to researching and finding relevant stories for the audience, i.e., to be more efficient (De Lara *et. al*., 2022), while more routine tasks can be performed by algorithms and robots.

Similarly, there will be new tasks for professionals in existing roles and new workflows (Beckett, 2019). For this, professionals need to acquire technological skills, as well as an increasing demand for knowledge in algorithms, data analysis, and AI tool management. This implies a transformation in journalism's professional roles, demanding profiles such as impact editors, platform editors, competition analysts, or specialists in subscriber content, gender, or diversity (Crusafon, 2022).

Faced with such rapid transformations, we encounter an increase in uncertainty and concern in the ethical sphere of radio. There is concern among professionals that AI will lead to a significant increase in automated or semi-automated media in the coming years. Internationally, media outlets clearly differentiate between information crafted by artificial intelligence and that which is not. Thus, the English media The Times indicates whether its content is created, supervised, and distributed by humans or by robots. However, in Spain, media outlets produce automated news generation, but there is no evident differentiation when a news item has been created by machines (Túñez-López *et. al*., 2021). Therefore, it would be essential for Spanish media to ensure differentiation between content generated by AI and content generated by media professionals, especially in radio.

Although AI facilitates the creation of multimedia content, it is important that its implementation is carried out ethically and responsibly, ensuring that public trust in the medium is not compromised. That is, there should be no difficulty in distinguishing between the real and the fake, the truthful and the deceptive, or the manipulated. However, the growth of fake news driven by artificial intelligence is a matter of significant concern due to its significant impact, as occurred in the 2020 US elections. Therefore, it is evident that artificial intelligence entails a series of consequences that directly affect data protection, security, and democracy, and thus, it will be a matter of great relevance in the next decade (Newman, 2020).

AI could facilitate the creation of irrelevant and false content in the form of text, audio, and video, which could undermine professionals' trust by presenting misleading information under the guise of news. Therefore, it is necessary to address ethical issues and ensure a quality transition for media professionals towards an increasingly digitized environment.

Conclusions

The introduction of AI is radically transforming how content is produced, distributed, and consumed in radio. From task automation to semi-automated content generation, AI is enhancing efficiency and productivity at

all stages of the process. A wide range of applications are being employed to implement AI in radio, including automatic news generation, speech transcription, language translation, multimedia content creation, content personalization, and audience interaction management. This demonstrates the scope and versatility of AI in this field. These tools are already successfully used in various radio stations and media outlets for automatic news writing, speech transcription, language translation, and improving audience interaction through chatbots or personalized subscription systems.

All of this has transformed and is transforming the role of radio professionals, extending functions beyond traditionally assigned ones. This suggests that radio professionals must adapt to these new forms of content production and distribution. Among them, the way AI is changing how audiences consume content stands out, offering flexibility and nonlinear access to it. This indicates that radio professionals must consider how to adapt their production and distribution strategies to meet the new demands of the audience.

While AI can automate certain routine tasks in newsrooms and be useful in tasks such as transcription and translation, the role of the journalist is evolving towards generating unique cognitive value for news production. Therefore, radio professionals should focus on creative and analytical skills that cannot be easily replicated by AI.

Although it might initially seem that AI could lead to job cuts due to the automation of certain tasks, it seems more likely that AI is causing a shift in roles that can create new opportunities and ways of working. This suggests that radio professionals can coexist with AI, using its capabilities to complement and enhance their work rather than replacing it entirely.

Additionally, AI is generating a growing demand for new professional profiles linked to technological skills in radio professional roles, such as knowledge of algorithms, data analysis, and AI tool management. In this regard, media professionals must acquire technological skills to adapt to the changing demands of the job market.

In conclusion, the impact of AI on professional roles in radio is significant and is transforming how news is produced and distributed. However, it also presents new opportunities for radio professionals, if they are willing to adapt to the changing demands of the job market and acquire the necessary skills to work alongside AI.

Nevertheless, despite the numerous benefits that AI offers, it also poses challenges and ethical considerations, such as the need to ensure transparency in content generation, combat misinformation, and protect the privacy and security of audience data. Thus, ethics in radio media in the AI era is a crucial issue that requires careful attention and concrete actions from media outlets and professionals, as it is necessary to ensure transparency, integrity, and accountability in content production and distribution to preserve fundamental values.

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TRANSFORMATIVNI UTJECAJ: EVOLUCIJA PROFILA RADIJSKIH PROFESIONALACA U DOBU UMJETNE INTELIGENCIJE

Sažetak

Upotreba umjetne inteligencije (AI) u području radija doživjela je značajan rast, transformirajući način na koji se radijski sadržaj proizvodi, distribuira i konzumira. Ova promjena donosi izazove i prilike za profesionalce u tom području, koji se moraju prilagoditi konvergenciji ljudske kreativnosti i inovativnih sposobnosti umjetne inteligencije.

Glavni cilj ovog istraživanja je sveobuhvatno analizirati postojeću literaturu o umjetnoj inteligenciji i profesionalnim profilima u radiju. Cilj je identificirati nove obrasce, trendove i perspektive koji osvjetljavaju način na koji je AI utjecala na definiranje kompetencija i uloga u ovom specifičnom sektoru. Konačni cilj je pružiti duboko razumijevanje promjena koje je AI uvela u radnu snagu radija.

Metodologija korištena u ovom istraživanju temelji se na analizi sadržaja specijalizirane literature o umjetnoj inteligenciji i radiju. Proveden je temeljit pregled istraživanja, akademskih članaka i relevantnih publikacija u specijaliziranim časopisima. Primijenjeni su kriteriji odabira kako bi se osiguralo uključivanje relevantnih i novijih studija koje se posebno bave interakcijom između umjetne inteligencije i profesionalnih profila u radiju.

Rezultati su otkrili značajne promjene u profesionalnim profilima u radiju s uvođenjem AI-a. Tehnološke vještine istaknute su kao temeljne, uz sve veću potražnju za znanjem o algoritmima, analizi podataka i upravljanju AI alatima. Također, uočena je tendencija redefiniranja uloga, omogućujući profesionalcima oslobađanje od rutinskih zadataka kako bi se usredotočili na kreativnost i inovacije u radijskoj produkciji. Iako su rezultati ukazali na jasne prednosti, istaknuti su i izazovi, poput potrebe za rješavanjem etičkih pitanja i osiguravanja glatkog prijelaza radnika u sve digitaliziranije okruženje.

Studija zaključuje prepoznavanjem potrebe za kontinuiranom prilagodbom profesionalnih profila u radiju kao odgovor na utjecaj umjetne inteligencije.

Ključne riječi: integracija AI, umjetna inteligencija; profesionalni profili, radio, uloga

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MEDIA USE AND FEAR OF VICTIMIZATION – THE MEDIATING ROLES OF GENERALIZED TRUST AND BELIEFS IN A JUST WORLD[98]

Original Paper
https://doi.org/1059014/NRQH1245

Abstract

With the spread of Internet use, the digital environment has become an important factor affecting personal well-being. Cultivation media effects represent the congruence between characteristics of the „media worlds" and the worldviews of media consumers after prolonged media consumption. This research study aimed to determine whether Internet and television use are connected with the fear of victimization and the possible mediating mechanisms of this connection. The research sample consisted of 1.021 persons from an opt-in online sample of the general population of Croatia. Results of structural equation modelling analysis showed that the total amount of television use is connected with increased generalized trust in people and belief in a just world, consequently decreasing fear of victimization. On the contrary, the overall amount of Internet use is connected with decreased generalized trust and belief in a just world, and consequently increasing fear of victimization. The analysis of the consumption of crime news on television and the Internet revealed much less clear conclusions. Namely, the consumption of television crime news is related to increased belief in a just world, and consequently with decreased fear of victimization. However, the direct effect of watching crime news on television showed a reverse sign. Consequently, the total effect (encompassing factors other than just world beliefs) showed a positive sign, i.e. consumption of crime news on television increases fear of

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98 The paper was written as part of the project *Differences in the cultivation effect of old and new media*, which is carried out within the Center for Internet and Society, Faculty of Humanities and Social Sciences, Josip Juraj Strossmayer University of Osijek

victimization. When it comes to the Internet, neither the direct nor indirect effects of consuming crime news can be confirmed.

Keywords: cultivation effects, fear of victimization, institutional trust, just-world beliefs, media use

Introduction

With the spread of Internet use, the digital environment has become an important part of the social environment affecting people's well-being. The so-called Differential Susceptibility to Media Effects Model (DSMM) proposed by Valkenburg and Peter (2013) represents a general model that states that there are different groups of variables (dispositional, developmental, and social) that act as moderators and mediators when it comes to the influence of media use on media effects. As moderators, the variables produce varying effects among different people and social groups, while as mediators these variables lead to selective exposure, i.e. to the different amounts of media use. The DSMM model also includes response states (cognitive, emotional, and excitative), as well as the idea that media effects are transactional, i.e. that they reciprocally influence all previous stages in the model. When it comes to response states, the so-called cultivation theory (Gerbner et al., 1986) states that there is a congruence between specific characteristics of „media worlds" and worldviews of media consumers that happen after prolonged media consumption. Cultivation effects can be generally divided into the first order (estimates of probability of occurrence and prevalence) and the second order (judgments related to values, attitudes and beliefs) (Shrum, 2009). Even though the difference is not a clear-cut one, the first-order effects are a result of swift judgments coming from memory, while the second-order effects result from prolonged exposure to media contents which influence the general worldviews of the media consumers. Prolonged exposition to the negative contents can lead to the increased fear of victimization, that is, to the so-called Mean World Syndrome (Gerbner et al., 1980). In other words, a person exposed to information that implies that the world is a dangerous place full of untrustworthy people would probably have a heightened sense of possible victimization. However, Morgan and Shanahan (2010) rightfully argued that cultivation effects should be more pronounced concerning the general social reality perception, in comparison to the perception of personal

circumstances, attitudes, and emotions, which are probably more strongly rooted in personal experiences with no connections to the media. Additionally, the specific causal paths between media exposure and attitudes are not clear and cannot be easily proven. Van den Bulck (2004) distinguished between the cultivation hypothesis (watching television increases fear of crime), the mood management hypothesis (people who fear victimization watch television to cope with their problems, and the withdrawal hypothesis (people who are afraid of crime stay at home and consequently watch television more often). As Shrum (2009) noted, the confirmation of mediating mechanisms that rest on solid theoretical foundations can make less likely some threats, such as reverse causality and spurious relations, to the internal validity of the media effects findings, as well as address conflicting findings that can be often found in media effects research.

In addition to detecting possible mediating paths through which media content affects the feeling of victimization, it is also very important to distinguish between general and specific cultivation. Namely, the total consumption of media can have one, and the consumption of specific media content can have a completely different effect on the general image of the world, but also specific attitudes. In addition, it is very important to investigate the possible differences in the cultivation influence of "old" and "new" media, given that they differ significantly in terms of the (de)centralization of the content offered, i.e. in the stronger possibility of choosing one's content on new media.

Previous studies have shown that the connection between media consumption and specific media contents and the feeling of victimization is far from conclusive and that it depends on the media types and contents. Based on a sample of Canadian and American students, Kohm et al. (2012) found that relying on local television as a source of information about crime is associated with a stronger fear of crime, even after controlling for demographic characteristics and previous experience of victimization, but only when it comes to American students. Reliance on the Internet and print media as a source of information about crime is associated with less fear of crime. On the other hand, the total amount of use of any type of media was not associated with fear of crime. Näsi et al. (2021), in a study involving the Finnish general population, found that individuals who more frequently followed news about violent crime showed a greater fear of street crime, and this relationship existed for both

traditional and social media and after controlling for prior victimization experiences and interest in crime news. By using causal modeling, Van den Bulck (2004) found the most support for the cultivation hypothesis concerning the connection between media usage and fear of victimization. Similarly, Bryant, Carveth, and Brown (1981) showed that people exposed to heavier viewing of crime films reported a higher probability of being a victim of future violence. Through qualitative research, Silva and Guedes (2023) determined that sensationalism, the location of the reported crime, the realism of the news, and the proximity to the event are of great relevance for the developing fear of crime. The importance of proximity to the location of a criminal event in the development of fear of victimization has been established in previous studies. For instance, Eschholz et al. (2003) found that violent crimes, despite occurring less frequently, generated greater fear of victimization compared to crimes happening nationwide. This heightened fear was attributed to proximity and the realistic portrayal of events. Individuals can use local crime news as a reference point for understanding their environment (Yanich, 2001). Local crime news is often associated with higher levels of fear of crime among the local population compared to news from other areas (Eschholz et al., 2003; Silva & Guedes, 2023). Compared to other news, local news creates the most potent perception of risk, encourages individuals to adopt various safety measures, and increases fear of crime (Silva & Guedes, 2023). Moreover, people are not passive consumers of news but actively seek content that interests them (Nasi et al., 2021).

Today, many individuals access news through online platforms (Gottfried and Shearer, 2016). In addition to the freedom to select content of interest, users comment on and discuss news stories (Gottfried and Shearer, 2016; Mitchell et al., 2016), as well as read others' comments, creating opportunities for interaction and exchange of perspectives. In this way, users create their own personalized network for news and information, shaping their attitudes and beliefs differently compared to traditional news sources (Hermida et al., 2012). Furthermore, news on social media is characterized by individual differences in the motivation to engage with certain types of content. For instance, individuals motivated to read crime news are more likely to actively seek, find, and consume such content, as well as to engage more frequently in commenting and discussions. Given that different people encounter different types of content in varying amounts,

it can be assumed that this will have distinct effects on the levels of fear of victimization among readers (Intravia et al., 2017). Intravia et al. (2017), based on various measures of social media consumption, found a significant contribution to the increase in fear of victimization. However, none of the specific measures were independently linked to fear of victimization.

The impact of online crime news on fostering fear of victimization differs from the well- documented influence of traditional media, such as television and newspapers. This difference is partly due to people's growing awareness of fake news online. For example, Intravia et al. (2017) found that individuals are aware of false information on the internet. Similarly, Hollis et al. (2017) showed that when people seek crime information, they place greater trust in traditional media and official crime statistics than in social media. These insights suggest that, while the internet does provide crime-related information, its unreliability and the potential for misinformation mean that such news may not necessarily increase fear of victimization among users.

Hawkins and Pingree (1981) identified that exposure to television programming is associated with several cognitive factors contributing to fear of crime. These factors include an individual's perception that certain criminal acts could directly impact their life, making those who perceive crime as a severe threat more likely to experience heightened fear. Secondly, the "victim perception" factor indicates that viewers who believe they could become victims are more likely to develop a fear of victimization. Lastly, a perceived lack of control over crime correlates with an increased susceptibility to fear. Building on this framework, recent studies have examined the role of media in shaping these cognitive dimensions of fear in the context of both traditional and digital media. Exposure to traditional media, such as news and crime series, as well as crime-related videos on social media, has been positively associated with the development of fear of victimization. Awais et al. (2021) further investigated this phenomenon, confirming that the relationship between media crime reporting and fear of victimization is indeed mediated by these cognitive factors—perception of threat, perception of victimization, and perceived control over crime—thus extending Hawkins and Pingree's foundational insights into the modern media landscape.

Related to cognitive factors, Beliefs in a Just World (BJW) (Lerner, 1980) represent a cognitive bias since people tend to perceive the world as a safe place where everyone gets what they deserve. In its nature, it is almost the opposite of the Mean World Syndrome, which is positioned within the framework of cultivation theory. BJW has an adaptive value as it makes people feel less vulnerable by assuming that, since they have not done anything wrong, they do not deserve any negative consequences (Furman, 2003). To maintain such a view of the world, individuals are inclined to derogate crime victims, attributing part of the responsibility for the crimes (De Judicibus & McCabe, 2001). Hafer and Olson (1998) demonstrated that those who strongly believe in a just world perceive their own negative outcomes as less unjust. The foundation of this belief is the maintenance of a sense of control, which consequently reduces the fear of the world's unpredictability, including unpredictable and unjust crimes. BJW is a relatively stable characteristic of an individual, and research indicates clear individual differences. According to the Differential Susceptibility to Media Effects Model, it is dispositional factor that determine which media content we consume and how we react to it (thus, JWB also has a mediating role).

Over the past three decades, two aspects of Beliefs in a Just World have been distinguished: general (G- BJW) and personal (P- BJW) (Dalbert, 1999). General Beliefs in a Just World are conceptually like Lerner's earlier definitions, while Personal Beliefs in a Just World focus on assessing how just the world is for the individual. Appel (2008) highlights that BJW is cultivated by fictional programs that portray the world as a just place, often even more just than the real world. González-González & Igartua (2024) experimentally examined the effects of fictional portrayals of police effectiveness on perceived police efficiency, trust in democracy, political interests, and political optimism, with BJW (measured with one item, contextually in terms of general BJW) and narrative transportation serving as mediators. The data showed that watching the clip in which the police were effective increased BJW compared to when participants watched the ineffective police clip, supporting the cultivation BJW. While there are indications in fictional media content in support of the cultivation of BJW, research on the role of news-related media content is still lacking.

Generalized Trust in people is an individual characteristic where people believe in the benevolence of others (Welzel & Delhey, 2015). Delhey

& Newton (2003) examine different theoretical explanations for trust, dividing them into individual and societal theories. Individual theories, termed "personality theories" (e.g., Uslaner, 1999), suggest that trust (or lack thereof) develops through early experiences with close individuals. Another group of individual theories focuses on socio-economic deprivation, with socially deprived individuals being less likely to trust others. In contrast, societal theories emphasize the characteristics of the society in which the individual lives. Generally, when assessing generalized trust in people, there are differences in the scope of the group of people to whom the participant refers when answering such questions. Delhey et al. (2011) suggest that in wealthier countries, the group referred to by participants is broader. Although Social Identity Theory emphasizes the preference for in-group members over out-group members (Tajfel, 1970), some studies suggest a positive correlation between trust in in-group members and trust in out-group members (Bahry et al., 2005).

In this research, generalized trust will be treated as an individual characteristic, which, according to the Differential Susceptibility to Media Effects Model, will mediate the relationship between content consumption and individual reactions in terms of fear of victimization.

Research goals and hypotheses

Based on the presented theoretical framework and previous research, the research questions that are tested in this paper are as follows:

Research goals:

1. To determine whether there is a cultivation effect of television and the Internet when it comes to the fear of victimization.
2. To determine whether there is a general cultivation, a specific cultivation, or both.

Research hypotheses:

H1. There will be a general negative effect of television use on the feeling of victimization.

H1.1. Generalized trust will mediate the relationship between the amount of television use and the feeling of victimization.

H1.2. Belief in a Just World will mediate the relationship between the amount of television use and the feeling of victimization.

H2. There will be a general positive effect of Internet use on the feeling of victimization.

H2.1. Generalized trust will mediate the relationship between the amount of Internet use and the feeling of victimization.

H2.2. Belief in a Just World will mediate the relationship between the amount of Internet use and the feeling of victimization.

H3. There will be a specific negative effect of television use on the feeling of victimization.

H3.1. Generalized trust will mediate the relationship between the amount of television news about crime and the feeling of victimization.

H3.2. Belief in a Just World will mediate the relationship between the amount of television news about crime and the feeling of victimization.

H4. There will be a specific positive effect of Internet use on the feeling of victimization.

H4.1. Generalized trust will mediate the relationship between the amount of Internet news about crime and the feeling of victimization.

H4.2. Belief in a Just World will mediate the relationship between the amount of Internet news about crime and the feeling of victimization.

Methods and sample

Fear of victimization is measured with the scale employed in Hu et al. (2015), with the cognitive component referring to the participant's perception of the possibility of victimization. It was examined in such a way that the participants were asked to estimate the probability of becoming a victim of a specific criminal act: street robbery, fraud, physical assault/fight, theft, vulgarity on the street, and burglary. Responses were offered on an answering scale from one to five, with 1 indicating very likely and 5 indicating impossible.

Generalized trust implies a trusting relationship to known people and to people in general (to most people), on a scale ranging from 0 (I have no confidence at all) to 10 (I have complete confidence) (OECD, 2017).

The Beliefs in a Just Worlds was assessed using the Beliefs in a Just World scales (originally developed by Dalbert, Montada, and Schmidt, 1984; Dalbert, 1999; with a Croatian translation by Ćubela, 2002). The scales comprise two subscales: the General Beliefs in a Just Worlds subscale and the Personal Beliefs in a Just Worlds subscale, each containing six items. The General Beliefs in a Just Worlds subscale evaluates the belief that the world is generally fair, while the Personal Beliefs in a Just Worlds subscale focuses on participants' perceptions of fairness directed toward themselves. Responses were provided using a six-point Likert-type answering scale, ranging from 1 (strongly disagree) to 6 (strongly agree).

The total amount of television and Internet use was measured in hours in an average day, while the amount of crime news consumption was measured on a scale ranging from 1 (never) to 5 (very often). Gender (male/female) and age (in years) were used as control variables.

Table 1. Structural equations models

Model	Predictors	Mediator	Criterium variable	Control variables
1	General use of television and internet	Generalized trust	Fear of victimization	Gender, age
2	General use of television and internet	Belief in just world	Fear of victimization	Gender, age
3	Specific use of television and the internet (crime news)	Generalized trust	Fear of victimization	Gender, age
4	Specific use of television and the internet (crime news)	Belief in just world	Fear of victimization	Gender, age

Overall, the proposed hypotheses were tested using four models (table 1). The models differed according to whether variables measuring general or specific cultivation were used as predictors, or whether generalized trust or

general belief in a just world was used as a predictor. Gender and age were used as control variables in all four models.

An online opt-in sample (N = 1,021) of the Croatian population (+18) was used in the research, and the data were collected by a public opinion polling company in January 2023. The quotas used in the sample ensured that gender distribution and regional distribution were equal to the population distributions. As expected, when using online opt-in panels, higher-educated persons were somewhat over-represented in comparison to the general population of Croatia, given that in the research sample about 30.3% of the people in the sample obtained a university education, while in the general population, this share amounted to 24.1% (Croatian Bureau of Statistics, 2023).

The ethical approval was obtained from the Ethical Committee of the Faculty of Humanities and Social Sciences, Josip Juraj Strossmayer University of Osijek (No. 602-04/22-04/225; 2158-83-02-22-3; 28 December 2022).

Results

As noted before, in the first model, we tested whether generalized trust in people represented a mediator of the relationship between the total amount of television and internet use. The summary of the results is presented in Table 2.

When it comes to the general cultivation effect, there is no direct effect of television watching or amount of the Internet use on feelings of victimization. As for the indirect effect, generalized trust is a significant mediator in both cases, but in the opposite direction. Namely, television use is connected to higher generalized trust, and generalized trust is connected with lower feelings of victimization. On the other hand, Internet use is connected with lower generalized trust, thus increasing feelings of victimization. As for the control variables, female gender and younger age are associated with a stronger feeling of potential victimization.

