

INNOVATIVE BOARD GAME DESIGN IN AN ACADEMIC ENVIRONMENT DURING THE COVID-19 PANDEMIC

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ABSTRACT

Leisure or entertainment, like other everyday needs, are fundamental activities for human well-being. The creation of activities that lead to moments of satisfaction and relaxation are also a focus of attention and one of the areas of intervention where design can contribute solutions. This project challenged a group of students on a degree course in product design to develop modern, alternative board games, centred on users and on situations and environments of use, in order to exercise the practice of product design and seek to present innovative solutions. The challenge came through a local Cultural Association, with a tradition in promoting this type of game. The project followed a design project methodology that led students through a first phase of immersion in the theme, mechanics and strategies of games and their variety, going through the generation of ideas, models, evaluation tests, to the production of prototypes. The project was subject to the constraints of the Covid-19 pandemic, which forced students and teachers to work at home. To improve teaching and learning experiences, the project involved specialists and professionals who shared their knowledge and experience in developing this type of product. This gave rise to a great diversity of solutions, resulting from the use of an adequate methodology, making it possible to design new board games in which the mechanics, when articulated with a theme of interest to the target audience, can result in a proposal for an appealing and unique game.

Keywords: Board game, product design, design education, innovation, co-design

1 INTRODUCTION

Students and teachers in the 2nd year of the degree course in Product Design at the Escola Superior de Tecnologia e Gestão of the Polytechnic Institute of Viana do Castelo, in the curricular unit of Project/Workshops II, were involved in an academic project to develop new board games. The theme arose through the Cultural and Artistic Association ArtMatriz de Viana do Castelo, which has a tradition in promoting this type of game and intends to disseminate the results of this partnership in various media and events, namely, in the 2022 event of Vianacon - Encontro de Jogos de Tabuleiro Modernos in Viana do Castelo, which it organizes together with the Municipality of Viana do Castelo. In the course of the project, several lectures were given by specialists in the area and entities in the field of board games. This project started in February 2021, during confinement, intending to promote the creativity associated with alternative and innovative modern board games. The students had several remote monitoring sessions by members and gamers, where they learned what currently exists in the landscape of modern board games and a little of the history of this activity. During the project's development, there were several practical presentations, highlighting the conversation with Game Designer Orlando Sá, who shared his creative process and working methods with the students. Methodologies for proximity to users (players / game creators), through ArtMatriz, its interlocutors and other expert guests, were defined through several work sessions, where it was possible to contextualize the constraints of the project's theme, identify and test guidelines, components and game mechanics, and get opinions on the intermediate results obtained. The cooperation and synergies developed between students and lecturers on the Product Design Course and the Cultural Association were crucial to obtain good results and culminated in the official partnership through the signing of a collaboration protocol. This article describes the activities carried out during the design process that included mixed teaching and learning

strategies that challenged teachers and students to find answers to the questions and doubts that this type of teaching raises: will it be possible to develop a design project in pandemic with different partners intervening online and what impact does that have on the process?

1.1 Modern board games

Board games have been part of people’s lives over the generations and remind them of hours of fun with friends or family. In recent years the hobby has become increasingly serious with games that are more strategically and artistically elaborated. These are called modern board games. Mostly created and made in Europe, they demand more from their players, making the activity a true passion. The universe of board games is huge and fascinating and in times of confinement due to the COVID-19 pandemic, modern board games were excellent, solitary or collective, activities. In the more elaborate board games, there are differences mainly in the gameplay. The main feature of modern board games is that players are not eliminated from the game, but are able to participate until the end, and all have a chance of winning. In addition to improved rules and features, modern board games also stand out for their whimsical look and attention to detail. Whether with illustrations made by award-winning professionals or carefully crafted pieces, the items in each game make the activity even more pleasurable, in addition to becoming true collectors' items. Nuno Sentieiro and Paulo Soledade, from What's Your Game, regarding the Nippon game, state that “Developing a game like this, of strategy, oriented to more experienced players, requires many hours of work”, in this case two years, because the duo already had experience. “We have to read, study and also have a drink at the classics, to do something new and interesting” [1].

2 SOLVING THE PROBLEM THROUGH DESIGN

The problem posed to students and teachers was ambitious from the outset, as the intention was to encourage participants to develop innovative modern board games. This problem, within a higher design course, required adopting design methods that could support and improve the development process from the correct understanding of the problem, raise subjective and objective requirements and define guidelines for the product, going through several stages until the elaboration of the game prototype. The design process benefited from knowledge about design methods from different authors [2], [3], [4], [5]. In preparing the project, a product design process was validated, given that, according to the same authors, the application of a design methodology is not dependent on the areas or type of product, but on its ability to adapt to the requirements of the project in terms of objectives, available time, teams and expected results. Therefore, the project was divided into five well-defined stages: problem analysis, development (idea generation), specification, execution (prototyping) and presentation (communication). At all stages, discussion and reflection were constant and, at various times, participants were subject to assessment and intervention by experts in the field, online such as Ricardo Ferreira in a presentation of games from his private collection and Game Designer Orlando Sá from his home in Holland where he works who talked about his design process. (Figure 1).

