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BOARDGAMING, RPGS, AND SERIOUS GAMES IN CULTURAL SUSTAINABILITY

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