The models with just-world belief as a mediator showed very similar results since the indirect effects of television use and Internet use through beliefs in a just world have the opposite direction in this case as well. Television

use increases belief in a just world, which decreases feelings of victimization, thus making the overall indirect effect negative (television watching decreases victimization feelings). On the contrary, Internet use decreases beliefs in a just world and consequently increases fears of victimization.

Table 2. Summary of the results – models 1 and 2 (unstandardized coefficients)

Relationships	Direct Effect	Indirect Effect	Confidence Interval	p-value	Conclusion
TV total -> Generalized Trust-> Fear of victimization	0.01	-0.004	-0.001 to -0.010	0.007	Full mediation
TV total -> Beliefs in a Just World-> Fear of victimization	0.01	-0.006	-0.001 to -0.015	0.036	Full mediation
Internet total -> Generalized Trust-> Fear of victimization	0.02	0.005	0,001 to 0.010	0.003	Full mediation
Internet total -> Beliefs in a Just World-> Fear of victimization	0.02	0.004	0.001 do 0.014	0.013	Full mediation

When it comes to the specific cultivation effects (models 3 and 4, table 3), there is a direct effect of television crime news on feelings of victimization (unstandardized 0.07, standardized 0.13, p = 0.00), wherein increased hours of crime news watching are connected with higher feelings of victimization. However, this influence is mediated through one of the proposed mediators – beliefs in a just world – but in the opposite direction. Therefore, in this case, we found a competitive mediation. In other words, watching the crime news on television leads to higher beliefs in a just world, and thus decreases victimization through this path, but it also increases fear of victimization through other paths, making the total effect positive. Regarding the Internet, neither direct effects (unstandardized 0.03, standardized 0.04, p = 0.84), nor indirect effects could be confirmed.

Table 3. Summary of the results – models 3 and 4 (unstandardized coefficients)

Relationships	Direct Effect	Indirect Effect	Confidence Interval (indirect)	p-value	Conclusion
TV -> Generalized Trust-> Fear of victimization	0.070**	0.001	-0.005 do 0.007	0.743	Direct effect, No mediation
TV -> Beliefs in a Just World-> Fear of victimization	0.070**	-0.008	-0.002 do -0.029	0.008	Partial mediation
Internet -> Generalized Trust-> Fear of victimization	0.031	0.000	-0.007 to 0.006	0.926	No direct effect, No mediation
Internet -> Beliefs in a Just World -> Fear of victimization	0.031	0.000	-0.007 do 0.009	0.995	No direct effect, No mediation

In Table 4, we can note that all the tested models showed acceptable fits with the data. Namely, we used three model fit indicators with the following cut-off values: CFI, TLI > 0.90 and RMSEA <0.06 (Hu and Bentler, 1999).

Table 4. Model fits

	CFI	TLI	RMSEA	90% CI lower	90% CI upper
Model 1	0.97	0.96	0.047	0.041	0.054
Model 2	0.97	0.96	0.045	0.040	0.050
Model 3	0.95	0.94	0.048	0.042	0.054
Model 4	0.96	0.94	0.049	0.043	0.055

Discussion

In this paper, based on the theoretical frameworks of the Differential Susceptibility to Media Effects Model (Valkenburg & Peter, 2013) and cultivation theory (Gerbner et al., 1986), we sought to examine whether cultivation effects from television and the internet exist on fear of crime/

victimization. Both general and specific cultivation effects were tested, as well as the potential mediating role of beliefs in a just world and generalized trust.

The data indicate that overall television and internet content consumption does not have a direct effect on fear of crime, but there are indirect cultivation effects through two individual cognitive characteristics of the participants—BJW and generalized trust. It's essential to consider the nature of the total media consumption variable used here, which was operationalized as the total number of hours of content consumed on television or the internet. Such a general measure provides no insight into the nature of the consumed content, i.e., how much of it implies that the world is a dangerous place. According to Gerbner et al. (1980), it is precisely this type of content that is critical for creating the Mean World Syndrome.

The data from this study showing that BJW and generalized trust mediate the relationship between media consumption and fear of crime can be meaningfully interpreted within the Differential Susceptibility to Media Effects Model (Valkenburg & Peter, 2013). Within the model, both BJW and generalized trust can be viewed as dispositional variables due to evidence of individual differences (Hafer & Olson, 1998; Uslaner, 1999; Delhey & Newton, 2003). According to DSMM assumptions, people with a stronger BJW are more likely to consume content that reinforces these beliefs, and a similar expectation can be made for individuals with higher generalized trust. However, both variables are fundamentally cognitive in nature and may also function as state-like responses to specific media content consumed. Appel (2008) and González-González & Igartua (2024), for instance, demonstrated that fictional content can influence BJW. In fact, the latter study found that fictional portrayals of police effectiveness could either increase or decrease BJW. In the DSMM, such primary cognitive reactions serve as mediators in the relationship between consumed media content and media effects. Our data support DSMM assumptions, indicating that individuals inclined toward BJW and generalized trust spent more time consuming television content, a more traditional medium that aligns with their initial dispositions, and these dispositions were strengthened through this consumed content (in the form of cognitive responses). Consequently, increased television viewing reduced participants' fear of victimization, through strengthening BJW and generalized trust. This aligns with Furman's (2003) claims about BJW's self- protective

function in enhancing one's sense of control over one's life (e.g., thinking that "the world is a fair place where good actions yield good outcomes, hence, I am less likely to fall victim to crime"). This also confirms the gate-keeping functions of the traditional media, such as television.

In contrast, we observed an opposite pattern with internet content consumption—higher internet consumption was associated with lower BJW and generalized trust, and consequently, with greater fear of crime. Despite today's flexibility in television content consumption, internet content can be far more tailored to our dispositions, with algorithms often offering content that aligns with these tendencies. For example, Molina and Sundar (2024) showed that distrust in people is associated with increased trust in AI. In this context, individual dispositional traits, supported by algorithms and content from others connected on social media, or by comments on shared content, can generate new (our own) internet content (Hermida et al., 2012). In turn, this content reinforces initial beliefs (e.g., Mean World Syndrome rather than BJW and generalized trust). Although not directly measured, our data suggest that participants dispositionally inclined toward BJW and generalized trust consumed more television content, while those with lower BJW and generalized trust were more inclined toward internet content.

The data regarding consumption of specific crime-related content on TV and the internet indicate that internet crime news consumption is not associated with increased fear of crime, either directly or through mediators. In contrast, greater consumption of television crime news directly increased fear of crime but also, through enhancing BJW, simultaneously reduced that fear. This suggests that BJW can, to some extent, function as a cognitive state that mitigates the cultivation effects of specific television content. Regarding internet content, it's possible that dispositional, developmental, and social variables had a stronger influence on the choice of how crime news is consumed via previously mentioned algorithms, making the measure of crime news following on the internet insufficiently sensitive for detecting specific cultivation effects.

This study has some limitations, as the intensity of overall and specific media consumption on both television and the internet was measured without examining how individuals choose and what type of content they follow. As Silva and Guedes (2023) have shown, the manner of presentation

or the spatial proximity of crime is important for crime fear. Therefore, future research should investigate who chooses which types of media content, as well as the emotional, cognitive, and behavioral reactions of the consumers and the media (including cultivation) effects. Longitudinal tracking of the effects of these media on all DSMM components and individual functioning would also be highly beneficial.

Conclusion

In this study, it was shown that there are indirect effects of both overall television viewing time and internet usage on fear of crime, mediated by Beliefs in a Just World (BJW) and generalized trust. However, these two mediators function differently for television and the internet – while more television viewing increases both BJW and generalized trust, which in turn reduces fear of crime, more time spent on the internet decreases both BJW and generalized trust and increases fear of crime. In this context, BJW and generalized trust are considered as cognitive responses to media content. These variables can also be viewed as dispositional determinants that, to a greater extent for the internet, shape the content consumed and the consequences it has on these cognitive reactions, as well as on more distal media effects such as fear of crime. Longitudinal research designs are needed to differentiate between these two models and explanations.

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KORIŠTENJE MEDIJA I STRAH OD VIKTIMIZACIJE – POSREDNIČKE ULOGE GENERALIZIRANOG POVJERENJA I VJEROVANJA U PRAVEDAN SVIJET

Sažetak

Širenjem korištenja interneta, digitalno okruženje postalo je važan čimbenik koji utječe na osobnu dobrobit. Medijski kultivacijski učinci predstavljaju podudarnost između karakteristika „medijskih svjetova" i svjetonazora medijskih konzumenata nakon dugotrajnog konzumiranja medija. Ovo istraživanje imalo je za cilj utvrditi jesu li korištenje interneta i televizije povezani sa strahom od viktimizacije te koji su mogući medijacijski mehanizmi te veze. istraživački uzorak sastojao se od 1.021 osoba iz opt-in online uzorka opće populacije Hrvatske. Rezultati SEM analize pokazali su da je ukupna količina upotrebe televizije povezana s povećanim generaliziranim povjerenjem u ljude i vjerom u pravedan svijet, a posljedično i smanjenjem straha od viktimizacije. S druge strane, ukupna količina upotrebe interneta povezana je sa smanjenim generaliziranim povjerenjem i vjerom u pravedan svijet, a posljedično i sve većim strahom od viktimizacije. Analiza konzumacije vijesti o krininalu na televiziji i internetu pokazala je mnogo manje jasne zaključke. Naime, konzumacija televizijskih kriminalističkih vijesti povezana je s povećanjem vjere u pravedan svijet, a posljedično i sa smanjenim strahom od viktimizacije. Međutim, izravni učinak gledanja kriminalističkih vijesti na televiziji imao je obrnut predznak. Posljedično, ukupni učinak pokazao je pozitivan predznak, odnosno konzumacija vijesti o kriminalu na televiziji povećava strah od viktimizacije. Kad je riječ o internetu, ne mogu se potvrditi niti izravni niti neizravni učinci konzumiranja vijesti o kriminalu. Sve u svemu, podaci sugeriraju da umjerenija ukupna upotreba interneta i manja izloženost određenim sadržajima na televiziji doprinose održivijem digitalnom okruženju.

Ključne riječi: kultivacija, povjerenje, strah od viktimizacije, uporaba medija, uvjerenja o pravednom svijetu

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ENVIRONMENTAL TOPICS IN GLOBALIZED CINEMA: SOCIAL MEANINGS IN *WALL-E, AVATAR AND INTERSTELLAR*

Original Paper
https://doi.org/1059014/OCFZ1613

Abstract

In globalized cinema, portrayals of polluted Earth and critical remarks associated with lack of people's environmental responsibility are rather scarce, but they do exist. The paper explains how and why such motifs are incorporated into mainstream film production. The main aim of the text is to identify key popular film stories able to offer spectacular as well as meaningful images of environmentalism and implicit critique of people's indifference toward protecting the nature. The paper works with the assumption that while most Hollywood feature films representing the so-called climate fiction tend to focus on natural disasters and grim images of the future that involve humankind struggling to survive, we are still able to identify a range of film projects which explore new variations of this topic and/or further develop the cinematic social meaning bound to the "man against the nature" trope. Three different popular feature films – WALL-E, Avatar, and Interstellar – are examined in more detail through discourse analysis. Our results suggest that some of the most popular feature-length films focused on environmental topics tend to offer pessimistic, dystopian visions of humankind's future and promote the strangely appealing idea of humans giving up on the nature they have destroyed and actually leaving the unhabitable Earth.

Key words: Avatar, climate fiction, environment, globalized cinema, Interstellar, WALL-E

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Introduction

Academic discussions on the ways in which nature and environmentalism are presented within globalized cinema necessarily have to address a number of issues. First of all, this particular topic and similar approaches to understanding social and cultural frameworks of contemporary fictional narrative cinema are largely overlooked by academics, especially when compared to substantial volume of scholarly discourses reflecting on mainstream cinema's ability to convey profoundly crafted messages about the power of love and other universal human values and interests (see, for example, Huntington, 2002), such as friendship, beauty, happy life, wealth, sex, and violence. Another issue worth mentioning, as O'Brien (2018) points out, is the fact that while experimental filmmaking and documentary cinema both have their respective traditions of scholarly research interested in environment-related motifs and topics, there is no clear line of thinking related to mainstream feature film's ability (and willingness) to represent environmental problems humanity has faced, is facing nowadays, and/or will face in the foreseeable future. As a result, approaches to discussing fictional narrative films that involve environmental themes are paradigmatically and methodologically diverse, typically associated with specific genres or national cinemas. We may also pay attention to environmental ethics communicated through film; Brereton (2016) explains that it allows us to look away from headline news and use mythic and allegorical storylines to safely, although only symbolically experience a variety of environmental problems.

This paper's purpose is to contribute to the evolving scholarly discourse which is centered on varying and ambiguous portrayals of environmental issues within globalized cinema. We define the term "globalized cinema" as the body of production processes, investments, personal relationships, creative approaches, thematic and formal elements, and specific feature films capable of attracting the attention of global movie audiences. These films are largely produced or co-produced by Hollywood studios or rather by their employees, subcontractors and representatives (Radošinská, Kvetanová and Rusňáková, 2020). As we assume, the visibility and general popularity of these motion pictures might help the motifs involving different aspects of environmentalism to gain prominence and wider recognition with hypermodern media culture.

According to Merriam-Webster, "environmentalism" is "a political and social movement focused on the preservation, restoration, and improvement of the natural environment" (Merriam-Webster, n.d.). This term unifies different approaches to studying and explaining environmentalism, which possess diverse levels of analytical strength and practicality, as explained by Sturgeon (2022). For example, we may differentiate between contemporary radical environmentalism (such as ecofeminism, etc.) and environmental justice advocacy. Our common responses to the key issue of global climate change differ as well; some are rather optimistic and utopian, other deeply pessimistic and dystopian. In globalized cinema, dystopian pessimism is largely prevalent, as noted below. O'Brien (2018) remarks that environmental themes are present in cinema more than ever before, also claiming that the relationship between film and the natural world is long and complex, and thus cannot be reduced to the most prominent problems such as climate change and pollution.

The paper does not aspire to function as a contribution to the contemporary ecocriticism, which we understand as a recognizable sub-branch of both literary and cultural studies that strives to define the relationship between literature (or, in our case, media content) and the natural environment, necessarily aiming to raise awareness of the need for concern and eventually action with regard to the environment (Buchanan, 2018). No critical analytical frameworks (such as phenomenology) are discussed, as we focus predominantly on the content of the mentioned and analyzed film works.

Theoretical Background

The first two decades of the 21st century have witnessed an explosion of films and video productions reflecting on environmental issues, as mentioned by Duvall (2017). The author also specifies the key themes appearing in this type of audiovisual content: climate change, peak oil, pollution, corporate control of food processing and management of water sources, social inequity, extinction of multiple animal species, general distrust in renewable energy technologies, etc. The rise of environmental motifs in terms of film production is marked by the involvement of environmental organizations, self-financed filmmakers and NGOs, but also Hollywood

majors and influential television networks. Moore (2017) suggests that the related themes are often linked to specific movie genres. For example, the commodification of the environment often occurs in family films, while natural disasters are inherently typical for eco- thrillers and catastrophic movies. Environmental dystopias are frequently communicated via Hollywood science-fiction, and resource scarcity may even appear in westerns. Superheroic narratives sometimes address these issues as well. Murray and Heumann (2022) even mention so-called eco-comedies as a genre able to depict society's problems and environmental crises in a humorous manner, providing a safe symbolic space within which we may laugh at ecological disasters.

Šašalová (2022) explains that this surge of attention toward environmental motifs is also obvious in terms of mainstream production of popular fiction (literature), films, TV dramas, and digital games. Our growing awareness of the need to reduce pollution, global warming, lack of clean water, unsustainable demographic indicators, and so on is entering the essential narrative structures to challenge the existing creative strategies; for instance, thanks to a new subgenre of climate fiction or cli-fi. Murray and Heumann (2009) explain that films widely regarded as "environmental" can attract the attention of the mainstream audiences, but typically only for a short time period, mentioning movies such as Al Gore's *An Inconvenient Truth* (2006) or *The 11th Hour* (2007) produced by Leonardo DiCaprio, which are driven by their producers' political influence or celebrity power, respectively. However, the authors also point out that when discussing fictional narrative cinema, we need to pay attention to the idea of a new, ecological type of hero. This eco-hero(ine) is portrayed as a savior; however, instead of saving the world, the character's main purpose is to overcome their deeply personal struggle, often by protecting someone important. This motif is present in movies such as *The Day after Tomorrow* (2004, directed by Roland Emmerich) or *Children of Men* (2006, directed by Alfonso Cuarón). The former story focuses on a father trying to save his son during the aftermath of a disastrous global event resulting in a new Ice Age, while the latter narrative involves a father figure as well, portraying a man helping a young pregnant girl who survives in a collapsing world in which people cannot procreate anymore.

Kaplan (2015) argues that movies which tend to depict futurist dystopian worlds (as imagined by their producers), and thus the consequences

of humankind's actions and mistakes in relation to the nature and environment, might be categorized as a new (sub)genre. The author calls this concept "pretrauma cinema", because its purpose is to offer their audiences a vision of what might eventually become everyone's harsh reality. These environmental dystopias exist to recognize audience fears associated with the degradation of the environment that has already begun, but also with the utter devastation anticipated in the future. As it seems, mainstream cinema often works with the unpleasant idea mentioned by Sturgeon (2022); that most dystopian environmental scenarios involve production of new fortress communities built to protect either elites or vigilante warlords and their private armies. These fortresses are typically isolated from those suffering outside who desperately need access to food, water, energy sources and/or medical care. For example, the movie *Mad Max 4: Fury Road* (2015, directed by George Miller) portrays a self-proclaimed warlord who restricts "his" people's freedom and access to water while exchanging milk and food for weapons and gasoline. He also sexually abuses young and beautiful girls (called "prized breeders") to produce healthier heirs. Another film to consider is Neill Blomkamp's *Elysium* (2013). The story depicts daily struggles of ordinary people barely surviving on Earth without any real medical care while the rich and powerful inhabit Elysium, a luxurious space station orbiting the planet which offers cutting- edge technologies and medical facilities. The role of "a warlord" is replaced by a ruthless woman managing the station and any access to its systems.

Other frequently used tropes are inexplainable mass suicides, criminal practices of pharmaceutical companies or other business subjects, and missions sheltering the remnants of human population after cataclysmic events. The notion of people committing mass suicides is present in *The Happening* (2008, directed by M. Night Shyamalan). The movie's storyline depicts people suddenly starting to take their own lives; their self-destructing behavior is seemingly caused by an airborne bio-terrorist attack based on spreading a dangerous neurotoxin. An obvious trait of ecocriticism can be seen in the critically acclaimed biographical drama *Erin Brockovich* (2000, directed by Steven Soderbergh), in which a young woman, who is an environmental activist and advocate, initiates a legal case against a major provider of natural gas and electricity due to the company's obvious responsibility for contamination of groundwater causing terminal illnesses such as cancer. A thematically similar plot is present in *The Constant*

Gardener (2005, directed by Fernando Meirelles). The film focuses on a married couple, a British diplomat Justin and his wife Tessa working for Amnesty International, during their stay in Nairobi, Kenya, specifically in the slums of Kibera. Tessa investigates local deaths and eventually links many of them to illegal trials of a new drug, Dypraxa. These tests are conducted by Kenyan-based company, which eventually has Tessa and some of her colleagues killed in order to destroy the damaging report mapping their activities. The movie is loosely based on real events that occurred in Nigeria. The motif of a group of last survivors is dominant in the science-fiction film *Snowpiercer* (2013, directed by Bong Joon-ho), in which a hi-tech train carries the people who survived a failed attempt to suppress global warming by the means of climate engineering. Instead, a Snowball Earth was created. However, the film's conclusion suggests that life outside the train still exists, even though the surviving species are not people, but rather animals.

According to Moore (2017), once producers choose environmental degradation as a topic, they must make delicate decisions regarding how to portray the process cinematically. However, the author critically points out that globalized cinema's desire to appeal to wide audiences constricts or flattens this otherwise controversial and multi-layered problem. Given that, many feature films focused on environmental motifs present simplistic solutions to complex issues in order to soothe the people's anxiety stemming from climate crisis and its obvious consequences.

As we believe, one of those simplified "ways out" is the idea that humans are not supposed to rally together and save the Earth;[103] instead, they are supposed to leave it and start over elsewhere. This premise is shared by all three feature films we discuss below – *WALL-E*, *Avatar*, and *Interstellar*.

Objective and Method

As noted above, the main objective of the paper is to identify key popular film stories able to offer spectacular as well as meaningful images

103 Note: We may mention an interesting exception, the movie Sunshine (2007, directed by Danny Boyle), in which a group of astronauts, scientists and technicians aboard a spaceship struggle to deliver their "payload", a massive thermonuclear device designed to "revive" the dying Sun. Their purpose is to save life on Earth and they are supposed to return if everything goes as planned. The so-called payload includes the planet's remaining energy resources, i.e., it is the last chance to save the humankind before the Sun loses its power and dies down.

of environmentalism and implicit critique of people's indifference toward protecting the nature. We focus on three popular and highly commercially successful feature-length films – *WALL-E* (2008, directed by Andrew Stanton), *Avatar* (2009, directed by James Cameron), and *Interstellar* (2014, directed by Christopher Nolan). Our ambition is to understand the ways in which the given fictional narratives address different environmental issues within their storylines representing a range of genre conventions typical for science-fiction. The main research question is posed as follows:

RQ: What kinds of environmental problems these movies reflect on, and which social meanings do they include?

In order to define social meanings present in *WALL-E*, *Avatar,* and *Interstellar*, we apply the principles of discourse analysis defined by Rose (2012), which means that we intend to place the discourse of visuals present in these films in their social and cultural context, in our case specifically in the context of environmental issues and the ways in which they are portrayed and reflected on. The term "social meaning" is inspired by Turner's (2006) introduction to film and its place within popular culture which emphasizes the medium's ability to offer narratives and characters the cinema audiences can easily identify with. Plencner (2008) claims that "social meanings" begin to exist when we interact with film narratives, and they are initiated by discourse (the way in which a movie plot is narrated) or created on basis on our identification with the film's protagonists. In other words, social meanings can be defined as criteria of mainstream film's popularity. Given that our paper reflects on cinematic portrayals of environmental themes, the crucial social meaning we deal with could be specified as the "man against the nature" trope.

Results Interpretation

WALL-E (2008)

The highly popular film story centered on WALL-E, a small robot developing a personality while trying to fulfil an impossible task, proves that environmental topics can also be present in an animated movie which is primarily aimed at children. At first sight, the film might be seen as an entertaining story about an insignificant, self-sustainable robot who tries to

clean the Earth flooded by garbage and toxic waste. However, the titular character also communicates the situational social meaning of romantic struggles, as most of WALL-E's actions are driven by his (at first comical and awkward) attempts to impress EVA, a much more progressive probe with obvious feminine characteristics. WALL-E's charming infatuation and efforts to attract EVA's attention also refer to the motivational social meaning of loneliness, desire and seeking true love.