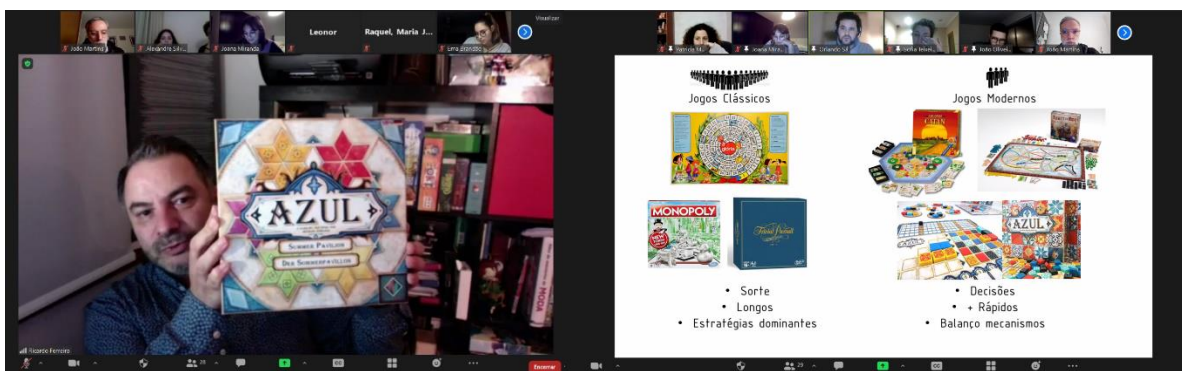


Figure 1. Lecture given via Zoom by the specialist in modern board games Ricardo Ferreira (left) and lecture with Designer Orlando Sá (Right)

2.1 Problem analysis

The project was developed in teams of two and three students who, at this stage, carried out research presented in the form of a mind map to better understand and manage the amount of information needed

(Figure 2). The construction of this diagram started from a centre with the title "Board Games" and led to themes revolving around this main idea: type of game, mechanics, players, publishers, authors, variety of shapes and dimensions, blogs, articles, story, objectives, game contexts, components, rules, motivations, etc. In this way, the students were able to represent, in detail, the conceptual relationship between dispersed information. Paths, words and illustrations sought to give an overview of the field where the project was developed and on which actions and strategies could be planned to achieve the objective of thorough understanding of the world of modern board games.

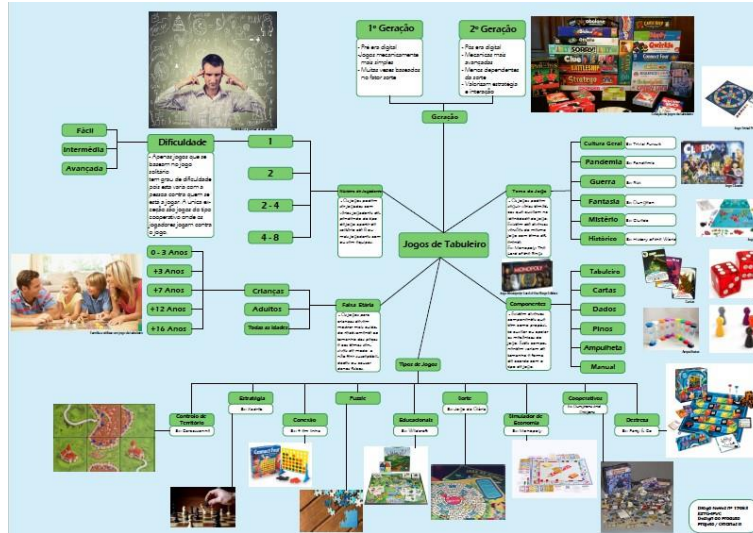


Figure 2. Student Diogo Neves Mind map

2.2 Development

Once the problem was defined, the next step was to generate ideas to solve it. At this stage, it was suggested that within a given time, each team should develop at least two ideas/concepts, supported by two concept panels with keywords, general and particular drawings, operational diagrams and other elements illustrating each of the idealized solutions (Figure 3).



Figure 3. Concept panel of the proposal entitled "B Design" by students Diogo Lopes, Maria João Dias and Raquel Ribeiro

The two possible solutions were accompanied by two full-scale study models where it was possible to demonstrate the concept and exemplify the functionality. On the defined date, one of the two possible ideas was chosen after evaluating both the appropriateness to the problem and the added value of each one. The validity of the ideas depended on meeting the following criteria:

- Concept (innovation).
- Gameplay (game operability)
- Game theme (suitable interest)
- Feasibility (production)

The criteria were verified by testing the game models, that is, by simulating several moments of the game which, in an intermediate phase of the project, served to choose the best game concept out of two possible ones (Figure 4).



