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EXPLORE AND CONQUER: ORIENTATION CHALLENGES

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Abstract: Studies show the presence of obstacles that affect the involvement of educators and students in activities related to orienteering sports during educational sessions. In this sense, the objective of this project was to create a themed board game entitled: “EXPLORE AND CONQUER: CHALLENGES OF ORIENTATION”, inspired by the concept of orienteering sport, focused on assisting physical education teachers in improving the approach to related activities to orienteering sports in the classroom. Furthermore, as it is a cooperative game, it can function as a pedagogical tool, capable of encouraging student engagement in the content. Upon completion of the development process, the game will be made available and promoted, with the aim of achieving its maximum potential as an educational and entertainment tool. This initiative is considered to contribute significantly to student engagement and learning, while offering a unique and enjoyable gaming experience.

Keywords: educators and students; board game; physical education teachers; cooperative game; educational sessions.

FINANCING

The financing body for this project was the Federal Institute of Maranhão (IFMA).

INTRODUCTION

In a world where education is constantly reinventing itself to keep up with society's demands, an unexpected and captivating ally emerges: board games. Therefore, according to Alves (2010, p. 282-287) “It is worth considering that the game as a learning instrument is a resource of extreme interest to educators, since its importance is directly linked to the development of human beings from a perspective social, creative, affective, historical and cultural.”

But what is the sport of orienteering? When did it appear? Where? Orienteering is a sport in which nature serves as a competition setting. Competitors in this modality must move around the terrain to reach control points pre-determined by the team organizing the dispute as quickly as possible (MELLO; RODRIGUÊS, 2010), that is, the one who passes through all the points in the shortest time wins. Participants have a map and a compass for guidance throughout the route. The emergence of the orienteering race, according to Silva (2011, p. 89) “Orientation emerged in the mid-19th century, around 1850 in Scandinavian countries and its roots are directly related to the military aspect [...]” and which is currently developing in Brazil.

Despite the undeniable health benefits associated with orienteering sports, its application in educational institutions is in fact a considerable challenge for physical education teachers. This occurs due to the requirements regarding the necessary equipment, the available infrastructure and the lack of appropriate environments for practicing this sport.

According to VITIELLO (2022, p. 51-53), who said that “In fact, there are very few games under the term “educational game” that actually educate. On the contrary, they sometimes create negative associations between games and school content. Well-intentioned educators, but with particularly poor knowledge of games, produce, with admirable good intention, things like dominoes, trivia games and the famous “trail games”, which, unfortunately, fail to seduce a student to learn, let alone learn from games.”

Based on Vitiello's previous reflection, creating educational games that are truly effective in the learning process is a challenge. Many games labeled as “educational” end up creating negative associations with school content, being unattractive and ineffective.

In this sense, this project developed a modern board game, which combines playful and educational elements, in order to exercise cognitive skills such as logical reasoning, decision making, teamwork and concentration, through a fun and enriching experience.

METHODOLOGY

The methodology chosen was the study of the rules and technical symbols of orienteering races, carrying out research in books and articles on the Google Scholar platform, experiences with different types of board games and meetings to plan how to translate the concepts of orienteering races. to the game. To implement the game, the Tabletop Simulator digital platform was used.

STEPS PERFORMED

The meetings were conducted, both *online* and in person, aiming to plan the entire project. These meetings included the presentation of schedule proposals at weekly and fortnightly intervals, aligned with the chosen methodology, to discuss the goals to be achieved and adjustments to the activities carried out.

GOALS 1:

- Carrying out the ISOM2019/2 study;
- Selection of technical symbols for the main board challenges;
- Preparation of letters with your fundamental skills;
- Conducting research on articles on mechanics construction steps for modern board games in which *Google Scholar* was the main tool used to search for these reliable sources;
- The choice of the platform that helped us in the development of the board game

known as “*Tabletop simulator*”;

- There was participation in the thematic lecture on board games with the theme “**Playful education: using board games in the classroom**”;
- Improvement of the route on the central board;
- The selection of technical symbols to be used on the central tray.

GOAL 2

- Carrying out research on articles on aspects of “*Level Design*” in the creation of modern board games;
- Preparation and improvement of the board with adjustments for modularity;
- Presentation of the beta version of the Game, in which two students from the institution itself, IFMA Campus Timon, participated in it, so that they could evaluate their opinion on the prototype for themselves.

GOAL 3:

- Preparation and execution of an Educational Board Games Festival at the Timon Campus.
- Preparation of the final expanded summary report.

RESULTS AND DISCUSSION

Given our initial limited understanding of board games, it took us a considerable amount of time to familiarize ourselves with the terms and language associated with board games. The book “**Board games in education**” (2022) proved to be an excellent guide, effectively highlighting the main possible failures that could occur during the design stage of a board game intended for the school environment.

The existence of texts for creating games is abundant, but texts for adapting subjects in the classroom are extremely rare. The objective of the project is not just fun or entertainment, but the integration of educational content in a strategic way, as creating an educational board game involves deeper considerations about education and pedagogical principles.