Organized and encouraged by a massive corporation named Buy n Large, a multi-national shopping and technological conglomerate, humans left a long time ago to cruise the space inside a luxurious spaceship. Other, much bigger waste management robots have been dysfunctional for decades, even centuries, leaving WALL-E with an impossible task. There is no chance he will ever manage to clean up all this trash. However, the robot keeps trying, admiring ordinary things people threw away a long time ago and developing a peculiar, human-like personality during the process. The animated movie might be labeled as eco-comedy, even though it also includes elements of science-fiction.

Flaig (2016) explains that *WALL-E* functions as a humorous, yet convincing image of what may become of an increasingly rationalized, industrial world. The author also remarks that the film successfully humanizes a figure that represents perfected Fordism. WALL-E wanders a post- apocalyptic Earth devoid of human life. The titular character is modeled after legendary slapstick artists such as Charlie Chaplin, Buster Keaton and Harold Lloyd, dancing to songs from old musicals and admiring the most mundane objects people got rid of without thinking twice. In contrast, the film's humans do not have to work thanks to automation and robots immediately fulfilling their needs and wishes. The film thus offers a satirical reflection of post- Fordist notion of the "end of work" as well as a clear critique of virtual entertainment which is all around these people, distracting them and encouraging them to consume and enjoy life without any regrets or doubts. Shaw (2010) explains that the story depicts a toxic planet Earth that was abandoned due to an ecological disaster. Humanity is literally floating, not just inside a spaceship cruising the universe, but also throughout infinite modes of consumption, from levitating loungers to immediately available drinks and snacks. We might add that this journey across the space was first advertised as a "relaxing cruise", ideal vacation which was supposed to give waste management machinery enough

time and a chance to clean up the planet. And yet, no one really thinks about returning home; even the process of launching EVA probes that are supposed to scan the environment on Earth and its ability to sustain life again, is fully automated and people aboard are not aware something like that even exists. Given that, when EVA and WALL-E eventually deliver a small plant obtained on Earth aboard the spaceship, humans are surprised, even puzzled.

Thus, the story depicts an exaggerated, yet convincing portrayal of what has become of humans after they "temporarily" left their home planet. None of them were born on Earth and they spend every day having fun, relaxing, eating and drinking. They individually receive tailor-made, targeted "useful tips" or rather ads shared by Buy n Large, as the corporation also owns the spaceship named Axiom on board of which the humankind roams across the galaxy. These people are visualized as helpless, overweight, always bored and lazy, barely able to walk or even stand, fully dependent on the spaceship's automated services, just like small children who cannot survive without their parents who take care of them, shape their behavior, feed them and protect them. The Axiom's lethargic population is surprised to see WALL-E, a small robot delivering a living plant, something these spacers have never seen before, a proof that Earth is still inhabitable.

Although the people living on the Axiom were not born on Earth and they know nothing about their own history, culture and natural environment, they are eventually forced to return. The scene in which they stumble, looking around to see the amount of waste their ancestors left behind, is both strange and funny. On the one hand, these people know nothing about the nature, saying that they look forward to grow their own pizza plants. On the other hand, they do have robots, digital archives, and other necessary technologies and they are probably able to make the planet sustainable again, at least partly.

Avatar

The blockbuster movie *Avatar* is one of the most commercially successful Hollywood projects in history, as well as its recently released sequel, *Avatar: The Way of Water* (2022). The first film primarily tells a story about a physically disadvantaged soldier given a second chance, who eventually

decides to abandon his mission and live among natives inhabiting a planet named Pandora. However, this heroic story also communicates human indifference toward death and destruction happening on Pandora.

The colonizers are primarily interested in unobtanium, which is an extremely rare and thus highly valuable raw material that is otherwise unavailable. It is basically the only reason why they travel across the galaxy to Pandora and stay there; to mine and ship away as much unobtanium as possible. In the movie, Earth's military forces accompany a corporation responsible for mining unobtanium to make sure the process runs smoothly, i.e., without any interventions initiated by the Indigenous people, Na'vi. However, the previous attempts to "civilize" these "savages" through the Avatar program are rather unsuccessful, as it becomes clear that the richest sources of unobtanium are located beneath the most sacred places on the planet's surface, where the Na'vi gather to worship their deity.

The Na'vi tribe includes warriors and prophets portrayed as "noble savages". According to Krech (1999), "noble savages" represent a rational, moral savagery, being close to the nature. Bird (1996) also claims that such Indigenous people are physically and emotionally tied to their land, manifesting their spirituality, heroism and virtue.[104] However, their future is threatened by invaders and their tribes and communities tend to fall eventually. Fritz (2012) claims that the Na'vi in *Avatar* are depicted as "Ecological Indians", which means that they represent spiritual "noble savages" with deep understanding of their own lands and nature. However, they not only respect and cherish their sacred soil. They are also prepared to fiercely defend it against people from Earth – indifferent soldiers, highly efficient miners, and ruthless, cynical businessmen.

When attacked by humans, the Na'vi do not only face brutal violence and death. Their sacred tree is eventually destroyed as well. During the story, the giant "tree of souls" is defined as a living spirit which represents the Na'vi's goddess called Eywa. Eywa is perceived as the All- Mother, the Indigenous people's collective consciousness and the force balancing the nature on Pandora. This means that when the tree falls, hit by airstrikes, the Na'vi lose their Goddess, as well as a part of their history and shared mind, which causes both despair and great suffering. This is

104 Note: On the contrary, "ignoble savages" are often imagined as wild, almost inhuman beasts who often actively participate in bloodshed and cannibalism (Krech, 1999).

a clever way to present human greed and desire to get rich, regardless of anyone else's fascinating natural habitat, highly valued religion and cultural tradition.

Even though the film's message related to protecting the nature and eco-criticism is clear, Rupert (2020) shares several critical remarks. The author argues that the wilderness on Pandora filled with wild animals and various dangers is depicted as Eden, a mystically perfect, harmonic environment sustained thanks to an endless cycle of renewal provided by Eywa. This portrayal is rather sentimental and simplified; Eywa is a forest deity similar to our understanding of "Mother Nature". In *Avatar,* Eywa "activates" wild beasts living in the forest to disrupt mining operations or eliminate military vehicles and aircrafts. That is precisely why the author criticizes the film; in reality Mother Nature cannot defend itself against destroyers, miners, or polluters. In other words, there is no magical, spiritual solution to the problem of endangering the environment. On the other hand, humans forced to roam the wilderness, such as Jake Sully, the film's main protagonist (Sam Worthington) personalize the timeless struggle of man facing the nature and, at the same time, repeated encounters with irrational spiritual forces. The film thus utilizes the most essential social meaning related to the good vs. evil binarity, portraying the nature, forest, deity and spiritual life as good, and technology, machinery, weaponry, economy and prioritization of valuable elements as evil.

Interstellar

Another highly successful movie to mention is the science-fiction film *Interstellar*. Again, the aspect of space travel is present within the narrative, and quite prominently. However, this time humans try to "save" the Earth or rather people living on it by finding a new home somewhere else in outer space. While talking to the main protagonist named Cooper, Professor Brand, the character played by Michael Caine, repeatedly says that we are not meant to save the Earth; we are meant to leave it. He also claims that we have manufactured all the appliances, TVs and technologies possible, but we have also run out of food due to irreversible climate changes. It remains unclear why people are not able to grow any other crops than genetically modified corn, although a serious disease that has decimated almost all crops (called "the Blight") is briefly discussed on several occasions. The

movie thus offers a pessimistic vision of the humankind's future. Despite technological progress, our unlimited consumerism and the resulting climate changes have damaged the planet permanently and the environment has irretrievably changed.

The true range of environmental destruction is outlined through the main character, Cooper (Matthew McConaughey), and his family and homestead. Corn fields are the only crops left and they are often decimated by wildfires. The family's everyday struggles deeply humanize the problems all people seem to face. One of the film's most remarkable scenes involves a sad conclusion that it is much more important to work as a farmer than to pursue much more prestigious and lucrative career patterns. This representational social meaning refers to questioning the role and purpose of technologies in relation to ordinary life, seeing our inventions and technological achievements as interesting and important, yet unable to satisfy the most fundamental needs – to breathe clean air, drink fresh water and eat quality food. The air people breathe is badly polluted and sandstorms or small tornadoes happen on a daily basis. People are getting increasingly sick, especially suffering from various lung diseases. Eventually, Cooper's adult son and his own family fall ill as well. Besides many inspirational notions of life-saving science and the possibilities of exploring the universe and fully explaining laws of physics related to gravity, the film also portrays people giving up any hope they have had left and eventually finding refuge elsewhere in space.

Being depicted as a reluctant eco-hero, Cooper initially leaves his family to join a space mission dedicated to finding an inhabitable planet. He hopes that the spaceship's crew will return after several years, which would mean that he will see his children and loved ones again. This ties the character to the situational social meaning of being a father who acts and sacrifices his own future to save his children. However, Cooper later finds out that the crew's return is almost impossible to achieve and that he and his fellow astronauts, in fact, left everyone behind, without any assistance or hope. Gittell (2014) remarks that the film overly simplifies the hard, complex choice to be made toward a plain statement that mankind can either leave the planet for good, or it can stay here and die. However, as the author reminds, the choices we actually have to make (and will have to make) regarding climate change and the future of Earth are much more

complicated. This is why it is possible to say that the film does not function as a convincing climate-change parable.

Besides seeing the collapsing ecosystems on Earth, the audiences are also confronted with images of hostile natural environments on different planetary systems across the space, from wild expanses of water similar to tsunami to frozen wastelands. However, on Earth we do not see much besides Cooper's corn farm and other settlements around his hometown and Professor Brand's highly classified research lab where the most qualified people are trying to find a solution to a seemingly unsolvable problem. We might see an abandoned drone Cooper seizes and plans to utilize as progressive farming equipment. He speculates that the drone no one controls and/or pilots might be Indian. Nevertheless, we do not actually find out how much of Earth's surface can still sustain life and how people live in other parts of the world.

Conclusions

Garforth (2006) argues that the presence of environmental consciousness and ecopolitics within cinema is a relatively recent phenomenon, which further diversifies the field of film studies and the broader area of "green cultural studies". However, the contemporary situation suggests that the number of mainstream films communicating rather generalized, yet emotionally intense "green" messages is constantly growing. Future research should examine how these topics evolve within mainstream cinema and in which ways they merge with other social meanings. The necessity to expand the existing variations of social meaning based on the "man against the nature" trope in globalized filmmaking is growing urgent especially in relation to children and teenagers, i.e., the future generations that will one day assume the responsibility for climate changes and protection of the remaining natural resources. Another question we need to address is to find out how to produce commercially successful and globally popular feature films involving environmental messages, as mainstream film audiences are generally interested in different types of social meanings such as finding true love, seeking one's true purpose in life, or eliminating a dangerous enemy. However, the most appealing social meanings can be cleverly combined with images of environmentally responsible behavior expressed by lead or at least supporting characters trying to save their loved ones or confront those who devastate the nature.

To answer the posed research question, we may conclude that the three interpreted examples of feature-length films involving ecocriticism show us that environmental topics can be cleverly incorporated into mainstream movies aimed at diverse target groups. However, erudite and intelligent discussions on the nature and sustainability are not included too often within globalized cinema. As it seems, such topics usually provide the story with a necessary background or support the narrative to humanize and emotionally saturate films that can often be defined as science-fiction, maybe even climate fiction.

The motif of people leaving Earth occurs in all three films. They do so either to obtain rare and expensive resources, or to save what is left of humanity and prevent starvation, or to live a comfortable, indifferent life aboard a spaceship where all necessary assistance is provided by robots, and everything seems to be very clean and well-arranged. Pradsmadji and Imanjaya (2023) observe that humans inside the Axiom have become severely obese. In addition to microgravity and its consequences, robots provide them with anything they might crave and they do not have to work or do anything meaningful whatsoever. One of the most serious consequences of this decline seems to be the fact that every individual is trapped inside their own, perfectly engineered "bubble" of never-ending consumerism. Thus, people have stopped interacting with one another, as anyone can enjoy comfort and security without other person's help and approval, regardless of what kinds of activities are favored by their fellow "space travelers". This might be interpreted as extreme individualism and consumerism.

People of the future are often portrayed as cruel, cynical and greedy (*Avatar*), helpless, sick and skeptical regarding their future (*Interstellar*), or lazy, incapable, bored and overweight (*WALL- E*). On the other hand, these films, in spite of their flaws or questionable narrative elements, successfully contribute to the much needed society-wide discussions on how important is to respect the nature and its spiritual meaning, how hard it will be to face the consequences of climate change in the future, or how important and demanding it is to actually care about the environment.

Acknowledgement:

This paper was elaborated within the research project supported by Slovak Research and Development Agency (APVV) No. APVV-21-0115, titled

'Hypermodern Media Culture – Film and Television Production as Mirror of Sociocultural Phenomena of the 21st Century'.

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EKOLOŠKE TEME U GLOBALIZIRANOJ KINEMATOGRAFIJI: DRUŠTVENA ZNAČENJA U FILMOVIMA *WALL-E, AVATAR I INTERSTELLAR*

Sažetak

U globaliziranom kinematografskom pejzažu prikazi zagađene Zemlje i kritički osvrt na nedostatak ekološke odgovornosti među ljudima relativno su rijetki, ali ipak postoje. Ovaj rad analizira na koji način i iz kojih razloga takvi motivi bivaju uključeni u mainstream filmsku produkciju. Glavni cilj rada je identificirati ključne popularne filmske narative koji ne samo da nude spektakularne vizualne prikaze ekoloških tema, već i implicitnu kritiku ljudske ravnodušnosti prema zaštiti prirode.

Polazna pretpostavka istraživanja je da se većina holivudskih igranih filmova koji se bave tematikom klimatske fikcije (climate fiction) fokusira na prirodne katastrofe i mračne vizije budućnosti u kojima čovječanstvo pokušava preživjeti. Ipak, moguće je izdvojiti niz filmskih projekata koji istražuju nove varijacije ove teme i/ili dodatno razvijaju društveno značenje povezano s tropom "čovjek protiv prirode" u filmskom diskursu.

Tri različita popularna igrana filma – WALL-E, Avatar i Interstellar – analiziraju se detaljnije metodom diskurzivne analize. Rezultati istraživanja sugeriraju da najpoznatiji filmovi s ekološkim temama često nude pesimistične, distopijske vizije budućnosti čovječanstva, promovirajući intrigantnu ideju o ljudima koji napuštaju prirodu koju su uništili i odlaze sa Zemlje, čineći je nenastanjivom.

Ključne riječi: avatar, klimatska fikcija, okoliš, globalizirana kinematografija, Interstellar, WALL-E

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THE IMPACT OF DIGITAL GAMES ON ENVIRONMENTAL SUSTAINABILITY

Original Paper
https://doi.org/1059014/GFJN8035

Abstract

The research explores the influence of popular culture, with a specific focus on digital gaming, in the ongoing dialogue surrounding environmentalism and sustainability. This investigation delves into the representation of ecological themes within these games and their potential impact on public consciousness. The objective is to discern the extent to which these digital platforms shape collective attitudes regarding environmental responsibility. This detailed study seeks to unravel the complex relationship between digital gaming, corporate messaging, and the pursuit of environmental sustainability. It aims to shed light on the dynamic interplay between green policy-making, economic progress, and shifts in cultural norms. The literature review focuses mainly on naming the basic terms and principles of serious games and also on the effectiveness of these games in the area of communicating environmental issues. It is for this reason that we try to use the most up-to-date sources and studies. Anticipated outcomes of this study include a deeper comprehension of the intricate ties linking digital media, corporate strategies, and public viewpoints. This exploration will potentially foster a more sophisticated approach to addressing environmental concerns within both the corporate sphere and popular culture. The research methodically examines the strategies employed by three distinct video games and gamified mobile applications, each targeting a varied audience demographic. It highlights the differing methods employed in communicating sustainability themes to these groups, as well as the gamification elements utilized to engage and educate users.

Keywords: digital Games, educational games, environmental sustainability, game design, gamification.

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Introduction

Digital games have become powerful tools for tackling global challenges, including the climate crisis. Their interactive and engaging nature makes them particularly effective for educating audiences about environmental sustainability. Serious games, designed to combine learning with entertainment, play a significant role in this area by helping users develop skills and acquire knowledge in diverse fields, including education and culture (Din and Baig, 2023; Lima and Otero, 2024). A key element of their success lies in gamification, which uses game-like features to increase motivation and involvement in non-game contexts (Ivanyuk and Bondar, 2024). This approach transforms traditional learning methods, creating dynamic experiences that encourage problem-solving and active participation (Fiuza-Fernández et al., 2022).

Game-based learning, as part of gamification, uses multimedia tools, augmented reality, and interactive features to enhance the educational process. When applied to environmental topics, games effectively combine entertainment with education, helping players understand sustainability issues while exploring actionable solutions to complex ecological problems. These games encourage creativity, environmental awareness, and behavioral change while illustrating the interconnectedness of environmental, social, and economic systems (Boncu et al., 2022; Becklas and Bauman, 2024). However, challenges such as oversimplified concepts, limited accessibility, and a lack of real-world applicability highlight the need for ongoing improvements (Madani et al., 2017; De Salas et al., 2022). This study explores how environmental digital games can serve as impactful tools for education and sustainability, bridging the gap between knowledge and action in real-world contexts.

Current State of Knowledge

Due to the interactive, immersive and entertaining nature of digital games, many organisations use them as a tool to educate and protect the environment and to raise awareness of the problems our planet is facing as a result of the climate crisis. In this case, digital games use the help of gamification as one of the tools which communicate serious topics. We

can cover all these games by the name of serious games. The term is defined as simulation software aimed at teaching practical concepts in diverse fields such as health, education, and culture (Din and Baig, 2023) and many more. They serve dual purposes: providing entertainment while promoting learning and skill development (Lima and Otero, 2024). This is only possible thanks to gamification we have mentioned above and its positive effects on education outcomes. It is generally known that gamification involves integrating game mechanics into non-game contexts to enhance motivation, engagement, and performance (Ivanyuk and Bondar, 2024). Gamification also transforms traditional methods, notably in education, fostering interactive and enriching experiences (Christopoulos and Mystakidis, 2023). Whatsmore, it has been proven that gamification establishes clear objectives, offers feedback, and guides students in learning (Fiuza-Fernández *et. al.*, 2022). Within the concept of gamification, it is also necessary to explain the notion of game-based learning which are basically specific gamification tools used in education. Game-based learning utilizes tools like mobile apps, augmented reality, multimedia elements (audio, graphics, video, animation), and gamification features such as leaderboards and milestone trackers to enhance educational experiences. If we talk about serious games using gamification and game-based learning, which aim to educate, then these fall into the genre of educational games. The definition is very similar to serious games. Educational games are designed to facilitate learning by engaging learners in interactive experiences that enhance skills and knowledge across various subjects, promoting active participation and problem-solving (Hilliard and Kargbo, 2017). The preceding text characterizes games whose central theme is environmental issues. However, they must also meet other important parameters not only to be gamified. There have been a number of studies dedicated to the issue of ecology and preserving the environment using digital games so we can define them clearly. They try to engage players through interactive gameplay, stimulate creativity, promote pro-environmental knowledge, and encourage behavioral change while providing rewards for achieving sustainability-related tasks (Boncu *et. al.*, 2022). They also often feature exploration, slow-paced mechanics, and themes promoting sustainability (Larreina-Morales and Gunella, 2023). Digital games addressing environmental issues incorporate educational elements, suggest actionable solutions, and illustrate the interplay of environmental, social, and

economic sustainability, enhancing player understanding of climate challenges (Becklas and Bauman, 2024). They also engage learners emotionally, provide cognitive knowledge, allow testing of new behaviors, and demonstrate immediate consequences, facilitating effective attitudinal learning in Environmental Sustainability Education (Janakiraman, 2020). However, the research also found several shortcomings that educational games addressing sustainability issues have. Shortcomings include limited realism, potential oversimplification of complex issues, and insufficient engagement with real-world environmental challenges, which may hinder effective learning and behavior change (Madani *et. al.*, 2017). Another study identifies weaknesses in user feedback regarding the serious game's design and engagement, suggesting areas for improvement in future iterations to enhance environmental education effectiveness (Bauer and Weiss, 2023). Games about the environment often lack accessibility features, particularly for visual, hearing, and haptic stimuli, leading to reduced experiences or unplayability for players with disabilities (Larreina-Morales and Gunella, 2023). Systemic flaws in gameful interventions include inadequate theoretical justification for design choices, variability in evaluation approaches, and unclear evidence of long-term behavior change or effective outcomes (De Salas *et. al.*, 2022). Games may reinforce anthropocentric attitudes, leading to environmental exploitation, as players often separate ethical considerations from virtual interactions, undermining the potential for genuine pro- environmental behavior change (Ho *et. al.*, 2022). In the context of our topic, it is also important to think about the impact of playing digital games with environmental themes and whether their introduction and use is justified. Overall, environmental digital games promote dialogue and reflection on the social complexities of environmental challenges, making them a preferred educational tool over traditional methods. While changes in self-efficacy were limited, collective efficacy showed a slight increase, indicating that players recognized the importance of collaboration for achieving sustainability (Ouariachi Peralta *et. al.,* 2019). By simulating real-world situations, these games can effectively bridge the gap between theoretical knowledge and practical application, ultimately promoting greater awareness and proactive engagement (Santos et. al., 2018). Games addressing environmental issues, particularly through a problem- based learning model with gamification, enhance children's cognitive engagement and environmental awareness. They

facilitate active learning by allowing children to explore real- life environmental problems, such as plastic waste and river cleanliness, through interactive challenges and cooperative activities. This approach fosters emotional involvement, encourages teamwork, and promotes behavioral change regarding environmental stewardship. Ultimately, such games can significantly improve children's understanding of environmental issues and motivate them to participate in solutions within their communities (Syafi'udin and Kuswandi, 2020). Games addressing environmental issues also enhance more than ecology knowledge and they can support soft skills' development. Those games can reveal how strategic interactions can influence both individual behaviors and environmental states. They demonstrate that the dynamics of strategies and environmental feedbacks can lead to diverse outcomes, such as bistability, limit cycles, and dominance by specific strategies. The incentives for individuals to lead or follow changes, along with the relative speeds of environmental and strategic dynamics, significantly affect the stability of equilibria and the potential for sustainable practices. This framework enhances understanding of complex social-ecological systems and informs decision-making in fields like ecology and economics (Tilman *et. al.,* 2020). There have been several studies on the effectiveness of particular digital games about ecology. For example, by incorporating cooperative gameplay that requires players to control an animal and navigate environmental challenges, such games can enhance understanding of the impact of human behaviors on wildlife and encourage proactive measures to mitigate threats to biodiversity (Van Greevenbroek *et. al.*, 2020). The other game called "Virtual Energy Hero," can significantly enhance knowledge retention and awareness among players. Research indicates that serious games can be more effective than conventional training methods in improving understanding of sustainability topics. By utilizing immersive storytelling and gamification techniques, these games engage players emotionally, motivating them to recognize and act on environmental challenges. Furthermore, they encourage participation in community initiatives, fostering a sense of agency and responsibility towards sustainable practices within urban settings, ultimately contributing to the development of Smart Cities (West *et. al.,* 2019). On the other hand, Gamers4Nature+ project demonstrated that involving students in the creation of digital games fosters a deeper understanding of ecological themes. This engagement not only promotes environmental awareness but

also encourages the internalization of the importance of preserving nature and maintaining ecosystem balance. The project's outcomes suggest that such game-creation activities can effectively support educational stakeholders in developing impactful educational tools focused on sustainability (Beça and Aresta, 2022). Another similar project called RAISE – gamified learning environment, significantly enhance students' understanding and engagement with sustainability topics. By immersing students in realistic scenarios that reflect real-world environmental challenges, these games facilitate experiential learning and encourage proactive attitudes towards combating climate change. Preliminary feedback from students aged 10 to 15 indicates a positive reception, highlighting the educational impact and the potential for further enhancement in fostering environmental awareness and responsibility among the younger generation ((Minas *et. al.,* 2024). Games addressing environmental issues, such as the mobile game Save The Purple Frog, can significantly enhance learning outcomes, as evidenced by a strong effect size of 0.62 in a study involving UK and Indian participants. However, while these games can effectively improve knowledge about environmental topics, they do not necessarily lead to changes in behaviors or attitudes towards the environment. This highlights the potential of serious games as educational tools, while also indicating the need for further research into gameplay duration and styles to foster behavioral change (Thomas-Walters and Veríssimo, 2022). Games addressing environmental issues, such as the Virtual River Game, facilitate stakeholder participation and enhance social learning by providing a safe experimentation environment. They enable participants to collaboratively explore the complexities of environmental systems, leading to improved cognitive understanding of system functioning, intervention effects, and stakeholder dynamics. Additionally, these games promote relational learning by fostering insights into the perspectives of other participants. Overall, serious games serve as effective tools for engaging diverse stakeholders in environmental management and decision-making processes (Haan *et. al.,* 2020). Most studies reported significant improvements in knowledge and behavior after using these technologies, with some effects retained in follow-up measures. However, not all studies found a positive impact on attitudes, indicating variability in effectiveness. The most commonly targeted issues included energy efficiency and sustainable mobility, while interventions often focused on specific behaviors rather than

comprehensive approaches. Overall, these tools present a promising method for fostering environmental awareness and action (Boncu *et. al.,* 2022).