Figure 4. Test of the game model entitled “Portus Cale” by students Beatriz Cruz, Ema Brandão and Leonor Oliveira

2.3 Specifications

This phase aimed to specify the proposals chosen in the previous phase. Here, students had to elaborate a set of elements with the technical detail of the selected idea. This phase led to achieving the accurate full-scale design of the board and game components, the full-scale model as faithful as possible to the game design, faithful reproduction of the remaining game components on the same scale and the selection of materials and manufacturing processes (Figure 5).

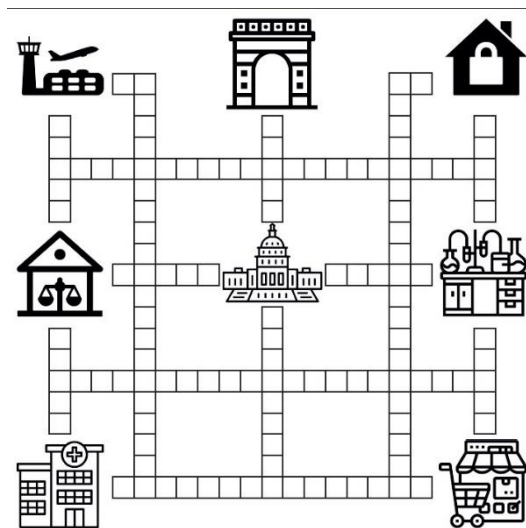


Figure 5. Board game entitled “Agents” by students Alexandre Silva, Diana Sousa and Paulo Dias

2.4 Execution

This phase dealt exclusively with construction of the prototype. This phase corresponded to achieving the solution, the last phase in conceiving a new product, and it was at this stage that the project began to materialize with a first prototype of the proposed solution, accompanied by a document containing all its technical specifications (Figure 6).



Figure 6 . Prototype of the “Multiple Nationalities” game by students Ana Canossa and Joana Santos

2.5 Presentation

At this stage, each group should make a photographic record of their board game, presenting images of the game, with all its components, its gameplay, with enough images to understand how the game operates, and the diagram of operation. In addition, each group created a digital PowerPoint file presenting the following product, concept and reference elements; game theme; the gaming board and other components; playability and operability; and an explanatory and demonstrative video of the proposal's gameplay lasting a maximum of 3 minutes. The presentation was made in person and was attended by a group of experts and players from the project's partner association (Figure 7).



Figure 7. Students present board game proposals to a group of experts through the prototypes built in the execution phase

3 RESULTS

The final results showed a great diversity of solutions, as a result of using an appropriate methodology, making it possible to design new board games in which the mechanics, when articulated with a theme of interest to the target audience, resulted in an exciting and unique game proposal. The main results

were released at a national Modern Board Games Meeting, in 2021, which took place in the city, organized by the local Cultural Association and the City Council. At this meeting, the quality of the games was evaluated and discussed and the proposal of one group of students attracted the interest of a games publisher who invited them to improve the proposal in some less developed aspects, and to present it again to the same publisher who will evaluate its market introduction. Of thirty-four prototype ideas submitted to the competition, seventeen were finalized. The winners were "Hang" by students Francisco Araújo, Patrícia Moreira and Sofia Teixeira; 2nd Place: "Year 3000 Return to Home" by students André Antunes, António Ribeiro and Marco António; and 3rd place for "Agents" by Alexandre Silva, Diana Sousa and Paulo Dias. With the success of this project, it was possible to test the validity of the initially planned product design process, which was based on mixed teaching and learning strategies with face-to-face and online components.

4 CONCLUSIONS

The use of collaborative design processes and methodologies facilitated the creative process, allowing the project to evolve and contributing to improving the solution to the problem of creating modern and innovative board games. The pandemic caused by Covid-19 required sudden changes in the teaching and learning process, leading to a reconfiguration of educational practices that implied the development of skills in online teaching and learning by teachers and students. Having been well planned, the methods became everyday procedures that flowed unconsciously, becoming part of the project. The use of technology and collaborative software, such as Miro and Sketch drive, constitutes a set of interactive tools that made it possible to easily share, visualize and discuss online visual work during lockdown. In game projects where the theme, concept, mechanics and rules are part of the same product, we can see how important teamwork is, with the participation of specialists, which is characteristic of multidisciplinary design projects. The creators (students) were aware of the need to follow each phase of the project and the specific objectives within each one that must be achieved in order to produce better and faster, with a greater certainty of success.

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