During the course of the project, the game went through changes, for example, in figure 3 below, which was one of the first prototypes, where the game had a greater focus on what equipment the characters would use, and on the board space, which was considerably smaller. This version ended up being revised due to the unnecessary complexity involved in preparing the characters before the match and the reduction of possible movements due to the small map.



Figure 1: Image of the first version of the game
Source: Author's creation on the "Tabletop simulator" platform" (2023).

Another additional change refers to the visual transformation in the structure of the players' chips shown in figures 4 and 5, changes that are literal in relation to their appearance, leaving a cleaner and simpler look compared to another that was found with many information contained.

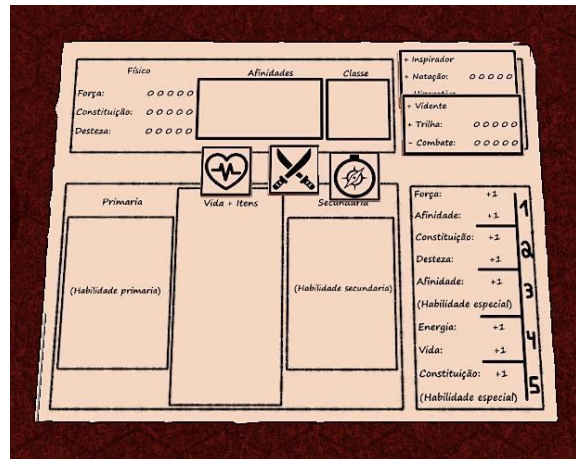


Figure 2: Image of the first version of the form
Source: Creation by the author on the "Tabletop simulator" platform (2023).

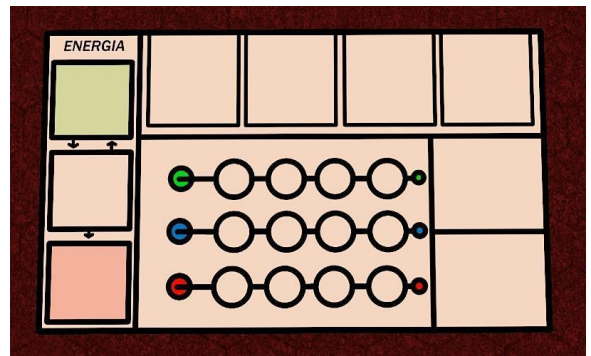


Figure 3: Image of the new version of the card
Source: Author's creation on the "Tabletop simulator" platform (2023).

A curiosity that must be highlighted in relation to the encounter cards, character sheets, expeditions and attributes where they are, on purpose, left blank so that the teacher, who is conducting the experience in the classroom, can personalize the game in a that meets the demands of your discipline, content and class.

In our first test we had the opportunity to develop the game completely and invite students from the institution to evaluate the game for themselves and one of the students commented:

“The game is extremely interesting, mainly because it mixes a more casual exploration game with a board game, even more with details focused on RPG, the classes and challenges part of the game is something very good. I believe that because it is a new proposal, at least for me, it was a little complicated to understand how it worked the first time, a little confusing because there were too many things, not that it is a bad thing, on the contrary, it is very good for increasing the duration of the game and the desire to play again to get another experience, not making it repetitive, however, it leaves it confusing, especially those who are going to play for the first time, that’s all, it’s great to have a vast repertoire for the game, but remember and understanding each class, challenges, levels, or even the main objective of the game, makes it a little complex for the uninitiated”

After completing this experience, it is clear that we have acquired significant learnings. One of the highlights lies in the wide range of possibilities that board games present as a pedagogical tool. This area demonstrates remarkable potential to help both students and teachers build knowledge in a dynamic and interdisciplinary way, without the constraints of rigid routines often linked to the traditional classroom environment. Expanding this scope goes beyond physical education teachers, also covering educators from all disciplines such as Mathematics, Geography, Biology, among others. This expansion appears as an effective strategy to break the monotony of conventional classes, promoting a significant improvement in the students’ learning process.

After the studies carried out and practical experiences, a cooperative exploration game was created, in which a group of explorers try to complete an expedition in a region and escape before time runs out. These expeditions have all the information, objectives and restrictions that players will face in developing the game’s stages. During the game, each player will be responsible for controlling a character with different skills, attributes and

specialties, where they must work together to complete the objectives of each expedition within eight rounds. Players win when they complete all expedition objectives and exit the area through the designated edge before time runs out.