Methodology

This research employs a comparative qualitative methodology to evaluate the effectiveness of environmental education within three mobile games: *Defender of Nature* (2020) by Y-Group Games based in Bulgaria, *Trash Monsters* (2015) by Bunny & Gnome based in Germany, and *Garbage Gobblers* (2018) by Bored Monkey based in Slovakia. These games were chosen based on several criteria: they are all mobile based, freely available on Google Play, focus on key environmental issues (such as waste separation, recycling, and pollution management), and were released between 2015 and 2020, a period reflecting growing interest in sustainability and ecological awareness in mobile gaming.

The analysis was conducted through structured gameplay observation, in which gameplay features were categorized and recorded systematically to ensure consistency across all three games. The specific categories of analysis include:

1. *Thematic Depth and Environmental Engagement:* This category examines the environmental themes and narrative complexity of each game, particularly focusing on the breadth and nature of tasks related to waste management and pollution prevention.
2. *Gameplay Mechanics and Control Complexity:* This category assesses the control mechanisms within each game, such as tap-and-drag functions, speed adjustments, and strategic sorting mechanics, evaluating how these elements engage players with environmental issues.
3. *In-Game Aids and Environmental Prompts:* This category investigates the visual prompts, guidance tools, and feedback embedded in each game, considering how they assist players in understanding and engaging with environmental tasks.
4. *Environmental Complexity and Sustainability Themes:* This category focuses on the overall environmental scope of each game, assessing how it integrates a range of sustainability themes and provides players with a holistic view of ecological issues.

The study's focus on gameplay-based data collection allows for an in-depth comparison of each game's unique mechanics, themes, and player aids, revealing their impact on learning outcomes related to environmental sustainability. By selecting games from Bulgaria, Germany, and Slovakia, the analysis provides a cross-cultural perspective on mobile games addressing environmental issues, enabling insights into their global applicability as tools for corporate environmental education. The findings highlight each game's strengths in promoting waste management practices, ecological awareness, and corporate sustainability initiatives.

Findings

This part presents the findings from the analysis of three selected video games focused on environmental sustainability: *Defender of Nature*, *Trash Monsters*, and *Garbage Gobblers*. Each game is evaluated on its thematic depth, gameplay mechanics, control complexity, in- game aids, and its capacity to convey environmental messages effectively. These factors are analyzed to determine how each game might serve as a corporate tool for environmental education and training. By examining the varied approaches of each game, we uncover a spectrum of methods through which companies could engage employees in sustainability initiatives, ranging from basic awareness of waste sorting to comprehensive ecological conservation strategies.

Picture 1: Screenshots of Layout Left to Right – Defender of Nature, Trash Monsters, Garbage Gobblers
Source: Own Processing, 2024.

Thematic Depth and Environmental Engagement

The thematic complexity of the selected games varies significantly, reflecting different approaches to conveying sustainability concepts and addressing environmental issues. *Defender of Nature* stands out for its comprehensive portrayal of environmental themes. The game is set in a dual-world environment where players encounter different ecological challenges in both urban and natural settings. The upper world introduces urban spaces that require waste management, plant maintenance, and litter removal. Here, players are encouraged to engage with a broad array of sustainability tasks, such as using a garbage truck to empty waste bins, cleaning a littered playground, and restoring overgrown plants in a city park. In the lower world, players encounter a polluted river, a waste-sorting facility, and a wastewater treatment plant. These settings introduce players to water pollution control, waste sorting, and infrastructure maintenance, broadening their understanding of ecosystem interconnectedness and providing immersive experiences in ecological preservation.

For corporations looking to cultivate environmental awareness, *Defender of Nature* offers substantial depth, allowing employees to explore a variety of environmental practices within a single game environment. By involving players in multi-faceted activities across diverse settings, this game supports experiential learning, making it especially valuable for companies with a strong commitment to corporate social responsibility. Employees can benefit from understanding the interconnectedness of sustainability initiatives, as each task reinforces the impact of individual actions on broader environmental health.

In comparison, *Trash Monsters* presents a more focused but still engaging narrative centered on waste sorting and recycling. While it does not extend into broader ecosystem themes as *Defender of Nature* does, *Trash Monsters* compensates by offering two gameplay modes, Endless and Adventure, that allow different levels of player engagement. Endless mode is designed to introduce players to waste sorting directly, encouraging them to sort waste items quickly and accurately into color-coded bins. Adventure mode, however, enriches the experience by adding characters known as "monsters" who inhabit specific locations representing various aspects of waste management, such as a recycling factory, a composting swamp, and a paper recycling center. Each monster represents a different type of

waste management, guiding the player through tasks associated with recycling, composting, and incineration. This approach allows *Trash Monsters* to balance simplicity with depth, giving players insights into specialized waste management techniques without overwhelming them with multiple sustainability narratives.

Trash Monsters could be particularly beneficial for companies aiming to introduce targeted waste management training for employees. The creature-based sorting system offers an intuitive yet educational experience that emphasizes task-specific knowledge. By interacting with each monster's designated task, players are gradually familiarized with the different types of waste materials, enabling companies to use *Trash Monsters* as a structured tool for training employees in specialized waste sorting and recycling processes.

In contrast, *Garbage Gobblers* is the least complex of the three games, focusing solely on waste sorting without additional environmental themes. Unlike *Defender of Nature* or *Trash Monsters*, *Garbage Gobblers* employs a progressive level structure where players are required to sort waste for points across a series of increasingly challenging levels. While this simplicity might seem limiting, it serves a distinct purpose: introducing players to fundamental waste sorting concepts in a highly accessible manner. *Garbage Gobblers* employs a creature-based sorting system similar to *Trash Monsters* but lacks the narrative and thematic complexity of a multi-level environmental strategy. Each level in *Garbage Gobblers* focuses on accuracy and speed, reinforcing the player's waste sorting habits. This straightforward approach can be advantageous for corporations seeking to engage employees at a foundational level, such as those new to environmental education or those in need of basic training in waste sorting.

Gameplay Mechanics and Control Complexity

Gameplay mechanics and control systems play a pivotal role in shaping each game's educational potential. *Defender of Nature* employs a variety of control gestures, including tapping, swiping, and rotating, that correspond to specific environmental actions. For example, players tap on waste bins to empty them, swipe to navigate the town environment, and rotate valves in the wastewater treatment plant to stop leaks. By associating different

gestures with environmental tasks, *Defender of Nature* enhances player immersion, transforming each action into a meaningful ecological intervention. This hands-on approach makes the game particularly effective for corporations aiming to simulate real-world environmental practices in an interactive and engaging way.

In contrast, *Trash Monsters* employs a simpler control scheme focused primarily on drag-and- drop mechanics, but it introduces strategic elements that differentiate it from *Defender of Nature*. Players adjust conveyor belt speeds, use a trashdex, a sorting guide that provides information on different waste types, and summon a robotic dog to handle oversized waste. This added layer of control complexity not only heightens player engagement but also simulates the logistics of waste sorting in a more nuanced way. For corporations, *Trash Monsters* offers a middle ground between accessibility and complexity, making it a valuable tool for training employees in sorting practices that require a certain level of precision and strategic thinking.

Garbage Gobblers offers the simplest control scheme, relying solely on tap-and-drag mechanics to direct waste items to the correct monster. Its design minimizes control complexity, making it accessible for players with limited gaming experience. The simplicity of *Garbage Gobblers* aligns well with entry-level sustainability training objectives, allowing companies to introduce waste sorting concepts without requiring extensive player knowledge or skill.

By analyzing these control mechanisms, we observe that each game presents distinct levels of interaction complexity that cater to different training needs. *Defender of Nature* provides an immersive experience suitable for advanced training, while *Trash Monsters* offers a balance of simplicity and strategy that could suit intermediate-level training programs. *Garbage Gobblers*, with its straightforward controls, is ideally suited for basic environmental training, particularly for employees who may be less familiar with gaming.

In-Game Aids and Environmental Prompts

Each game incorporates unique in-game aids and visual prompts that guide players through tasks, creating learning experiences tailored to

different levels of environmental understanding. *Defender of Nature* uses visual cues such as hand icons and arrows to assist players, while also embedding environmental feedback, such as flowers blooming after watering, to indicate task completion. This reinforcement through visual indicators strengthens the player's connection to the ecological impact of their actions, fostering a sense of accomplishment and environmental responsibility. In a corporate context, such cues can facilitate exploratory learning, allowing employees to engage with environmental tasks in a structured but non-penalizing environment, which can encourage continuous learning and improvement.

In contrast, *Trash Monsters* utilizes a structured aid system through its trashdex, a comprehensive tool that categorizes waste items and helps players understand the destination of each item. Additionally, the game's scoreboard penalizes incorrect sorting by deducting points, adding a layer of accountability that encourages players to carefully consider their actions. This penalty system enhances the educational value of *Trash Monsters* by simulating the consequences of improper waste management, a concept highly applicable to corporate training. By encouraging players to make accurate decisions, *Trash Monsters* can help reinforce the importance of proper waste handling, aligning with corporate goals of reducing waste and promoting efficient resource management.

Garbage Gobblers, by contrast, simplifies guidance by displaying icons above each monster to indicate the type of waste it consumes. Without penalties for mistakes, *Garbage Gobblers* creates a low-stakes environment suitable for introductory training. While this approach reduces the educational impact compared to the other two games, it can be useful in easing employees into the basics of waste sorting without the pressure of penalties. For corporations introducing waste sorting for the first time, *Garbage Gobblers* provides a non-intimidating entry point that can build confidence in new environmental concepts.

These differing levels of in-game assistance reveal how each game tailors its guidance to match its educational objectives. *Defender of Nature* encourages independent exploration, suitable for advanced training; *Trash Monsters* fosters responsibility through structured guidance, ideal for reinforcing specific waste management skills; and *Garbage Gobblers* offers gentle support, ideal for beginners who require foundational training.

Environmental Complexity and Sustainability Themes

The environmental scope and complexity of each game offer distinct educational advantages for corporate sustainability training. *Defender of Nature* integrates a wide array of sustainability activities, such as waste management, water conservation, and ecosystem restoration, within an immersive game world. This variety provides a holistic view of environmental issues, making it ideal for companies committed to comprehensive sustainability programs. By exposing employees to multiple ecological themes, *Defender of Nature* fosters an awareness of how different sustainability practices contribute to broader environmental health, aligning with corporate efforts to promote ecological literacy among employees.

Trash Monsters focuses more narrowly on waste management but achieves educational depth by organizing tasks around waste-specific locations, each associated with a unique creature. This creature-based structure provides a memorable and engaging way for players to understand specialized waste management practices. For corporations that wish to implement waste reduction and sorting initiatives, *Trash Monsters* offers a structured approach that reinforces task-specific knowledge. The game's modular design allows for a more targeted training approach, making it an ideal choice for companies looking to train employees on specific waste streams, such as recycling or composting.

In contrast, *Garbage Gobblers* simplifies the environmental narrative, remaining focused solely on waste sorting. This closed-loop level structure reinforces sorting habits by encouraging players to assign waste to the correct creatures. Although *Garbage Gobblers* lacks the thematic complexity of the other two games, its simplified focus makes it suitable for companies aiming to raise basic awareness around waste sorting. By emphasizing accuracy and repetition, *Garbage Gobblers* builds foundational sorting skills without the need for complex narrative structures.

The varied thematic depth, control complexity, in-game guidance, and environmental narratives of these games reveal a range of opportunities for corporate training. *Defender of Nature* provides an expansive, exploratory experience suited to advanced sustainability programs, while *Trash Monsters* offers a focused, creature-driven approach that is ideal for task-specific waste management training. *Garbage Gobblers*, with its straightforward

gameplay, provides an accessible entry point for foundational environmental education. By aligning the selection of each game with specific corporate objectives, companies can engage employees in meaningful sustainability education, fostering environmental awareness and responsible behavior within the workplace.

Table 1: Findings Based on Game Categories

Category	Defender of Nature	Trash Monsters	Garbage Gobblers
Thematic Depth and Environmental Engagement	Dual-world, diverse tasks, pollution control, restoration.	Waste sorting, character-driven, recycling focus.	Simplistic, basic sorting, no narrative depth.
Gameplay Mechanics and Control Complexity	Tapping, swiping, rotating, immersive mechanics.	Drag-and-drop, conveyor belts, trashdex, penalties.	Tap-and-drag, beginner-friendly, minimal complexity.
In-Game Aids and Environmental Prompts	Visual cues, blooming flowers, reinforced actions.	Trashdex guidance, feedback, error penalties.	Icon above characters, no penalties, low-stress.
Environmental Complexity and Sustainability Themes	Interconnected systems, wide range, sustainability focus.	Task-specific, waste management, specialized themes.	Limited scope, foundation knowledge, narrow focus.

Source: Own Processing, 2024.

The table organizes the findings from the games *Defender of Nature*, *Trash Monsters*, and *Garbage Gobblers* into four key areas: thematic depth, gameplay mechanics, in-game aids, and environmental complexity, using concise keywords to capture their unique features. *Defender of Nature* stands out with its dual-world setting and diverse ecological tasks, while *Trash Monsters* offers a focused, character-driven narrative around recycling, and *Garbage Gobblers* takes a simpler approach with limited narrative depth. In terms of gameplay, *Defender of Nature* uses immersive gestures like tapping and swiping, *Trash Monsters* introduces drag-and-drop mechanics paired with strategic elements, and *Garbage Gobblers* opts for basic, beginner- friendly controls. Regarding in-game aids, *Defender of Nature* provides detailed visual feedback to reinforce actions, *Trash Monsters* offers structured guidance with error penalties, and *Garbage Gobblers* uses icons for prompts without penalties, creating a low-pressure learning environment. Lastly, in terms of environmental complexity, *Defender of Nature*

covers interconnected sustainability systems with a broad scope, *Trash Monsters* focuses on task- specific waste management, and *Garbage Gobblers* limits itself to foundational knowledge.

Conclusion

In conclusion, digital games addressing environmental issues, often categorized as serious games, demonstrate significant potential in fostering environmental awareness, education, and behavior change. By combining immersive gameplay with educational content, these games effectively engage users with pressing environmental issues. The incorporation of gamification, integrating game mechanics like rewards, leaderboards, and interactive tasks helps to motivate players while enhancing learning outcomes, especially within corporate settings where environmental responsibility is increasingly prioritized.

This research highlights the impact of three distinct games: *Defender of Nature*, *Trash Monsters*, and *Garbage Gobblers*, which serve as valuable examples of environmental education tools. However, certain limitations must be noted. The study's narrow focus on these three games, while providing detailed insights, limits the generalizability of its findings across the broader genre of environmental games, which vary significantly in mechanics, narratives, and target demographics. Consequently, the conclusions drawn may not fully apply to games with different styles or cultural contexts. Additionally, this research uses a qualitative methodology, focusing on in-depth gameplay analysis but lacking quantitative measures of behavior change or knowledge retention. This limits our understanding of the long-term effectiveness of these games in promoting pro-environmental attitudes and behaviors.

Despite these constraints, the games examined present various approaches to environmental education, each catering to different training levels and objectives. *Defender of Nature* offers comprehensive experience, engaging players in multi-layered tasks that span urban and natural settings, making it suitable for advanced corporate training programs with a focus on ecological literacy. *Trash Monsters* provides a character-based sorting system and structured waste management tasks, serving as an effective tool for companies aiming to develop specialized waste handling skills among

employees. *Garbage Gobblers*, with its straightforward, penalty- free gameplay, offers a basic introduction to waste sorting concepts, making it ideal for corporations beginning their environmental awareness initiatives.

The impact of these games extends beyond mere awareness, as they foster collaborative attitudes and personal responsibility among players. However, limitations such as potential oversimplification of complex ecological issues and accessibility concerns may hinder the full effectiveness of such games. Moreover, without quantitative data on the games' impact on behavior change and knowledge retention, the long-term value of these games in promoting real-world pro-environmental behaviors remains uncertain.

Future research should aim to expand this analysis by including a wider array of games and incorporating longitudinal, quantitative studies to assess knowledge retention and behavior change more accurately. Despite these research limitations, digital environmental games hold promising potential as tools for corporate sustainability initiatives and as an engaging means of cultivating ecological responsibility and awareness. By selecting and aligning games to meet specific corporate training objectives, organizations can effectively foster environmental literacy and proactive attitudes within their workforce. Through simulating real-world sustainability challenges, these games can bridge the gap between theoretical understanding and practical application, demonstrating the broader value of gamified learning experiences in addressing complex global issues.

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Acknowledgement

The paper was elaborated thanks to support and funding provided by the Scientific Grant Agency of the Ministry of Education, Research, Development and Youth of the Slovak Republic and the Slovak Academy of Sciences, specifically thanks to financial resources available within the grant project VEGA No. 1/0489/23 entitled "I*nnovative Model of Monetization of Digital Games in the Sphere of Creative Industries*".

UTJECAJ DIGITALNIH IGARA NA EKOLOŠKU ODRŽIVOST

Sažetak

Ovo istraživanje proučava utjecaj popularne kulture, s posebnim naglaskom na digitalne igre, u okviru suvremenog dijaloga o ekologiji i održivosti. Analizira se prikaz ekoloških tema unutar digitalnih igara i njihov potencijalni utjecaj na javnu svijest. Cilj je istražiti u kojoj mjeri ove digitalne platforme oblikuju kolektivne stavove o ekološkoj odgovornosti.

Ova detaljna studija nastoji razjasniti složen odnos između digitalnog igranja, korporativnih poruka i težnje prema ekološkoj održivosti. Također, istraživanje naglašava dinamičnu povezanost između ekoloških politika, ekonomskog razvoja i promjena u kulturnim normama. Pregled literature fokusira se na definiranje osnovnih pojmova i principa ozbiljnih igara (serious games), kao i na njihovu učinkovitost u komunikaciji ekoloških problema. Iz tog razloga korišteni su najnoviji izvori i studije kako bi se osigurala relevantnost analize. Očekivani rezultati istraživanja uključuju dublje razumijevanje povezanosti između digitalnih medija, korporativnih strategija i stavova javnosti. Ova analiza mogla bi doprinijeti razvoju sofisticiranijih pristupa ekološkim pitanjima u korporativnom sektoru i popularnoj kulturi. Istraživanje sustavno analizira strategije triju različitih videoigara i igrificiranih mobilnih aplikacija, koje su usmjerene na različite demografske skupine. Poseban naglasak stavlja se na različite metode komunikacije tema održivosti, kao i na elemente igrifikacije koji se koriste za angažiranje i edukaciju korisnika.

Ključne riječi: digitalne igre, dizajn igara, edukativne igre, ekološka održivost, igrifikacija

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EMOTIONAL COMMUNICATION IN ENVIRONMENTAL CRISIS: FILOMENA CASE

Review Article
https://doi.org/1059014/HFSL3825

Abstract

The Filomena snow storm, which occurred between January 8 and 10 of 2021 in Spain, was an essay on how communication should be approached to facing an environmental disaster. The storm hit Madrid with special fury . The city was collapsed for 15 days. For two weeks prolonging the long confinement imposed as a result of Covid 19. Two crisis overlapped: the healthy and the produced by an atmospheric agent. However those circumstances did not lead on a political crisis. The alliance between local authorities and media favored a type of communication that empathized with the citizens. The main objective of this article has been to analyze the causes that have made Filomena an atypical crisis that has prevented the fall of the local government. The methodology applied has focused on studying how the media transmitted to citizens the narrative designed by the local government, based on messages, especially images, that generated empathy with the population. The main conclusion is that an empathetic communication campaign, based on visual resources, reduces social unrest and the risk of political crisis.

Keywords: communication, crisis, emotional, empathetic, environmental disaster

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Introduction

One of the first crisis manifestations is the increasing of information. The media increases the space dedicated to the treatment of the issue in question, but at the same time, the demand for information grows exponentially (Seeger, Sellnow and Ulmer, 2003). The crisis caused by Covid 19 has left abundant bibliography on the matter. Previous health crises such as avian flu or Ebola, served as a test to experiment and measure information demand (Thompson et al., 2017). But all magnitudes overflowed with the first global pandemic in history (Hollowood, Mostrous,2020). The Covid19 health crisis has served to analyze an extreme case of crisis communication and has alerted governments about what is emerging as another pandemic with equal or greater consequences: information overload with its derivative of infointoxication.

In times of crisis population demands information. and the increase of consumption feeds back into and state of anxiety (Thompson et al., 2017). This compulsion favors digital media since the content is constantly refreshed (PEW, 2014) as well as television. In fact, studies carried out in the first wave of Covid 19 showed that TV and digital had been the preferred media in terms of citizen trust (Casero-Ripollés, 2020). But apart from these professionalized channels, people seek direct and participatory experiences. Social networks, especially Twitter, (Gil de Zúñiga et al.,2017) meet the expectations of immediacy, personalization and participation. All of this coincides with a great disbelief in the media and institutions (Newman et al., 2020).

Covid 19 has brought to the fore the concept of emotion, an element that will need to be analyzed in more detail in the future. Although there is literature that supports its specific weight in the perception of crises. Álvarez (2009) encouraged audiences to listen to what they felt and take it into account when acting and communicating. Coombs (2007) takes this same line when he states that crises are what the public thinks about them and not so much the events themselves.

The leadership model affects people's emotions. It can attract them to collaborate with the instructions or orders requested of them or incite them to transgress them (Boin, 2007). In crisis situations, where the most common emotions arise: Fear and Sadness

(Díaz, Fernández and Rojano,2020), citizens need to feel that the leader actively participates in their situation (Desconfianza,2018). This kind of empathy translates into communication and determines the degree of acceptance or rejection of authority (Maggi,2012).

Emotional communication in Philomena

The crisis caused by the Filomena squall at the beginning of 2021 took place within another crisis whose proportions had not been seen throughout history. The heavy snowfall that fell over Spain between January 8 and 10 was mainly focused on Madrid. On January 9, the capital dawned white and collapsed. No one could leave the house without the risk of slipping on the snow, surface transport was impossible and the only way to move around was underground. The snowfall, initially greeted with rejoicing by the population, threatened to turn into a major political crisis as snow was still blocking the streets two weeks later.

Citizens, who had suffered successive confinements due to Covid 19 had not yet recovered from the restrictions. In this context, a snowfall, also historic, planned as a new lockdown in the mood of the citizens. However, the reaction of the population, at least in the first few days, was contrary to expectations. In fact, people welcomed the novelty of the snow with surprise and happiness. The white blanket brought images of freedom and childhood. This subjective component makes perceptions different (Coombs, 2007).

The local government adopted communication as a strategic tool to strengthen its leadership. If the buses were cornered on the sidewalks, the fire engines did not have enough chains, if the salt stockpile was scarce for the amount of snowfall, the local government opted for communication as a lifesaver to gain time and for the temperatures to melt the snow.

The reasons why the heavy snowfall did not lead to a political crisis, as usual, (Castells, 2016) that would have hit the local government, can be attributed to emotional motives. Emotional elements predominated over rational ones (Slovic and Burns 2012).

Filomena did not entail attrition for the mayor of Madrid, José Luis Martínez Almeida, member of conservative party (PP). On the contrary,

it reinforced his leadership. The way the mayor approached the situation with a committed and empathetic gesture facilitated the cooperation and patience of the population, according to Choi and Lin (2017), Kim and Cameron (2011) and Van der Meer et al. (2014).

It should be noted that two circumstances contributed to this positive balance of the local government: there was not a single death directly related to the snowfall and that the crisis was short in time, especially compared to the Covid 19 pandemic.

Citizens appreciated being taken into account in times of suffering. Feeling like protagonists or an active part in the experience (Wendling,2013) Mayor José Luis Martínez- Almeida's attitude of touring the neighborhoods, stepping in the snow, and personally supervising how the city was doing, contributed decisively to generate this feeling of empathy.

The mayor's trips to the neighborhoods were followed live by a legion of reporters and television cameras that broadcast the mayor's movements. As happened to so many neighbors, his car was trapped by the snow and the event produced one of the most iconic images of those days: the mayor pushing the car while snowflakes fell on his face. A behavior that deserved the recognition of the media, as published by the newspaper .

Although, in general, the media aired this empathetic facet of the mayor, there was no lack of criticism. The economic newspaper Cinco Días criticized the fact that the mobile application (Avisos Madrid) had not been used to warn the population of the forecast of the heavy snowfall.

Objectives

The general objective of this article is to unravel how the most important snowfall of the century, which collapsed the city for several weeks, avoided the risk of becoming a political crisis, seriously damaging the prestige of the local government. The study opens the door to future research on crisis management and communication.

As apecific objetives, we address the following: To find out how the communication strategy for the Filomena storm was addressed; To determine which elements of institutional communication contributed to the fact that the social perception of the collapse caused by the snowfall did not

have a response of disaffection towards the local government. Also analyze the degree of acceptance and dissemination by the media of official messages

Methodology

The study we are bringing is based on a triple hypothesis. On the one hand, we start from the premise that the social perception of a crisis determines the response of population to the measures adopted by the authorities. Likewise, we consider that the type of communication adopted by the authorities contributes to the population feeling cared for or forgotten. Finally, we assume that in times of crisis communication must be fast and visual. To do this, it is essential to produce striking images.

We have chosen a case study as our methodology. This is a research method that has a long history in the disciplines of sociology, anthropology, history, and psychology. The main purpose of undertaking a case study is to investigate the particularity, the uniqueness, of the singular case (Jiménez Chaves 2012). Storm Filomena is presented here as a case study of how a persuasive and empathetic media campaign favorably influences the social perception of a government's management and avoids the risk of political crisis.

The case study allows us to analyze a phenomenon in its context, using quantitative and qualitative sources (Yin, 1981). However, it has limitations because it involves subjective information and it is difficult to reach a statistical inference. Limitations reinforced by fact we are facing with feelings and emotions.

Firstly, a bibliographic review has been carried out about the importance of subjective perceptions and emotions in the way in which the population faces a crisis. Although there are notable contributions in this regard (Ulmer, Sellnow, Seeger, 2017), their incorporation into the sociological metrics that measure their impact and consequences in the development and application of communication strategies in exceptional situations seems insufficient.

It is necessary to highlight the circumstances that the city experienced in the so-called "snowfall of the century", within a context of a global

pandemic, where the huge demand for information contributes to the risk of misinformation. Given that social perception is built based on published opinion (Stephens and Malone 2012), the research focuses on the receptivity of the media to the communication strategy carried out by the local government.

A quantitative and qualitative analysis has also been carried out of the information provided by the City Council during the worst days of the storm. The sources used were press releases, press conference calls, official statements and graphic material, daily distributed by the Communications Department to press, radio and television.

The information flow analyzed operates in two directions. On the one hand, the information sent from the local government to the media and how these messages were received and reported in the written press.

Results

The epicenter of the Communication strategy pivoted on the mayor's overexposure to the media. The government opted for direct and immediate communication. The closest thing to a live in broadcast of the mayor's actions. The priority resource was the call of the media to accompany the mayor at the crucial points of action: on his tour of the neighborhoods to check the consequences of the snowfall and visits to emergency centers.

This direct communication, paying special attention to gestures, led to the dissemination of iconic images of the mayor pushing a car while snowflakes fell on his face (Image 1) or avoiding blocks of snow turned into ice on the street (Image 2). Both summarize and exemplify the type of communication that was desired to be offered.

Image 1: The mayor of Madrid, José Luis Martínez Almeida, during storm Filomena. Source: https://www.eldiario.es/politica/fotos-visitas-institucionales-resaca-filomena_1_6745505.html

Image 2: The mayor of Madrid, José Luis Martínez Almeida, during storm Filomena. Source: Victor Lerena/EFE

Analysis of the information offered by the Madrid City Council through the Press Office (Table 1) reveals three basic axes: 1st Prevention (basic information on how to act during snowfall, availability of salt, care services for the homeless), 2nd Supervision of the situation in the streets (effects of Filomena on mobility, trees and maintenance of basic services), 3rd Declaration of catastrophic zone.

Table 1. Official communications sent to the media by the Communication Department

Day	Official Press release
08/01/2021	The City Council launches a shock plan in Cañada Real in the face of the cold wave. The City Council requests neighborhood collaboration to avoid the abandonment of waste in the area of containers El Retiro and 8 other parks closed this afternoon due to the snow forecast
09/01/2021	Practical guide to improve the situation of buildings and homes after the snowfall in Madrid The City Council enables 157 new places to accommodate homeless people during Storm Filomena
10/01/2021	The EMT launches 28 lines, 17 of them with links to hospitals and one to Mercamadrid Almeida appreciates the work of the municipal emergency services and insists on the need to stay at home
11/01/2021	The City Council suspends access to all parks in Madrid due to the risk of trees falling. Villacís begins an inspection campaign to evaluate the structural damage to buildings after the snowfall
12/01/2021	The mayor checks the work of firefighters in removing damaged trees and fallen branches The City Councils of Madrid and Rivas will request a meeting of the members of the Pact for the Cañada Real to promote the relocation of residents
13/01/2021	Almeida thanks the EMT workers: 110,000 people were able to return to their homes despite the heavy snowfall A total of 33 sports facilities in Madrid are affected by Storm Filomena Villacís describes Social Services' attention to the elderly during the storm as a success Andrea Levy visits the Rastro area to learn about the situation of the merchants
14/01/2021	The emergency contract for the trees adds 1,100 more workers for the review, pruning and felling of the specimens damaged by the storm The City Council requests the declaration of Madrid as a catastrophic area Álvaro González visits the cleaning and maintenance work that the Municipal Housing Company is carrying out in its developments after the snowfall

15/01/2021	Villacís describes the losses of the Madrid economic sector as "catastrophic and shocking" Almeida assures that most of the Retiro trees will be preserved and the buildings have not suffered serious damage. The capital's tunnels that were closed by the storm are operational again Villacís promotes a plan to speed up the cleaning of accesses to facilities of municipal schools and nursery schools The capital's tunnels that were closed by the storm are operational again Villacís promotes a plan to speed up the cleaning of accesses to facilities of municipal schools and nursery schools
16/01/2021	This Sunday, maximum speed limitations of 70 km on the M-30 and access roads
17/01/2021	Traveling on the EMT from Monday to Wednesday will be free to guarantee traffic flow The maximum speed limit is maintained at 70 km on the M-30 and access roads on Monday
18/01/2021	Madrid launches an urgent cleaning plan for scuppers and sewers Almeida advocates the reactivation of tourism as soon as possible A total of 273 public schools have been inspected with the express cleaning contract Almeida is committed to major sporting events to "glimpse the normality that we miss so much"
19/01/2021	The Pollution Protocol is deactivated for tomorrow, Wednesday The City Council deploys an action plan in urban tunnels in view of the forecast of rain and thaw in the coming days
21/01/2021	The City Council opens an information line to help the self-employed in managing compensation for the storm Almeida demands the active participation of cities in the European Recovery Funds Madrid Salud, Gold Medal for the Order of Merit of the National Plan on Drugs for its work during the pandemic The Cold Campaign welcomes a daily average of 600 people during the storm
22/01/2021	The Municipal Sports Games resume the competition after the passing of Filomena The City Council asks for extreme caution with trees due to the strong gusts of wind New school in Cañaveral
23/01/2021	Villacís supervises the work to remove fallen trees and branches in Aluche Madrid resumes the Regulated Parking Service this Monday

Source: Press releases sent to the media from the Communication Department of the Madrid City Council. Own elaborationThis information policy was reflected in the media (table 2), as can be seen from the press summaries prepared daily within the Communication Directorate of the Madrid

City Council by virtue of what was published in the Madrid online and offline media. In the following The table outlines the headlines of the news that appeared on the front pages of the sections of the local press about Filomena.

Table 2. News Published in the Madrid Press about Storm Filomena

Fecha	Media	News
9/01/2021	La Razón ABC El Mundo El País La Vanguardia	The snowfall puts Madrid in check The snowfall of the century blocks Madrid The snow storm paralyzes traffic in Madrid An exceptional snowfall collapses Madrid Filomena plunges Madrid into collapse
10/01/2021	La Razón ABC El Mundo El País La Vanguardia	The worst storm in 50 years Filomena causes chaos and isolates Madrid The 30 most intense hours of the mayor of Madrid A historic snowfall paralyzes Madrid Filomena isolates Madrid
11/01/2021	La Razón ABC El Mundo El País La Vanguardia 20 Minutos	Madrid hopes to recover mobility and supplies Madrid isolated. Only the subway works Madrid's battle against the ice sheets Madrid regains its pulse, but fears the cold
12/01/2021	La Razón ABC El Mundo El País La Vanguardia 20 Minutos	Moncloa avoids a clash with Almeida due to the catastrophic zone Meteorologists "nailed" the arrival and impact of Filomena Positive balance of the management, highlights the role of Almeida The storm revives the political clash between Madrid and the Executive Government and PP clash over storm management New shock due to the declaration of a catastrophic area
13/01/2021	La Razón ABC El Mundo El País	The Psoe will boycott Moncloa's "no" to declaring a catastrophic zone Political storm after the passage of Filomena. Sánchez faces his own Podemos disappears in the management of the crisis due to the storm
	La Vanguardia 20 Minutos	The notice to the population was lukewarm and the orders late The cold makes it difficult to return to normality after the snowfall

14/01/2021	Razón ABC El Mundo El País La Vanguardia 20 Minutos	Madrid requests to be a catastrophic zone The PP accuses Iglesias of disappearing and not showing his face in the midst of an emergency 24 hours with Almeida How infrastructure failed Four out of ten emergencies in Madrid are due to falls due to ice PSOE mayors join Almeida and request the declaration of catastrophe
15/01/2021	La Razón ABC El Mundo El País La Vanguardia 20 Minutos	Socialist municipalities join the catastrophic zone Collapse in garbage collection. The mayor celebrates what has already been cleaned The CAM supports the City Council for the emergency zone Madrid announces losses of 1,400 million and requests a catastrophic zone The UME in the street. Bus lines running and streets open
16/01/2021	La Razón ABC El Mundo El País La Vanguardia 20 Minutos	The post-Filomena effect 1.4 billion damages in the capital Against the clock to return to “normality” Schools and open streets Filomena’s anonymous heroes Madrid, a week buried in snow
17/01/2021	La Razón ABC El Mundo El País La Vanguardia 20 Minutos	Three days of free buses and without a SER zone to avoid collapses The EMT will be free for three days to facilitate the cleaning of Madrid Free buses through Filomena EMT buses will be free until Wednesday “We do everything possible and impossible to reach all the streets as soon as possible” (Almeida)
18/01/2021	La Razón ABC El Mundo El País	Filomena leaves and the thaw and floods arrive Objective: clear the sewers of snow and branches due to a rain alert And now “Operation Sewers” The capital prepares a flood risk map
	La Vanguardia 20 Minutos	And now, anti-flood operation

19/01/2021	La Razón ABC El Mundo El País La Vanguardia 20 Minutos	Moncloa declares Madrid a catastrophic zone, but sees the bill inflated Moncloa declares a catastrophic zone, but sees the bill sent by Madrid as excessive The catastrophic zone arrives with reproaches The Government declares a catastrophic area, but reduces Madrid's requests. 43% of the streets are still dirty ten days later The thaw threatens to collapse Madrid again The Government declares a catastrophic area, but rejects Madrid's calculation
20/01/2021	La Razón ABC El Mundo El País La Vanguardia 20 Minutos	Snow limits the return to school, while more storms arrive
21/01/2021	La Razón ABC El Mundo El País La Vanguardia 20 Minutos	
22/01/2021	La Razón ABC El Mundo El País La Vanguardia 20 Minutos	The firefighters lacked cars to fight Filomena. Nine unused snow plows
23/01/2021	La Razón ABC El Mundo	The SER is operational again after removing the snow
	El País La Vanguardia 20 Minutos	
24/01/2021	La Razón ABC El Mundo El País La Vanguardia 20 Minutos	

25/01/2021	La Razón ABC El Mundo El País La Vanguardia 20 Minutos	Filomena damaged almost 16% of the trees in regional parks Statements by the Environment delegate: About 8,000 trees must be cut down
26/01/2021	La Razón ABC El Mundo El País La Vanguardia 20 Minutos	Almeida defends himself: He acted according to what was said by the State Meteorological Agency (AEMET) Almeida asks for European funds for Filomena and announces that he will renew the trees

Source: Press summaries of the General Directorate of Communication of the Madrid City Council. Own elaboration
Note: The dates and media to which headlines have not been attributed are due to the fact that the media did not publish anything about Filomena or if they did, it was not unrelated to Madrid.

As reflected in table 1, the official information from the City Council was aimed at highlighting the role of the mayor in directing operations in crisis management, in neuralgic points such as the Emergency Center, cleaning cantons, Police and Firefighters groups. At the same time, their presence in the neighborhoods was constantly reported to check the consequences of the storm, fallen trees, blocked vehicles, buses stuck in the snow.

This omnipresence of the mayor served to dampen criticism about the management of the crisis for a time, but on January 17, nine days after the storm, fatigue began to show. The city was still dirty, "85% of the 9,000 tons of garbage that accumulated on public roads remain uncollected" (El País, 2021). Photos of neighbors multiplied on Twitter showing pedestrians walking between blocks of ice and mountains of garbage, becoming less and less patient and it was beginning to spread that and measures were taken on the fly. The criticism was led by El País and Cinco Días. They criticized the late response of the municipal authorities, despite the exact forecasts of the State Meteorological Agency and the lack of resources.

However, most of the information has been uncritical of municipal management (Table 2). In fact, it is remarkable that newspapers such as El Mundo published twice in the little more than two weeks of the crisis two reports dedicated to the mayor's marathon days dedicated to touring the city supervising the cleaning work, visits to neighborhoods and contact with neighbors.

The communication strategy, based fundamentally on the visual expression of the mayor's actions, had an immediate effect. The photographs of the first mayor, pushing a vehicle in the middle of the snow, jumping through the ice and talking to police, firefighters and cleaning personnel, fulfilled the empathetic and supportive function of the population, according to Wendling's studies (2013) and Stephens and Malone (2012) The people of Madrid felt that their problems were shared and that the listening work they expected had been carried out, as proclaimed by Álvarez (2009). That attitude mitigated what could have become a political crisis of attrition for the local government. The only friction occurred with the central government due to the declaration of a catastrophic area, which only reinforced the mayor's leadership.

The strategy was proposed as a visual communication and very close to the terrain. The abundance of photographs (in this article the two most iconic photos of the mayor have been included), and the constant calls to the media to document the actions of the local government, especially the mayor's movements, were due to the interest in showing clearly palpably forms a type of leadership linked to action. It can be said that it was a crisis followed live by the cameras.

The defining feature consisted of personalizing the mayor's actions. The striking photos of Martínez Almeida pushing a stuck vehicle or jumping through the snow explained the leadership model that was wanted to be transmitted. A leadership attached to the street, to the neighborhood. For two weeks, the snowfall was omnipresent in the Madrid media, most of which are generalists so they expanded the echo beyond regional limits. The figure of José Luis Martínez Almeida as an involved mayor who felt the cold and fatigue gained national relevance. Citizens perceived this level of commitment, which fostered positive emotions that explain why the crisis, despite the unpredictability and failures made by the local government, was resolved without further political wear and tear.

Although, in general terms, the media aired this empathetic facet of the mayor, there was no shortage of criticism. The economic newspaper Cinco Días criticized the fact that the mobile application (Avisos Madrid) had not been used to notify the population of the forecast of heavy snowfall. "It is difficult to understand that the politicians of Madrid have been so clumsy in communicating specific instructions before everything exploded

and yet they have run so much to take photos with shovels, snow blowers and any other seasonal props." Five Days (2021)

Discussion

The ruler's results and that interpretation can focus his behavior (Van der Meer et al.,2014).The people of Madrid saw in the mayor's actions emotional support for the situation they were experiencing and this message was valued above any other rational information. A circumstance that coincides with the most recent research (Losada, 2018) according to which citizens put their sensations and feelings before other considerations when assessing responsibility for crises.

The weight of emotions, highlighted by authors such as Van der Meer et al. (2014), Choi and Lin (2017) define the perception of a crisis situation as something sad or fearful. These were the outstanding emotions in the first phase of the pandemic (Díaz, Fernández and Rojano, 2020).

Slovic and Burns (2012), Pang, Jin and Cameron (2009), reiterate this point of view when evaluating crises. The distrust associated with Twitter could be related to the channel's own misinformation, one of the most frequently used to receive information (Serrano Puche et al., 2018; Fletcher & Nielsen et al., 2018).

The determination of responsibility in the crisis also counts (Coombs and Holladay, 1996). The SCCT model (Situational Crisis Communication Theory) affirm that citizens can have an angry attitude, even reaching the point of revolt, if they perceive that the ruler has been responsible for the crisis. The direct and immediate communication model of social networks contributes to raising spirits and creating waves of social indignation (Gil de Zúñiga et al 2017).

According to Pang, Jin and Cameron (2010), the main emotions generated in a crisis are anger, fear, anxiety and sadness and within these basic emotions, we must highlight the fear and anxiety produced by overinformation (Seeger; Sellnow; Ulmer, 2003).

The reaction of the Madrid population to Storm Filomena, reported in the printed media, reaffirms previous academic work on empathy on the part of rulers. To do this, it is essential that you be especially sensitive to the

real situation, communicating with "compassion, concern and empathy." (Heath, 2006). This could explain why the photos of the first mayor pushing a car under the snow became so popular.

Álvarez (2009) approaches that knowledge of the emotions generated by a crisis is essential to design its management is observed in the response of the media, as evident in the press summaries in those two weeks.

Conclusions

The main conclusion drawn from this research is that an accident, whether due to natural causes or human error, is not doomed to lead to a political crisis that devastates a government. In this sense, the example of Filomena can be seen as a paradigm of this statement.

Filomena tested the value of a communication strategy based on public relations and permanent contact with the media. This caused confidence in the institutions to be transmitted. In this sense, the action of the local government in accompanying journalists on all trips around the city to check the problems suffered by the population was vital. A fundamental part of the communication strategy was to reinforce the visual resources. To promote images and situations that explained by themselves the empathy of the authorities. The images of the mayor under the snow pushing a stuck car proved iconic and made it easier for him to be perceived as a model of supportive and empathetic leadership. It can be concluded that a successful communication strategy requires an overexposure of the ruler to the media in order to make visible at all times the degree of personal involvement and commitment to the citizens. In this sense, official communication must prioritize gestural messages and visual content.

Recommendations

Among otrher recommendations on the crisis communication, we propose make strong leadership visible in the first moments of the crisis. To make visible a cohesive organization/government regarding the real situation that arise. To desing a Plan Communication with a predominance of image and gesture .To maintain communication at the scene of the incident.