- Figure 1 below shows the game components:

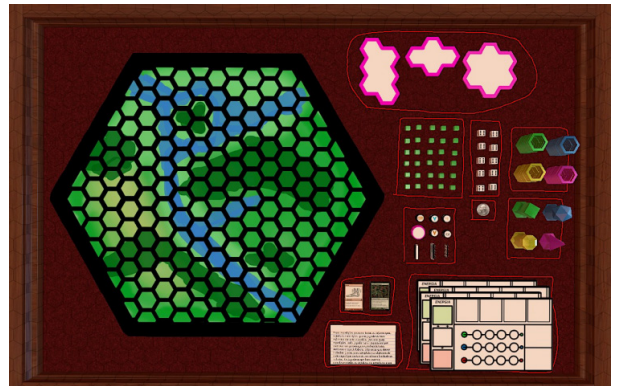


Figure 4: All game components

Source: Created by the author on the “Tabletop simulator” platform (2022).

This consists of: 1 Hexagonal board; 3 Structures; 60 energy markers; 10 Six-sided dice (D6); 10 x 4 colored Hexagons (10 per color); 10 x 9 Land Markers; 1 Coin; 4 Characters (one of each color); 1 Deck of negative conditions; 1 Meeting deck; 1 Expedition deck; 4-character sheets.

BASIC COMPONENTS OF AN EXPEDITION:

Title, Number of turns, Number of events, Events, Recommended number of characters, Number of structures, Position of structures, Objectives, Restrictions.

BASIC COMPONENTS OF A MEETING:

Name, Description, required attributes, experience value, success condition, failure condition, test difficulty.

Characters:

- **Scout:** focused on movement and exploration. Capable of covering great distances and performing multiple actions in a single turn, but is individually fragile;
- **Partner:** Focused on help and utility. It has abilities that benefit everyone nearby and can protect allies from negative conditions;
- **Visionary:** Focused on risk management and planning. Can predict future encounters and manipulate data results, but suffer negative consequences;
- **Champion:** Focused on executing difficult actions at crucial moments. Extremely high attributes, but little energy.

PREPARATIONS:

- Players choose their characters and the color of their pieces, set aside 5 energy markers and place their chosen pieces on top of the zones designated on the character sheet.
- The expedition is chosen and players follow the initial instructions outlined (where characters start on the board, where structures are positioned, etc.).
- Decks, land markers, and dice are placed in an area that is easily accessible to all players.
- Figure 5 shows the initial preparation of the players:

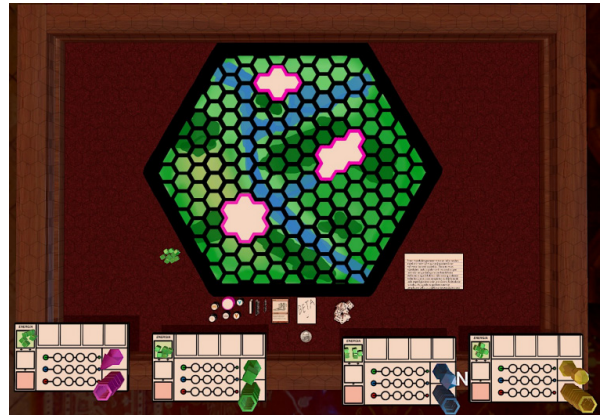


Figure 5: Example of table organization

Source: Created by the author on the “Tabletop simulator” platform (2022).

PROGRESS OF THE ROUNDS:

- The first player (determined by the group) starts their turn, becoming the active player. This player can perform the following actions as many times as he wants while he has energy available:
 - Move (1 energy): place your character in a hexagon adjacent to your current position that is not occupied by another player or a terrain marker that prevents crossing.
 - Explore (2 energy): draw a card from the encounter deck and perform the test described on it. When you complete a test and are successful, place a hexagon in your current space and collect experience from the encounter. Figure 2: Example of table organization
 - Rest (0 energy): recover half (rounded down) of the energy spent this turn, the other half is lost until the end of the round. This action ends the active player’s turn, passing the turn to the next player and making them the new active player.
 - Pass (1 energy): Ends the active player’s turn during an encounter before attempting the check, passing the turn

to the next player and making them the new active player. When a passed player becomes the active player again, they must make the encounter before taking any other action.

- Help (1 energy): adds 1 die to an adjacent player's next tests. This action can be performed by non-active players at any time during the active player's turn.
- When a player has no more energy at the start of their turn, they must pass the turn to the next player.
- When all players have no energy to use, the round ends.
- Players must spend their experience points acquired during the round to improve their attributes.
- Check the dispatch card to see if any events occurred during the next shift. If this occurs, follow the instructions described in it.
- All players recover their spent energy and the next turn begins.

- If players have not completed all objectives and the number of rounds outlined in the expedition has run out, all players lose the game.

CONCLUSION

In short, we understand how board games play a crucial role as a pedagogical resource, enriching the learning process with well-documented approaches. However, the lack of bibliographical material on the subject is, in fact, a challenge considering that this form of learning combines education and fun, but dealing with the lack of resources is an obstacle. Therefore, by exploring this form of approach, we can improve learning environments, providing students with an engaging way to acquire knowledge, where research and adequate planning are essential to develop a new generation of educational games, boosting education in a creative way it is efficient.

THANKS

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