The closest to the ground and maintain lines of communication open and constant, but brief (press conferences, statements, punctual and brief)

The present study confirms previous research by other authors on the importance of the perception factor in crises. Something that is not sufficiently incorporated into the evaluation metrics of communication strategies. For this reason, this work should give a way to future research.

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EMOCIONALNA KOMUNIKACIJA U OKOLNOSTIMA EKOLOŠKE KRIZE: SLUČAJ FILOMENA

Sažetak

Snježna oluja Filomena, koja je zahvatila Španjolsku između 8. i 10. siječnja 2021., poslužila je kao primjer kako bi komunikacija trebala biti usmjerena u suočavanju s ekološkim katastrofama. Oluja je s posebnom žestinom pogodila Madrid, paralizirajući grad na 15 dana. Time je dvotjedna izolacija uzrokovana vremenskim uvjetima dodatno produžila dugo razdoblje zatvorenosti zbog pandemije COVID-19.Iako su se preklopile dvije krize – zdravstvena i ona uzrokovana vremenskim nepogodama – ovaj događaj nije rezultirao političkom krizom. Ključnu ulogu u tome imala je suradnja lokalnih vlasti i medija, koja je omogućila komunikaciju usmjerenu na empatiju s građanima. Glavni cilj ovog rada je analizirati razloge zbog kojih je Filomena postala atipična kriza, spriječivši pad lokalne vlasti. Primijenjena metodologija fokusirala se na proučavanje načina na koji su mediji prenosili narativ oblikovan od strane lokalne uprave, oslanjajući se na poruke, osobito vizualne sadržaje, koji su stvarali osjećaj empatije među građanima. Glavni zaključak istraživanja jest da empatijska komunikacijska kampanja, temeljena na vizualnim resursima, smanjuje društvenu napetost i rizik od političke krize

Ključne riječi: ekološka katastrofa, emocije, empatija, komunikacija, kriza

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INNOVATIONS IN LIFESTYLE MEDIA: TOPICS OF SUSTAINABLE DEVELOPMENT OF SOCIETY FROM THE PERSPECTIVE OF JOURNALISTS

Original Paper
https://doi.org/1059014/BFLU3409

Abstract

This paper covers the field of lifestyle journalism in the context of processing topics related to the sustainable development of society. The purpose of the research is to show whether journalists who work for lifestyle magazines and web portals are educated on topics related to the sustainable development of society; do they think that these topics are important and are they ready for innovation and changes in the organization of work, which implies the introduction of such topics in lifestyle media. The main objectives of this research include – determining the level of familiarity and education with the concept of sustainable development of society by the interviewed journalists, as well as their interest in and treatment of these topics related to the sustainable development of society in the lifestyle media. The research was conducted using an quantitative methodology on a purposive sample of members of the population of lifestyle journalists in the Republic of Croatia. The research shows that journalists in lifestyle media consider themselves competent to deal with such topics. If they had the power to decide on innovation in editorial policy, almost all respondents (93%) would introduce topics of sustainable development of society into the editorial policy of their lifestyle media outlets. If lifestyle media were to cover topics related to sustainable development of society in their editions, 70% of respondents estimate that the general impression of such lifestyle media would be mostly or completely positive. The *research provides original scientific results that can contribute to a better understanding of lifestyle media and the perception of topics related to the sustainable development of society as key determinants for the development of a democratic society.*

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Keywords: education, innovation, lifestyle media, journalism, socially responsible topics

Introduction and theoretical background

Newsrooms of the 21st century tend to be viewed as places of digital machinery, where journalists are inundated with information, news sources and a wide variety of options. Yet at the same time, journalists have less time for thorough analysis, verification of materials, as well as for their own training and education. Therefore, quality education of journalists is more important today than ever before, especially due to the fact that the very sustainability of the journalistic profession has been brought into question. As McQuail (2005) points out, academic education of journalists is one of the key prerequisites for the realisation of journalism as a profession. Moreover, the author asserts that in the context of the transition caused by the convergence of the media, it is necessary to undertake changes in the way journalists are educated and to introduce new topics relevant to the modern public.

At the same time, the United Nations emphasises the need to support multidimensional communication systems to foster dialogue, allowing communities to express their views, aspirations and concerns, and to participate in decision-making regarding the development of these communities (Antonio Guterres, Geneva, 2019). In this respect, UNESCO's publication "Media as partners in education for sustainable development" (UNESCO, 2012) emphasises the role of the media in communicating topics of sustainable development and provides journalists with information on the main problems of sustainable development, thus stimulating them to undertake research of this topic. This is particularly important in the context of the UN's 2030 Agenda for Sustainable Development (UN, 2015), which defines the 17 Sustainable Development Goals and their sub-goals, signed by all Member States. The programme was supported by global publishers. In this sense, for example, the UK-based Association of Professional Publishers (PPA) warns of sustainability challenges in modern society. In 2004, Axel Springer became the world's first media organisation to publish the Sustainability Report. On the other hand, lifestyle journalism and the rise of lifestyle content in the media is often seen as an

example of tabloidisation of journalism or the weakening of journalism as an important democratic institution (Kristensen and From, 2012; From and Kristensen, 2015, 2018, 2020). However, the rise in popularity of lifestyle journalism in the 21st century can also be viewed as a response to the challenges that media institutions and professional journalism face in the digital age. Accordingly, scholars argue that genres and a way of addressing lifestyle journalism could strengthen audiences (Hanusch, 2010, 2017; Hanusch and Hanitzsch, 2017; McGaur, 2010). For example, Fürsich (2012) shows that different subgenres of lifestyle journalism can activate, yet also prevent negotiations on current cultural changes. Therefore, it is especially important, especially in digital era, to pay attention to this sometimes unfairly neglected type of journalism, and especially to content creators who are greatly shaping public opinion and the behaviour of their target audience. According to Zgrabljić Rotar (2011), digital media, including the Internet, reduce distribution costs (for each traditional medium: print, radio and television). However, they do not reduce the cost of content production, which means that the production of content has the same price, regardless of whether it is distributed traditionally or online (Van der Wurf, 2008). The content has only become more accessible and faster, and consequently – in many cases – of lower quality. Therefore, Zgrabljić Rotar (2011) claims that journalistic professionalism, which implies quality education, and editorial policy continue to be the fundamental categories of journalism regardless of the platform on which the content is published. In this respect, journalists and their perception of journalism, namely lifestyle journalism and their opinion of the future of the profession and the potential of implementing certain changes in lifestyle media should to be taken into consideration.

Methods

The area of this research[113] is lifestyle journalism, and the purpose is to determine whether lifestyle journalists are sufficiently educated on how to cover topics related to sustainable development of society, given the context of modern society in which sustainability is one of the priorities. The research was conducted using an quantitative methodology on a purposive

113 Research has been made as part of PhD doctoral thesis research (Čulo, 2023)

sample of members of the population of lifestyle journalists in the Republic of Croatia. Considering the area and purpose of this research, its main objective is to determine the level of journalists' familiarity and competence in regard to the concept of sustainable development of society. From such formulated purpose two secondary goals arise: (1) determining journalists' interest in topics related to sustainable development of society in lifestyle newspapers the respondents are employed with or for which they usually write; (2) assessing the potential of including topics related to sustainable development of society in Croatia's lifestyle media from the respondents' perspective.

Based on the abovementioned research objectives, the following hypotheses are formulated:

H1: Journalists and editors of lifestyle media in the segment of the media market of the Republic of Croatia consider themselves to be sufficiently competent for dealing with topics related to sustainable development of society.

H2: The innovated concept of lifestyle media editorial policy will be improved by introducing topics related to sustainable development of society, which will increase the overall readers' interest in lifestyle media.

Empirical data analysed within this paper were collected during August, September and October 2020. Data collection was conducted using the Internet survey method, on a sample of members of the population of lifestyle journalists in Croatia. The invitation to participate in the research was sent to 35 official e-mail addresses of journalists of print and digital lifestyle media in the Republic of Croatia. Out of a total of 35 journalists invited to participate in this research project, 30 of them completed the survey questionnaire. The target population to which the results of the research are generalised includes Croatia's lifestyle journalists permanently employed in media companies who produce print or/and digital media formats, as well as part- time journalists (so-called freelancers) who write for print or/and digital lifestyle media in Croatia. For the purpose of creating the basic set, i.e., for the purpose of selecting relevant respondents, official e-mail addresses of potential respondents were used, downloaded from the websites of the leading media companies and obtained through direct telephone contacts with these media companies. The exact population parameters are not known, i.e., the total number of journalists in

a particular media company and other characteristics of journalists permanently or temporarily employed in lifestyle media in the Republic of Croatia. Nonetheless, the questionnaire was sent to all journalists who were mentioned by name in lifestyle print media and sections of Internet portals and thus this sample is considered relevant.

For the purpose of collecting relevant data, and in accordance with the research objectives and hypotheses, the survey questionnaire was designed and created. The questionnaire consisted of 44 questions/statements, i.e., it included 41 items of measurement and a total of 91 variables. 38 measurement items (41 questions) were measured using a single-particle measuring instrument, while three items of measurement (three questions) were measured using multiparticle measuring instruments. Considering the structure of the survey questions, 11 were in the form of open answer (open type) while 33 survey questions were closed type, of which 31 were in the form of unambiguous answers, where respondents could select only one answer among a number of offered answers, while two survey questions were formulated as multiple choice questions, and respondents could select multiple potential answers. Closed questions and statements are associated with nominal scales of answers with a different number of categories or ordinal scales of estimates of different number of degrees. The collected data were processed and analysed by means of the statistical software package for social sciences *IBM*

SPSS Statistics 21 (Statistical Package for the Social Sciences), whose 21-day free trial version was downloaded from the manufacturer's website: https://www.ibm.com/analytics/spss-trials.

Empirical data were analysed by means of the methods and procedures of descriptive and inferential (inductive) statistics. Within the framework of descriptive statistics, variables were analysed using univariate techniques, appropriate descriptive statistical indicators (frequency distribution, percentage response distribution, average value, modal values, medial values, standard deviation, total range, asymmetry and flattening). The data are presented by tabular and graphical representations. Given that the final sample includes fewer than 100 respondents (n = 30), the graphs show frequencies instead of percentages.

Within the framework of inferential statistical data processing, variables were analysed using bivariate techniques that included testing the

statistical significance of differences and/or correlations by means of appropriate nonparametric tests (Mann-Whitney U test, Kruskal- Wallis H test, Spearman *rho* rank correlation coefficient) or parametric tests (*t*-test, variance analysis, Pearson correlation coefficient), depending on the deviation of the analysed variables from the normal distribution. In case of statistically significant deviation of the analysed variable from the normal distribution, within the framework of inferential statistics, nonparametric tests were used, while in cases where the analysed variables did not statistically significantly deviate from the normal distribution, parametric tests were used.

To put it succinctly, in the case of testing the connection of nominal variables, a Chi- squared test was used, while the correlation of ordinal variables was tested by Pearson's or Spearman's *rho* correlation ranking. In the case of testing the differences of members of two groups on a particular variable, the Mann-Whitney U test or t-test were used, while in the case of testing the differences between members of multiple groups on a particular variable, the Kruskal-Wallis H test or variance analysis was used. For the purpose of testing the normality of variables, the Kolmogorov-Smirnov Z or variance analysis tests were used. All statistical tests were conducted with a five percent risk level, i.e., the probability of statistical significance of less than 0.05 was considered statistically significant. During the analysis of a multiparticle measuring instrument intended to measure attitudes towards lifestyle media in general, for the purpose of checking its dimensionality, a factor analysis was carried out.

Results

Sociodemographic characteristics of respondents

The final sample included a total of 30 respondents (survey participants), journalists employed at print and digital lifestyle media outlets in Croatia. With regard to the age structure of the respondents, the sample included persons between 18 and 64 years of age: one member (3%) of the youngest age group (from 18 to 24 years), two members (7%) of the oldest age group (from 55 to 64 years), while from other central age groups (from 25 to 34 years, from 35 to 44 years, from 45 to 54 years of age) there were nine people (30%). Considering the level of education, the largest

number of respondents, more than a half (n = 16; 53%), completed graduate university study programmes. None of the participants in the research had the lowest level of education (no school, unfinished primary school, completed primary school) or the highest level of education (postgraduate doctoral study).

The analysed sociodemographic variables, i.e., sociodemographic structure of the respondents, are presented in Table 1.

Table 1. Sociodemographic structure of respondents

Variable	Variable categories	Frequencies	Percentages
Age of respondents	From 18 to 24 years	1	3,3 %
	From 25 to 34 years	9	30,0 %
	From 35 to 44 years	9	30,0 %
	From 45 to 54 years	9	30,0 %
	From 55 to 64 years	2	6,7 %
	65 years and older	0	0,0 %
Educational status	No school, unfinished elementary school	0	0,0 %
	Primary school	0	0,0 %
	Secondary school	2	6,7 %
	Short vocational study	2	6,7 %
	Undergraduate vocational study programme	2	6,7 %
	Specialist graduate vocational study programme	0	0,0 %
	Undergraduate university study	1	3,3 %
	Integrated undergraduate and graduate studies	1	3,3 %
	Graduate university study	16	53,3 %
	Postgraduate specialist study	2	6,7 %
	Master of Science	4	13,3 %
	Postgraduate doctoral study	0	0,0 %

Total length of service in journalism	Less than two years	2	6,7 %
	From 2 to 4 years	4	13,3 %
	From 5 to 9 years	5	16,7 %
	From 10 to 14 years	5	16,7 %
	From 15 to 19 years	7	23,3 %
	20 years or more	7	23,3 %
Total work experience in lifestyle media	Less than two years	3	10,0 %
	From 2 to 4 years	4	13,3 %
	From 5 to 9 years	3	10,0 %
	From 10 to 14 years	8	26,7 %
	From 15 to 19 years	7	23,3 %
	20 years or more	5	16,7 %
Variable	Variable categories	Frequencies	Percentages
The media outlet at which the respondents were employed at the time of conducting the survey as journalists / for which they usually worked (wrote)	Freelancer status	11	36,7%
	Story	3	10,0 %
	Večernji list	2	6,7 %
	Cover Style	1	3,3 %
	Elle	1	3,3 %
	Fashion.hr	1	3,3 %
	Gloria	1	3,3 %
	Gloria Glam	1	3,3 %
	Hanza media	1	3,3 %
	Journal.hr	1	3,3 %
	Mixer	1	3,3 %
	Naturala	1	3,3 %
	Playboy Croatia	1	3,3 %
	Roditelji.hr	1	3,3 %
	Scena.hr	1	3,3 %
	Wall.hr	1	3,3 %
	No response	1	3,3 %

The type of media format for which respondents write	Print media editions	5	16,7 %
	Digital media editions	13	43,3 %
	Both print and digital editions	12	40,0 %

Assessment of the level of competence of lifestyle media creators

When it comes to the estimated level of Croatia's lifestyle media journalists and editors' competence for covering topics related to sustainable development of society, the respondents rated the competence with an average grade of good. With the same grade, they described the education of lifestyle media editors. More than half of respondents (57%) assess journalists' competence as good. and five respondents (17%) assess it as very good. There was no journalist who assessed his/her competence with the lowest grade (poorly competent) or the highest grade (excellently competent). Considering the estimated competence of lifestyle media editors, the largest number of respondents (40%) estimate editors' competence as good, four respondents (14%) as very good, while two respondents (7%) assess it as excellent.

The levels of competence of journalists and editors of lifestyle media in the Republic of Croatia for covering topics related to sustainable development of society, as viewed from the respondents' perspective, are shown in Figure 1.

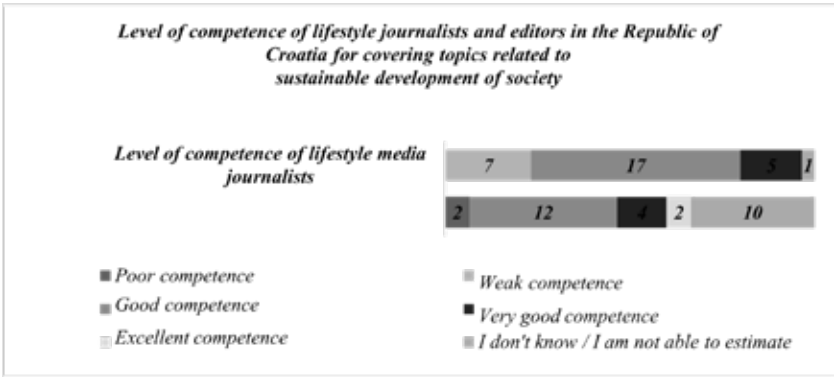

Figure 1. Levels of competence of lifestyle media creators in the Republic of Croatia for covering topics related to sustainable development of society (from the respondents' perspective)

As far as other statistically significant differences are concerned, respondents who rated the level of competence of lifestyle media editors as higher also assessed the quality of covering topics related to sustainable development of society in lifestyle media as higher. Moreover, when describing lifestyle media, they mostly used positive attributes. As for the attitude towards the need for additional education of journalists on topics related to sustainable development of society, the majority of respondents (87 %) believe that additional education is necessary. No survey participant claims that additional education of journalists on topics related to sustainable development of society is not necessary. When lifestyle media covers topics related to sustainable development of society, among other content, the majority of respondents (70%) estimate that the general impression on current readers and on those who do not normally read lifestyle media is mostly or completely positive. Respondents do not think that lifestyle media would leave a completely or mostly negative impression on current readers if these topics were covered, and only one respondent (3%) believes that readers who do not normally read lifestyle media would get a negative impression.

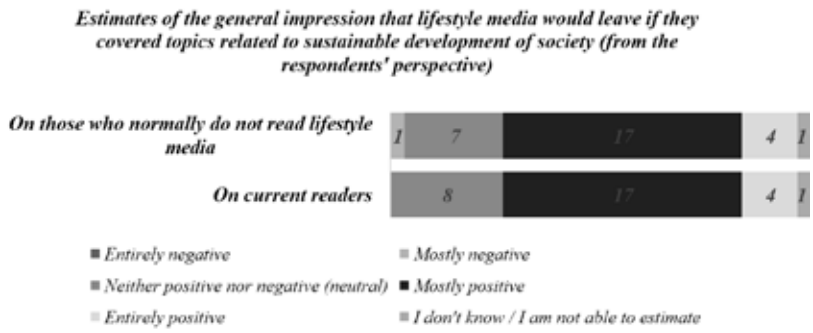

Figure 2. General impression that lifestyle media would leave if topics related to sustainable development of society were included in their editions (from the respondents' perspective)

In the event that lifestyle media covered, among other things, topics related to sustainable development of society in their editions the majority of respondents estimate that the general reading interest of current readers of lifestyle media and those who do not normally read them would remain more or less the same, with 10 respondents (33%) believing that reading interest among those who do not normally read lifestyle media would increase, while seven respondents (23%) believe that reading interest among current readers would grow. General reading interest in topics related to sustainable development of society in lifestyle media is shown in Figure 3.

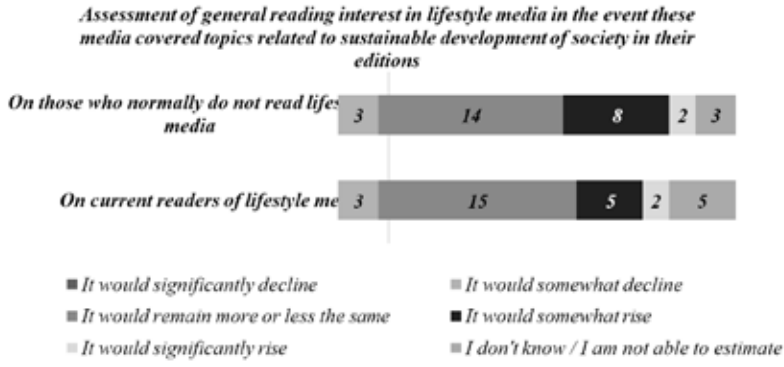

Figure 3. Respondents' estimates of general reading interest in lifestyle media in the event that these media covered topics related to sustainable development of society

Certain statistically significant differences were found between different groups of respondents with regard to the consequences that the introduction of topics related to sustainable development of society would have on lifestyle media. As expected, those who, according to their own self-assessment, are more familiar with the concept of sustainable development of society and its globally accepted goals believe that those who do not normally read lifestyle media would become interested in them if such topics were introduced. On the other hand, advocates of a more positive general impression on current readers believe that general reading interest among those who do not normally read lifestyle media would increase. Those who believe that such lifestyle media would leave a more positive general impression on those who do not normally read them also believe that general reading interest among current readers and among those who do not normally read them would increase. It is worth noting that those who believe that general reading interest among current readers and those who do not normally read them achieve a higher index of positive consequences caused by the introduction of socially responsible topics, notably those related to sustainable development of society, that is, they agree to a greater extent with the need to include such topics in lifestyle media editions. Furthermore, those who believe that general reading interest in lifestyle media among current readers would increase, also believe that general reading interest among those who do not normally read them would increase as well.

Characteristics that make a journalist competent for quality journalistic coverage of topics related to sustainable development (from the respondents' perspective)

The respondents listed the following formal or/and informal qualities that make a journalist competent for quality journalistic treatment of topics related to sustainable development: *expertise, education, professionalism, curiosity, desire for research and learning, openness, imagination, creativity, credibility and truthfulness, analytics and criticality, empathy, information, following foreign media and novelties*, and *lifestyle that coincides with the topics of sustainable development*.

Opinions and attitudes on socially responsible topics

Opinions and attitudes of journalists surveyed on socially responsible topics in lifestyle media, notably topics related to sustainable development of society, were measured through five indicators: self-assessed level of familiarity with the concept of sustainable development of society and its globally accepted goals, self-interest in the topics of sustainable development of society, self-interest in dealing with topics of sustainable development of society in the lifestyle media outlet at which respondents are employed as journalists or in the media outlet for which they usually write, readiness to include these topics in editorial policy (if respondents personally decide) and attitude towards education on these topics (familiarity with such trainings, experience of participating in one of them and readiness to attend future trainings of this kind).

Figure 6. Self-assessed levels of familiarity with the concept of sustainable development of society and its globally accepted goals

The level of familiarity with the concept of sustainable development of society and its globally accepted goals was measured by separate direct indicators associated with a 5-point ordinal assessment scale (from 1 *"I am not at all familiar"* to 5 *"I am very well acquainted"*). According to their own assessment, respondents are relatively familiar with the concept of sustainable development of society and its globally accepted goals. The self-assessed levels of familiarity with the concept of sustainable development of society and its globally accepted goals are shown in Figure 6.

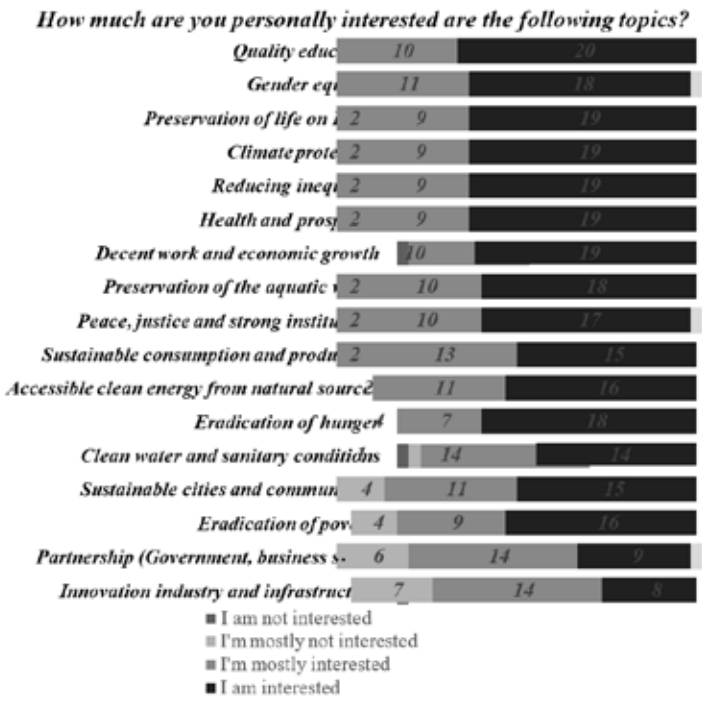

Figure 7. Level of expressed interest in topics of sustainable development of society

Between the level of familiarity with the concept of sustainable development of society and the level of familiarity with its globally accepted goals, a statistically significant correlation of the positive direction was established, whereby a better knowledge of the concept of sustainable development of society entails a better knowledge of its globally accepted goals. Also, those who know more about the concept and the goals achieve a greater value in the index of positive consequences that the introduction of socially responsible topics, notably topics related to sustainable development of society, would have on lifestyle media, i.e., they agree to a greater extent with the need to include such topics in lifestyle media editions.

Based on the answers, it can be concluded that the respondents are quite interested in the topics of sustainable development of society. More than 70% of respondents are interested in each topic, i.e., more than 20 of them. If they had the power to decide on editorial policy, almost all

respondents (n = 28; 93%) would introduce the topics of sustainable development of society into lifestyle media, that is, 15 (50%) of them would certainly do so, while 13 respondents (43%) would probably do so. Only one respondent (3%) is unlikely to introduce these topics, while there are no respondents claiming that they would certainly not.

Table 7. The result of testing the statistical significance of differences in the level of familiarity with the concept of sustainable development of society and the level of interest in these topics between the groups that differ in their readiness to include these topics in the editorial policy of lifestyle media

Variable	Levene's variance homogeneity test	Statistical significance of the average difference		Readiness to introduce topics of sustainable development of society into the editorial policy of lifestyle media	
				I would probably introduce	I would certainly introduce
Familiarity with the concept of sustainable development of society	F = 1,017 p = 0.323	t_2 = 2, 555 p = 0.017	M ± SD	(n = 13) 2.92 ± 0.76	(n = 15) 3.80 ± 1.01
Level of interest in topics of sustainable development of society	F = 5,735 p = 0.025	t = 3,143 p = 0.006	M ± SD	(n = 12) 54.75 ± 8.00	(n = 14) 62.86 ± 4.29

Despite the fact that everyone welcomes the introduction of topics of sustainable development of society, the level of familiarity with education on these topics is relatively low. Only three respondents (10%) knew that in the past period education for journalists on topics of sustainable development of society was available. Among the respondents, nobody had taken part in such a training. The majority of respondents are ready to attend a training on sustainable development of society, if available in the future, with six respondents (20%) certainly intending to attend such trainings, and 13 respondents (43%) saying that they probably intend to attend them. Five respondents (17%) are unlikely to choose to attend a training on sustainable development of society for journalists. No respondents stated that they would not certainly attend them.

Discussion

The implementation of this research started by putting forward the hypotheses according to which *journalists and editors of lifestyle media in the segment of the media market of the Republic of Croatia considered themselves to be sufficiently educated to deal with topics related to sustainable development of society*. A Chi-squared test with a five percent risk level was used. It tested the statistical significance of the deviation of the empirically obtained distribution (the variable that measured the self-assessed competence of respondents as journalist for covering topics related to sustainable development of society) from the rectangular distribution. According to the results of the this test, the empirically obtained distribution of the self-assessed competence deviates statistically significantly from the rectangular distribution (*Chi-square* = 42,800; p = 0.000). Given that the largest residual deviation was recorded in the category of the highly educated, with the share of respondents who consider themselves sufficiently competent is higher than expected, the hypothesis according to which journalists and lifestyle media editors considered themselves to be sufficiently trained to deal with topics of sustainable development of society is accepted. The result of testing the statistical significance of deviations of the empirically obtained distribution (the variable that measured the self-assessed competence of respondents as journalists for dealing with topics related to sustainable development of society) from the rectangular distribution is presented in Table 8.

Table 8. The result of testing the statistical significance of the deviation of the empirically obtained distribution (the variable that measured the self-assessed competence of respondents as journalists for dealing with topics related to sustainable development of society) from the rectangular distribution

How would you assess your own competence (as a journalist) for covering topics related to sustainable development of society?			
Response categories	Empirical frequencies	Theoretical frequencies	Residual deviations
Excellently competent	0	5	-5
Highly competent	7	5	2
Competent	17	5	12
Poorly competent	5	5	0
Little competent	0	5	-5
I don't know/ I am not able to estimate	1	5	-4
Amount of Pearson's Chi-squared test = 42.80			
Degree of freedom = 5			
Statistical significance assuming the truth fulfilment of the null hypothesis (asymptotic bidirectional statistical significance) = 0.000			
0 cells (0%) have a theoretical frequency of less than 5. Minimum theoretical frequency = 5			

When testing the second hypothesis according to which *the concept of editorial policy of lifestyle media would be improved by introducing topics related to sustainable development of society, which would increase the overall readers' interest in lifestyle media*, a Chi-squared test with a five percent level of risk was used. It tested the statistical significance of deviations of the empirically obtained distribution (the variable that measured the degree of agreement with the second hypothesis) from the rectangular distribution. According to the results of this test, the empirically obtained distribution of the degree of agreement with the hypothesis deviates statistically significantly from the rectangular distribution (*Chi square* = 14,800; p = 0.011). Given that the share of respondents who do not agree with the above statement is lower than expected, and the share of those who mostly or completely agree is higher than expected, the hypothesis according to which the concept of editorial policy of lifestyle media would be improved

by introducing topics related to sustainable development of society, thus increasing the overall readers' interest in lifestyle media is accepted. The result of testing the statistical significance of the deviation of the empirically obtained distribution (the variable by which the degree of agreement with the hypothesis was measured) from the rectangular distribution is presented in Table 9.

Table 9. The result of testing the statistical significance of deviations of the empirically obtained distribution (the variable that measured the degree of agreement with the statement according to which the introduction of topics related to sustainable development of society would improve the concept of editorial policy of lifestyle media, thus increasing the overall readers' interest in lifestyle media) from the rectangular distribution.

To what extent do you agree with the following statement? Introducing topics related to sustainable development of society would improve the concept of editorial policy of lifestyle media, thus increasing the overall readers' interest in lifestyle media			
Response categories	Empirical frequencies	Theoretical frequencies	Residual deviations
I don't agree at all	0	5	-5
I mostly disagree	5	5	0
I neither agree nor disagree	6	5	1
I mostly agree	9	5	4
I totally agree	9	5	4
I don't know / am not able to estimate	1	5	-4
Pearson's Chi-squared test amount = 14.80			
Degree of freedom = 5			
Statistical significance assuming the truth of the null hypothesis (asymptotic bidirectional statistical significance) = 0.011			
0 cells (0%) have a theoretical frequency of less than 5. Minimum theoretical frequency = 5			

Conclusion

The research shows that journalists in lifestyle media, despite not attending any specialised education related to the topics of sustainable development of society, consider themselves competent to deal with such topics. It was found that the difference in the years of journalists' service entails a statistically significant difference in the average result in the constructed index of the level of interest in topics related to sustainable development of society, where people with less journalistic experience (up to 10 years) show less interest in topics of sustainable development of society, and those with more years of journalistic experience (10 and more) express greater interest in the same topics. If they had the power to make innovation on editorial policy, almost all respondents (93%) would introduce topics of sustainable development of society into the editorial policy of their lifestyle media outlets, with 50% of respondents who would certainly do so, while 43% of respondents would probably do so. If lifestyle media were to cover topics related to sustainable development of society in their editions, 70% of respondents estimate that the general impression of such lifestyle media on current readers and those who do not normally read such media would be mostly or completely positive. Competence of journalists and editors for dealing with topics of sustainable development of society was on the average rated by the respondents as good. However, one cannot ignore the fact that education of journalists in general, and especially in the domain of topics of sustainable development of society, is very scarce. Even if such trainings exist, journalists have no knowledge of them. Therefore, this kind of trainings should definitely be encouraged, as well as future research on this topic, which is crucial not only for the future of a sustainable society but also for the sustainability of the journalistic profession in the dynamic and technologically improved media landscape of the modern age.

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INOVACIJE U LIFESTYLE MEDIJIMA: TEME ODRŽIVOG RAZVOJA DRUŠTVA IZ PERSPEKTIVE NOVINARA

Sažetak

Ovaj rad obrađuje područje lifestyle novinarstva u kontekstu obrade tema povezanih s održivim razvojem društva. Cilj istraživanja je utvrditi jesu li novinari koji rade za lifestyle časopise i web portale educirani o temama vezanim uz održivi razvoj društva, smatraju li te teme važnima te jesu li spremni na inovacije i promjene u organizaciji rada, što podrazumijeva uvođenje takvih tema u lifestyle medije.

Glavni ciljevi ovog istraživanja uključuju određivanje razine upoznatosti i educiranosti intervjuiranih novinara s konceptom održivog razvoja društva, kao i njihovu zainteresiranost za te teme te način na koji ih obrađuju u lifestyle medijima.

Istraživanje je provedeno kvantitativnom metodologijom na namjernom uzorku novinara lifestyle medija u Republici Hrvatskoj. Rezultati pokazuju da novinari lifestyle medija sebe smatraju kompetentnima za obradu takvih tema. Ako bi imali mogućnost donošenja odluka o inovacijama u uredničkoj politici, gotovo svi ispitanici (93%) uveli bi teme održivog razvoja društva u uredničku politiku svojih lifestyle medija. Također, 70% ispitanika procjenjuje da bi, ako bi lifestyle mediji obradili teme održivog razvoja društva u svojim izdanjima, opći dojam takvih medija bio pretežno ili potpuno pozitivan.

Istraživanje donosi izvorne znanstvene rezultate koji mogu doprinijeti boljem razumijevanju lifestyle medija i percepciji tema održivog razvoja društva kao ključnih odrednica razvoja demokratskog društva.

Ključne riječi: edukacija, društveno odgovorne teme, inovacije, lifestyle mediji, novinarstvo

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YOUNG AUDIENCE AND CLIMATE CHANGE REPORTING

Original Paper
https://doi.org/1059014/XNSB7568

Abstract

This study, part of the Croatian Science Foundation's Journalism Research Lab (Jourlab) project, investigates young people's perceptions of climate change reporting in Croatian media, along with the most effective storytelling methods in climate reporting. The research was conducted in two phases, starting with interviews of young journalism students who shared their personal experiences with climate journalism. These interviews were complemented by a hands-on pilot project within the "Journalism Research Lab" course at the Faculty of Political Science, where 40 journalism students (ages 21-25) created multimedia stories on climate change. Through project-based learning, students used digital tools, audio-visual formats, and data visualizations, gaining practical experience that deepened their engagement with the topic. Following the production phase, in-depth interviews revealed that while students initially viewed climate change as abstract, producing their own stories made the issue more tangible and relevant. Building on this, the second research phase involved focus groups with young audiences aged 18-25 from four Croatian cities. Participants, after discussing their media habits, watched climate change stories presented in two versions, each using distinct storytelling techniques. Findings showed that young audiences are indeed interested in climate topics, provided that the reporting is visually engaging, well-explained, and contextualized. This study highlights that innovative storytelling formats are crucial to capturing and sustaining young audiences' interest in climate issues, emphasizing a need for media support in developing such approaches.

Keywords: climate change, climate journalism, climate news, young audiences

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The Ambiguous Relationship Between Young Audiences and News

"How we cover the impact of human activity on our environment will form the basis for how history judges this generation of journalists. Political scandals will come and go, economic crises and wars may impact us for decades, but decisions made now by everyone in our society will affect our climate and be felt forever," states Liz Corbin, Head of News and Deputy Media Director of the European Broadcasting Union (Borchardt et al, 2023). This statement highlights a critical challenge in journalism today: engaging young audiences with news that has long- term significance, especially on urgent issues like climate change. For young audiences, who hold the future of environmental action, understanding climate change is vital, yet their engagement with news content on such topics remains limited.

The digital media landscape has dramatically reshaped young people's news consumption. In recent years, consumption of traditional media—such as television and print—has steadily declined, particularly since the COVID-19 pandemic. Surprisingly, however, digital news consumption is also in decline, linked to a growing trend of news avoidance among younger audiences (Newman et al., 2024). Research consistently finds that young people are increasingly avoiding news altogether (J, 2021; Reuters Digital Report, 2024). Additionally, a survey conducted by the Faculty of Political Science in Croatia (Perišin et al., 2021) reveals a pervasive lack of trust in the news media, journalists, and journalism itself, especially among young people in Croatia.

The concept of "digital natives" has described young people who have grown up immersed in digital technology since 2001 (Prensky, 2001). This concept has become a mainstay in academic discussions, although with varied interpretations (Martola et al., 2024). Digital natives' media habits differ markedly from previous generations, showing a clear preference for social media and other digital platforms, while traditional newsrooms have struggled to adapt to these changes (Perišin et al., 2024; Kovačević, 2023; Kanizaj & Lechpammer, 2023; Blažević et al, 2022). According to the Flamingo Report by the Reuters Institute (Newman et al., 2020), younger audiences differ from older groups not only in how they consume news but in their attitudes toward it. Driven by a desire for relevance

and enjoyment, young people often seek news that bridges their personal experiences with broader global contexts. Traditional media outlets hold less appeal for them; instead, they favor infotainment, lifestyle, and grassroots content at the periphery of conventional news (Newman, 2020). For many, news is encountered passively, incidentally through social media feeds or platforms like YouTube, rather than through intentional engagement (Boczkowski, Mitchelstein, & Matassi, 2018). This tendency can result in fragmented knowledge and limited depth in understanding complex issues like climate change (Fletcher & Nielsen, 2018).

Climate Fatigue and the Challenge of Sustained Engagement

Although young people express concern for environmental issues, they frequently report frustration with media coverage of climate change, particularly due to a lack of actionable solutions and constructive perspectives (Ejaz et al., 2023). The 2023 Reuters Institute study on global climate news consumption found that, although awareness of climate change is widespread, interest levels vary across demographics and regions. Many young people are aware of climate-related misinformation, especially on messaging apps, and cite political figures as common sources of false information. Over half of young respondents believe that climate change disproportionately affects poorer individuals (53%) and poorer countries (52%) and feel that wealthier, high-polluting nations should bear greater responsibility for addressing it (Ejaz et al., 2023). However, while young people display interest in climate issues, they engage with climate news less frequently than older adults, who generally consume news more often.

This phenomenon, often referred to as "climate fatigue," has led to apathy among young audiences, as constant exposure to alarming climate news without actionable solutions can become overwhelming (Homburg et al., 2007; O'Neill & Nicholson-Cole, 2009). Temporal distance compounds this challenge; young people often perceive climate change as a remote or abstract issue unlikely to affect them personally, which diminishes their sense of urgency (Scannell & Gifford, 2013). According to Bødker and Morris (2021), the future-focused nature of climate change reporting contrasts with the immediacy valued by news media, making it difficult for

journalists to communicate the issue's urgency effectively. This temporal disconnect can lead young audiences to perceive climate change as irrelevant to their present lives, creating a barrier to sustained engagement.

Addressing Youth Engagement through Constructive Storytelling

In response to these challenges, media organizations are increasingly adopting solutions- oriented journalism to reframe climate news and make it more engaging. Outlets like the BBC and The Economist, for instance, have dedicated website sections for climate change, providing in-depth, accessible information and content geared toward social media platforms. The Next Gen News Report by FT Strategies and KnightLab explores the gap between what young people want from news and what is currently offered, synthesizing young audiences' preferences into a three-tiered framework for an ideal news experience (Itzkowitz et al., 2023). This framework prioritizes three elements: (1) trusted sources, as young people prefer news from relatable voices with first-hand experience; (2) personal relevance, as they seek topics that interest them and offer actionable steps; and (3) a storytelling style that is visually rich, convenient, and allows for deeper exploration if desired (Ennis, 2024).

Constructive and solutions-oriented climate journalism is becoming increasingly important in public service journalism. According to the EBU News Report, *Climate Journalism that Works – Between Knowledge and Impact* (Borchard et al., 2023), climate change is "possibly the greatest story of our lifetime." However, audiences often disengage from climate coverage due to a lack of constructive framing and relevance. Lead author Alexandra Borchardt stresses the need for newsrooms to shift from predominantly negative coverage toward solutions-oriented journalism, equipping journalists with a more comprehensive understanding of climate issues. Liz Corbin, Head of the EBU Media Desk, noted that almost every editor interviewed emphasized that effective journalism must focus on solutions, not just problems. Corbin further stated that transitioning to impactful climate journalism requires a change in mindset across newsrooms: "If climate change journalism is to work, it will need to permeate everything we do. Like any transformation, it is not something you do

once and move on; this requires a change in mindset" (Borchardt et al., 2023).

The EBU report includes case studies on impactful climate journalism, newsroom reorganization guides, and cross-genre expertise-building strategies. Norway's public broadcaster NRK exemplifies a successful approach; in 2020, NRK reorganized its newsroom to create dedicated climate-focused teams in Oslo and Bergen. This structure, explains News Director Helje Solberg, helps ensure that slow-moving climate coverage isn't overshadowed by urgent news events. "Journalism that is slow-moving on a major crisis will easily lose out to big news like the war in Ukraine" (Borchardt et al., 2023). NRK's climate journalism model, centered around breaking news, investigative reporting, and constructive storytelling, has seen

high engagement levels among young people, underscoring the effectiveness of solutions- oriented and visually rich formats.

Innovative Storytelling Methods in Conveying Climate Change to Young Audience

In addition to adopting constructive and solutions-oriented journalism principles, other innovative storytelling methods have been proposed to better engage young audiences with climate news or news in general. One promising approach involves using YouTuber-like presentation styles in news content. Himma-Kadakas and Ferrer-Conill (2022) explored how mimicking the informal, personal, and interactive style of popular YouTubers affects young audiences' engagement with news. Their study found that integrating these elements can make news content more relatable and engaging for younger viewers, thereby increasing their interest and involvement in climate issues.

Another approach is to frame climate change within the context of personal lifestyle choices and consumer habits. Elgesem, Knudsen, and Fløttum (2024) examined how Norwegian journalists perceive covering climate change from a lifestyle perspective and whether they believe this type of reporting should offer practical advice and solutions for climate-friendly living. Their findings indicate that while journalists from various fields, including politics, economics, and culture, cover climate-related lifestyle

issues to varying extents, many support a constructive approach aimed at providing audiences with actionable information to encourage sustainable living. This shift towards more relatable, lifestyle-oriented coverage has the potential to enhance public engagement and motivate both individual and collective action on environmental challenges (Elgesem et al., 2024).

Additionally, interactive and visually engaging formats can capture young audiences' attention effectively (Wang et al., 2018). Utilizing graphics, infographics, videos, 3D maps, and interactive elements makes climate content more accessible and easier to understand (Segel & Heer, 2010). Hart and Feldman (2018) found that the use of interactive digital media can significantly increase engagement and interest in climate change topics among young people.

Climate Journalism and Young Audiences in Croatia

Within the Croatian media landscape, few outlets actively pursue strategies to improve climate reporting, especially for young audiences. One notable exception is Klimatski portal (2024), an online news outlet dedicated to climate issues, which emphasizes evidence-based, solutions-

oriented journalism. Its editorial approach centers on expert opinions and scientifically grounded perspectives to build public resilience against misinformation, particularly on green transition policies.

Academic research in Croatia has paid little attention to climate journalism and its impact on public perceptions. Despite the global growth in climate journalism studies, Croatian media's engagement with climate issues remains largely unexplored. Maria Bolevich (2020), in her essay for the *Routledge Handbook of Environmental Journalism*, underscores the challenges for environmental journalists in the Balkans, including limited editorial support, financial instability, and restricted access to reliable sources. Political influence and misinformation compound these issues, while public skepticism toward environmental news impedes effective communication. Bolevich advocates for greater international collaboration to bolster quality environmental journalism in the region.

A recent study by Klimatski Portal and the University of Zadar reveals that while 82% of Croatian citizens acknowledge climate change as real,

many view its impact as a distant concern. Nearly 30% believe that severe consequences will only affect future generations, while 35% express skepticism toward scientific research on climate issues. These findings underscore a need for improved climate education and media strategies in Croatia to foster a sense of urgency (Vidov, 2024). Complementing these findings, Brautović's (2024) report on the climate disinformation ecosystem in Croatia and Slovenia describes the spread of misleading narratives that overlap with misinformation from the COVID-19 pandemic and the Ukraine conflict. The report emphasizes the need for credible climate journalism to reach young, digitally savvy Croatian audiences effectively.

Further analysis by Vozab and Peruško (2021), based on Reuters Digital News Report surveys (2017–2021), shows that young Croatians have the lowest engagement with climate news and consider it less serious than do other age groups. Additionally, young people frequently encounter climate misinformation, particularly on social media. While 40% feel the media provides adequate guidance on climate issues, around 25% view media efforts as insufficient, highlighting the need for more targeted, reliable digital climate content. This view is reinforced by Gospodnetić et al. (2024), whose comparative study across Estonia, Portugal, and Croatia finds that young Croatian audiences see media coverage of environmental issues as lacking practical guidance and often biased toward economic over social aspects of renewable energy.

A comprehensive study on young Croatian audiences' attitudes toward climate change reporting has yet to be conducted. This research aims to fill that gap, exploring how young people in Croatia perceive climate news—both as future journalists and as the general audience. As part of the *Journalism Research Lab: Innovative Storytelling Practices to Engage New Audiences* project (Perišin et al., 2021), this study examines which audiovisual formats and storytelling methods resonate most effectively with young audiences. Specifically, it investigates how climate and environmental stories can be made both credible and engaging, identifying journalistic strategies that could rebuild trust and enhance engagement with pressing issues like climate change.

Methodology

This research employed a two-phase qualitative research design to explore young people's attitudes towards climate change, but also climate news reporting. First, interviews were conducted with journalism students who participated in a project dedicated to climate change in Croatia. Second, attitudes of Croatian youth towards climate issues and how media report on it were explored through a series of focus groups discussions in four major cities.

Phase One: In-depth interviews with Journalism Students

The results of the national survey of news attitudes in Croatia (Perišin et al, 2021) inspired a pilot project at the Faculty of Political Science as part of the BA Journalism module called "Journalism Research Lab ". Twenty five journalism students between the ages of 21 and 25 produced multimedia stories dedicated to contextual climate reporting in the context of Croatia and its specific climate issues.

For this, students were trained in the use of various digital tools which allowed them to experiment and develop different audio-visual and data visualization formats, using smartphones and even drones to produce stories about climate change. The goal was to tell stories in a way that their peers – young people – would assess as interesting and highly comprehensive.

The477roductionn phase was followed by an online explorative survey with open-ended questions for eighteen students who completed the module, and in-depth interviews with eight of them. Both methods were used to explore the ways in which journalism students perceive and understand climate reporting, particularly in the context of journalism they implemented during the project. The survey was conducted in June 2022, while in-depth interviews happened in July 2022.

Phase Two: Focus Groups with Young Audiences

The second research phase involved conducting eight face-to-face focus group discussions with young audiences in four major cities in Croatia: Zagreb, Split, Rijeka, and Osijek. The focus groups were conducted in October and November 2023. A total of 64 participants were recruited,

divided into two age subgroups—18–21 and 22–25 years old—to capture a range of perspectives within the target demographic. Other than balanced gender representation, the groups included both university students and employed young adults, with equal distribution of secondary- and higher-education backgrounds among those employed. This heterogeneity allowed us to capture a broad range of perspectives on the research topic.

The first part of the focus group interviews included discussions on young people's media habits, their attitudes towards news and journalism, along with their perceptions of climate news in Croatian media. To further explore these perceptions and test the effectiveness of innovative storytelling techniques, an experimental component was incorporated into the focus groups. Eight video news stories were produced, covering four environmentally significant topics, each presented in two versions: a traditional format and an innovative one. The innovative formats represented the approaches developed in the pilot project mentioned in the first research phase. Two of these topics were directly related to climate change—"Global Increase of Temperature" and "Rising Sea Levels"—chosen for their direct relevance to the Croatian context and their potential impact on local communities.

The first (traditional) versions adhered more to conventional journalistic practices prevalent in Croatian media, focusing primarily on presenting problems through expert interviews and factual reporting. In contrast, the innovative versions integrated elements designed to enhance engagement among young audiences. These included a greater emphasis on contextual explanations to deepen understanding, the use of relatable protagonists to foster emotional connections, and a constructive narrative that not only highlighted the issues but also presented potential solutions and positive developments. Visual enhancements such as animated graphics and compelling introductions were also employed to make the content more appealing and accessible.

Finally, a thematic analysis of focus group transcripts was conducted to explore the dominant themes related to participants' general attitudes toward media consumption, news and journalism in Croatia. The purpose of this method was to inductively search for patterns and systematically engage with meanings, following Braun and Clarke's six-phase approach (2022). This approach involved familiarization with data through

interview transcripts, development of codes, construction of provisional themes, revision of validity of initial themes, and finally definition of each theme and subtheme. The analysis focused on emerging themes regarding participants' sentiments toward climate change and climate journalism, including the preferred audience engagement techniques in climate reporting.

Overall, the two interconnected phases of the research provided a comprehensive examination of innovative storytelling from both the producer and audience perspectives. The first phase focused on journalism students as emerging content creators, exploring how engagement with innovative storytelling techniques influenced their interest in climate change reporting. The multimedia content they produced was characterized by interactive elements and strong visual components.

The second phase of the research built upon these findings by assessing how the target audience—young adults in Croatia—perceived and engaged with these innovative storytelling techniques. By presenting them with stories similar to those developed by the students, the effectiveness of these methods in capturing attention, enhancing understanding, and fostering interest in climate change topics among young audiences was evaluated.

Results

Engagement and Innovation in Climate Journalism: Perspectives from Journalism Students in Croatia

Based on survey responses and eight in-depth interviews, our study found that journalism students in Croatia perceive current climate journalism as insufficiently engaging for young audiences. Many students felt that climate stories are often poorly explained, with traditional storytelling formats that fail to capture younger viewers' interest. During interviews, they emphasized that climate topics would benefit from enhanced visualization, such as infographics and animations, to make information more accessible and engaging.

The survey and interview data revealed that, initially, most students regarded climate change as an abstract topic. However, as they began working on specific stories and experimenting with innovative storytelling approaches, their interest and understanding of the topic grew. One student reflected,

> "*I never paid attention to such topics, but when I started to work on a specific topic and when I saw the work of other students, I understood it is the major topic.*" (Interviewee 3)

Another student shared that working on a story about a beekeeper's struggles with climate change

> "*...opened my eyes… I met a beekeeper who lost tons of honey due to climate changes, and I never thought about it. This opened up something big for me.*" (Interviewee 1)

Throughout the semester, students experimented with digital tools and concluded that strong visual elements are crucial for attracting young audiences. They suggested that platforms like TikTok, Instagram, and Facebook could serve as effective channels for climate communication, offering formats more aligned with young people's media consumption habits. As one student noted,

> *"Climate change should be communicated to young people in a visual way through TikTok, Instagram, Facebook to make them think more about it."* (Interviewee 8)

Another explained,

> *"Everybody told the story in his own way, different from the traditional way which would be just a tv report or an article. And we consider the content we created innovative."* (Interviewee 5)

When defining effective and innovative storytelling for young audiences in climate journalism, interviewees highlighted the importance of interactive and visually engaging formats. One student remarked, *"I think innovation is… using graphics, 3D maps… things that capture attention in a new way"* (Interviewee 2), underscoring the need for modern visual elements. Some students suggested that innovative journalism could adopt a conversational tone, making content feel as if it were *"explaining it to a friend… make it simpler and engaging… not like you're talking to some distant viewer"* (Interviewee 7).

While some students argued that innovation doesn't require abandoning traditional formats, they felt it could be achieved by layering interactive elements onto existing structures. One explained,

> *"Even if we kept the standard news layout, adding things like time-lapse or interactive maps could make a big difference... you're keeping some of the structure but just making it modern"* (Interviewee 3).

However, students also identified challenges in the Croatian media landscape, particularly restrictive editorial policies and limited support for in-depth investigative reporting, as barriers to innovative climate journalism. One student noted,

> *"Journalists can be innovative to a degree... if the editorial policy allows... but it's hard to see that happening anytime soon"* (Interviewee 4).

This contrasts with practices in global media outlets, where dedicated climate sections and supportive editorial policies facilitate comprehensive and impactful climate coverage—a level of commitment less common in Croatian media.

Insights from Focus Groups: What Climate News Should Be

Building upon these insights from the journalism students, the second phase of our research aimed to understand how young audiences in Croatia perceive climate news in Croatian media outlets, but also the innovative storytelling techniques in climate change reporting. Engaging young audiences remains one of the most significant challenges not just for Croatian newsrooms, particularly when reporting on complex issues like climate change and environmental protection.

Exploring News Attitudes and Engagement Among Young Croatians

First, the general news attitudes of participants were explored. A clear distinction emerged between the two age subgroups (18-21 and 22-25). Some participants aged 18-21 expressed that they encounter news passively, often coming across headlines on social media by chance. Their engagement is selective, focusing mainly on topics of personal interest,

like entertainment, sports, or local events. On the other hand, individuals aged 22-25 talk about more intentional and critical engagement with the news. They actively seek diverse sources and show a broader interest in politics and global events, often scrutinizing sources for bias and quality. This subgroup's critical approach reflects a heightened awareness of media quality and bias, which influences their selective trust in news sources.

Participants are generally aware of global crises and significant political events, such as the Israeli-Palestinian conflict, but their understanding often lacks depth. Many participants admitted that while they knew of these issues, they struggled with context or historical background, which made it difficult for them to fully grasp the ongoing complexities. Some expressed frustration with Croatian media's lack of detailed coverage, feeling compelled to search for international sources like the BBC to gain a comprehensive understanding. The absence of thorough, context-rich reporting leaves young readers disengaged or misinformed, highlighting a gap that interactive or in-depth reporting could address.

In this sense, a notable theme in the focus groups was news fatigue in general. Initially, participants are interested in news events, particularly those with immediate relevance, such as the Ukraine conflict or local crises. However, due to information overload and the rapid, transient nature of news on platforms like TikTok and Instagram, young people quickly lose interest. Participants described their generation's reduced attention span, shaped by social media's rapid-scroll format, as a barrier to sustained engagement with complex topics. This fleeting attention often limits them to superficial knowledge of issues, as many abandon news stories once initial curiosity fades.

Distrust in Media and the Appeal of Authenticity

A strong distrust of traditional media and social media influencers alike was evident among participants. While they generally expect objectivity from journalists, they perceive a trend of sensationalism and "clickbait" tactics designed to drive traffic rather than inform. Headlines that exaggerate or misrepresent stories diminish the participants' trust in the content, leading many to disregard articles they perceive as clickbait.

> *"Do you believe influencers? Participant 4: Not really. Bloggers and influencers may not have a reason to lie as much as the media. The*

media just wants clicks and more. I've clicked on a shocking headline only to find the article inside didn't really match." – Participant 4 (Rijeka, 18-21).

"I don't trust journalists when I see a clickbait headline saying, 'this happened'—I won't even open it. If the title is sensationalist, I assume it's false." – Participant 6 (Split, 22-25).

This cynicism reflects a broader discontent with media's perceived priorities—maximizing clicks over factual integrity—which discourages young people from engaging with mainstream news sources regularly.

Challenges and Expectations in Climate Change Reporting

A broader discussion on journalism and the complexities of reporting on climate change was facilitated. This general dialogue aimed to explore the perceptions and attitudes of young audiences towards current media practices in covering climate change issues. From these discussions, we conducted a thematic analysis where key themes such as apathy, skepticism, helplessness, and the desire for localized and solution-oriented content emerged.

A significant challenge identified in the focus groups was emotional fatigue, as some participants reported feeling overwhelmed or indifferent due to the repetitive nature of climate change messaging in the media. Several participants expressed that they had become desensitized to the issue. For instance, one participant stated,

"I'm just indifferent… that's not a normal feeling… but it's become normal for me given what's happened throughout my life. I mean, over the last 20 years, there's been constant talk about climate change, wars, rising prices, and always some problem, problem." (Participant 2, Zagreb).

There were others with this sentiment,

"Well, for me, it's like, I don't know, at first, I was sad, of course, because it sounds like everything's going to hell, yeah, but over time, yeah, you get used to it…" (Participant 2, Rijeka)

Many young participants expressed feelings of helplessness, believing that individual efforts are insufficient in combating climate change. This theme resonates throughout the focus group discussions, with statements such as,

> *"I wouldn't say it annoys me; it just makes me sad, but what can I do about it? As an individual, I can't do anything."* (Participant 2, Rijeka) and
>
> *"I think that we, as individuals, ordinary people, can't do anything; it's the companies, the businesses that produce and emit those gases that need to take action..."* (Participant 4, Rijeka)
>
> *"I'll make an effort, like, you know, with things like reducing plastic now and, for example, turning off the water and similar things, but I know that, as an individual, I'm not the one who's the problem in the end — it's those big companies in China."* (Participant 8, Osijek)

Another significant recurring theme is the perception of climate change as a distant or abstract issue, which aligns with the temporal challenges highlighted by Bødker and Morris (2021). Many participants felt that climate change would not directly affect them in their lifetimes, leading to a reduced sense of urgency. This sentiment is reflected in statements such as:

> *"In 100 years, well, who knows what will happen in 100 years?"* (Participant 2, Rijeka) and
>
> "*Why should I care what will happen in 100 years, I won't be alive anymore*" (Participant 1, Split)

Bødker and Morris (2021) argue that the temporal distance inherent in climate change reporting contributes to a sense of disconnection and apathy among audiences. They note that the long- term processes and future uncertainties of climate change often clash with the immediate and event-focused nature of news media, making it challenging for journalists to convey the urgency of the issue effectively. This disconnect can lead individuals, especially younger audiences, to perceive climate change as irrelevant to their present lives.

One prominent theme among young participants is the perceived ineffectiveness of current climate change reporting. Several expressed frustrations

with repetitive and unengaging content that fails to inspire action. For example, one participant remarked,

> *"I mean, it's all stuff we already know, just throwing around terms that are familiar to us — climate change, rising sea levels, greenhouse gases, okay – so what?"* (Participant 6, Zagreb)

Another stated:

> *"I think that the way they're publishing this now won't achieve anything at all, because there always have to be two sides in the media, meaning the liberal and the conservative one, and there always have to be two radical sides; there's never that middle ground, never the real truth."* (Participant 7, Rijeka)

Comparing Traditional and Innovative Reporting Styles on Climate Change

During the focus groups, participants viewed both versions of each story and provided feedback on their engagement, comprehension, and emotional responses. This approach allowed us to directly compare the impact of traditional versus innovative reporting styles on young people's perceptions of climate change.

Many participants expressed a preference for the versions that offered solutions-oriented content, versions that offered practical advice and constructive approach rather then simply focusing on the problems. One participant noted.

> *"If they're just going to spend half an hour telling me how bad and terrible it will be, I'll turn it off right away... but if it's something from, say, the city, and then at the end they say, 'That's why you need to do this and that; we'll implement this and that,' then I'd watch it."* (Participant 1, Split)

> *"At the end of the video, there's no... try this, do that... What have we gained from this, what now?"* (Participant 7, Rijeka)

Participants also showed a strong preference for content that is localized and personally relevant. Participants expressed that when climate change impacts are directly related to familiar places, the content resonates more deeply with them. For instance, one participant noted the personal relevance of potential sea-level rise affecting places they have visited:

> *"For example, take Bol on Brač, I mean, I was there, I went swimming there 10 years ago, and now they're saying that in 10 years it might not be there anymore, you know, and, I mean, I've been there, so, like, it's a shame, and that's actually, like, one of the only pieces of information I remembered from the whole video."* (Sudionik 1, Zagreb)

Another participant highlighted the connection between local events and broader climate phenomena:

> *"If Venice floods, about a week later Rijeka will flood too"* (Participant 7, Rijeka).

These reflections indicate that tying global issues to local contexts makes the information more tangible and urgent for young audiences.

The use of visual elements such as maps, animations, and infographics was also emphasized as a crucial factor in engaging young viewers. Participants found that visual aids help in better understanding complex information:

> *"Better, because it visually shows everything they're explaining. I mean, personally, it's better for me because somehow it's easier when someone illustrates it like that rather than just talking to me."* (Participant 6, Zagreb)

Another participant suggested incorporating more animations to illustrate future scenarios:

> *"These animations, these graphics. If more of them were used… Like, a cool example, if they showed the coastline flooding… For instance, put an example of how the water level rises after 50 years… That's something that could easily be implemented. We (our generation) connect everything through images… when we see how it floods, it's clear to us. Nothing more is needed. That's it."* (Participant 1, Rijeka)

The need for more ”ontext in information was another significant theme. Participants felt that reports often lacked historical comparisons and detailed explanations, making it challenging to grasp the full scope of the issue:

> *"Because there aren't any, like, historical comparisons, how we got the data in terms of what we're comparing it to… if we don't compare it to anything, we have no context."* (Participant 1, Zagreb)

Media's Role and the Importance of Presentation

Discussions underscored the critical role the media plays in shaping perceptions of climate change. Participants highlighted the need for trustworthy sources and engaging presentation styles to foster credibility and sustained interest. Several participants emphasized the importance of clear visuals and evidence-based reporting. One participant appreciated the inclusion of supporting data, saying,

> *"They supported the information with numbers, which hadn't been done in previous videos"* (Participant 8, p. 323).

These observations suggest that the style and credibility of media content are critical to how young people engage with climate change reporting. Ensuring that content is visually engaging, scientifically robust, and presented by credible voices can enhance both trust and engagement among this demographic.

When it comes to climate change reporting, but also in news consumption in general, young adults favor concise, visually appealing formats. Videos, infographics, and explanatory animations are preferred, as they can quickly convey essential information without overwhelming the viewer. The younger audience, accustomed to the fast-paced, visual nature of digital platforms, finds brief and engaging content more suitable to their consumption habits.

Some participants mentioned a preference for news summaries and graphic presentations, which offer essential information at a glance. For them, the ideal news content combines brevity with clarity and relevance, maintaining engagement without demanding extensive time commitment.

> *"I want to know what's going on as quickly as possible, and I don't even need too many details, just the main information."* – Participant 6 (Zagreb, 22-25).

On the other hand, while our participants showed preference for concise news, they also value context and structured information. Participants expressed a desire for news stories to be organized in a way that provides easy access to the broader context of the topic. For example, having related articles grouped together with summaries allows young readers to quickly navigate evolving stories. The ideal structure for them combines short, relevant summaries with the option to explore more in-depth content.

This hybrid model enables them to stay updated on significant issues while managing their limited attention span.

Key insights and conclusion

The findings of this study reveal the complex relationship between young audiences in Croatia and climate change reporting, highlighting both challenges and opportunities for enhancing engagement through innovative storytelling methods.

Perceptions, Media Distrust, and Storytelling Preferences

Young people's perception of climate change is often marked by a sense of abstraction and temporal distance. Many participants view the issue as a distant threat, unlikely to impact their immediate lives, aligning with prior research showing that temporal disconnect can reduce urgency and personal relevance. This perception fosters emotional fatigue and feelings of helplessness, as constant exposure to alarming news without actionable solutions leads to apathy. Another insight from this research is the significant distrust young audiences have toward traditional media. Sensationalism and clickbait have eroded trust in mainstream news, while social media influencers are often perceived as lacking credibility. This skepticism creates a barrier to effective climate communication, discouraging young audiences from engaging with content that could inform and inspire action. However, the study also reveals a clear preference among young audiences for content that is visually engaging, interactive, and solutions-oriented. The success of the innovative storytelling techniques developed by journalism students in this study demonstrates the potential of such methods to capture attention and enhance understanding, making complex topics more accessible.

The Role of Solutions-Oriented Journalism and Education

The appeal of solutions-oriented journalism stands out as a way to mitigate feelings of helplessness. When young people are presented with actionable steps and success stories, they feel empowered to consider their own roles in addressing climate issues. This approach shifts the narrative from one

of inevitability to one of possibility, fostering more proactive engagement. Educational institutions play a critical role here; journalism students initially saw climate change as distant but became more engaged when creating innovative content. Incorporating training in modern storytelling techniques within journalism curricula can prepare future journalists to communicate effectively on complex global issues.

The findings align closely with those of the *Next Gen News Report: Understanding the Audiences of 2030* (Itzkowitz, 2023). This international study, conducted across nine locations in Nigeria, India, and the United States, involved 45 interviews with 18- to 25-year-olds from diverse life stages, socioeconomic backgrounds, education levels, ethnicities, religions, sexual orientations, and accessibility needs. Similarly, this report shows that young people prefer news from relatable sources, covering topics they care about and offering opportunities for meaningful action. They also favor personalized, visually rich, short-form content with the option to access additional background or context if desired (Itzkowitz, 2023).

Addressing Systemic Challenges in Croatian Climate Journalism

The Croatian media landscape presents specific challenges that contribute to the disconnect between young audiences and climate change reporting. For now, limited editorial support for in-depth journalism and a lack of dedicated climate coverage hinder impactful storytelling. To address these issues, media organizations should prioritize climate journalism, establishing dedicated climate desks or sections, as seen in leading international outlets. This study provides actionable strategies for media outlets, including the adoption of innovative storytelling techniques that resonate with young people's media consumption habits. By tailoring content to be concise, visually appealing, and locally relevant, journalists can bridge the gap with young audiences, encouraging deeper engagement with climate issues.

While the study offers valuable insights, it is important to acknowledge its limitations. The qualitative nature of the research provides depth but limits its generalizability. The focus on urban centers may overlook perspectives from rural areas, where media access and environmental concerns may

differ. Future research could expand to include a more diverse demographic and employ quantitative methods to validate and extend these findings.

In conclusion, engaging young audiences with climate change reporting in Croatia necessitates a multifaceted approach that addresses both the content and delivery of information. By embracing innovative storytelling methods, emphasizing solutions, and localizing content, journalists can enhance the relevance and impact of their reporting. Educational institutions and media organizations have critical roles to play in supporting these efforts. Through collaborative and strategic initiatives, it is possible to bridge the gap between young people and climate change reporting, fostering a more informed and proactive generation poised to tackle one of the most pressing issues of our time.

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MLADA PUBLIKA I IZVJEŠTAVANJE O KLIMATSKIM PROMJENAMA

Sažetak

Ova studija, dio projekta Novinarski istraživački laboratorij (Jourlab) Hrvatske zaklade za znanost, istražuje percepcije mladih o izvještavanju o klimatskim promjenama u hrvatskim medijima, te najefikasnije načine pripovijedanja o klimatskim vijestima. Istraživanje je provedeno u dvije faze, počevši s intervjuima sa studentima novinarstva koji su podijelili svoja osobna iskustva klimatskog novinarstva i kreiranja multimedijskih novinarskih priča o klimatskim promjenama u Hrvatskoj. Kroz projektno učenje studenti su koristili digitalne alate, audio-vizualne formate i vizualizaciju podataka, stječući praktično iskustvo koje je produbilo njihovu angažiranost prema temi. Nakon faze produkcije, detaljni intervjui pokazali su da su studenti klimatske promjene isprva doživljavali apstraktnima, no stvaranjem vlastitih priča tema im je postala opipljivija i relevantnija. Na toj osnovi, druga faza istraživanja uključivala je fokus grupe s mladima u dobi od 18 do 25 godina iz četiri hrvatska grada. Sudionici su nakon rasprave o svojim medijskim navikama gledali video priče o klimatskim promjenama prikazane u dvije verzije, od kojih je svaka koristila različite tehnike pripovijedanja. Rezultati su pokazali da su mladi zainteresirani za klimatske teme, pod uvjetom da je izvještavanje vizualno privlačno, dobro objašnjeno i smješteno u kontekst. Ova studija naglašava važnost inovativnih formata pripovijedanja za privlačenje i održavanje interesa mladih za klimatske teme, ističući potrebu za podrškom medija u razvoju takvih pristupa.

Ključne riječi: klimatske promjene, klimatsko novinarstvo, klimatske vijesti, mlade publike

EUROPEAN REALITIES – SUSTAINABILITY
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https://doi.org/10.59014/SFGJ4586

ISBN 978-953-8181-93-1