GAMES AND EDUCATION

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The teaching and learning process requires careful planning that considers the target audience, the content, the methodology, the educational resources, and the practices consistent with the previously established objectives. Thus, the learning results are achieved satisfactorily.

To motivate the didactic practices, increase students' interest, and make them aware that they are part of the educational process, the teacher must pay attention to and use all the educational resources available. In contemporary times, the teacher-student collaborative work with the content is fundamental. Moreover, it can be complemented and supported with digital resources and games already part of the student's daily lives.

It is important to emphasize that the teacher should not use an educational resource just for fashion but be aware of how much this resource reinforces and promotes the educational process as a whole.

In contemporary times, the teacher-student collaborative work with the content is fundamental.

In the case of the use of games in education, its logic is already present in educational structures. One example is the grading system, where one completes a task and receives a reward according to accuracy and effort. Moreover, playing, gambling, and learning to follow the rules are characteristics of the game and education that evoke, besides learning, joy and fun. All this makes combining these two universes a powerful practice to provoke evolution and transformation.

Gamifying didactic activities

Gamification is a technique that aims to add game elements to non-game activities to strategically enable the playful engagement of the intended users. To this end, it uses fundamental elements present in a game structure. Furthermore, it transforms this system to enhance learning by motivating and enabling problem-solving in infinite areas of knowledge areas.

Using a gamified system for educational purposes aims to improve school performance and develop students' socio-collaborative, critical, analytical, and problem-solving skills.

Several elements taken from games can be used to develop gamified systems. Goals, rules, feedback, and voluntary participation are the best-known elements as they constitute the game mechanics. Although it is already possible to operate a game with these elements, the gamification process is more complex and can be further developed.

The Mechanics, Dynamics, and Aesthetics (MDA) Protocol, created in 2004 by game design theory and game researchers Hunicke, LeBlanc, and Zubek, is divided into three approaches: Mechanics, Dynamics, and Aesthetics. Each approach forms a specific set of aspects of game design and consists of identifying features present in the design of any type of game (from sports to video games). Thus, it is possible to decompose the aspects to aggregate their elements in constructing of other games.

Mechanics describe the components of the game (the structure), Dynamics are the elements that generate player interaction with the game and vice versa, and Aesthetics is everything that evokes emotional responses in players (art, sounds, fun).

A gamified system is not a game. However, by using this system, it is possible to acquire knowledge and develop skills and abilities in socialization and interpersonal relationships. Gamification can be an effective tool to support educational teaching practices.

Passive teaching and learning methods used in most schools no longer captivate and satisfy students. As a result, these methods are losing their place to interactive practices and strategies, such as gamification, which is more motivating and more in line with the needs of students in the digital age, who no longer want or accept to be mere passive agents-observers of learning.

Using Game-Based Learning (GBL) as pedagogical support

Unlike gamification, Game-Based Learning (GBL) consists of using a ready-made game for educational purposes. Therefore, they are also called Educational Games.

GBL uses the game to enhance and optimize the learning experience. For example, the student can acquire knowledge through digital or analogue games, such as board games or Role-Playing Games (RPGs) that have a structure already created with the learning objective in mind.

GBLs can be used to convey didactic-pedagogical content, exercise it, or fix it through simulated practices.

Examples of GBL applications range from simple quiz games with prizes to video games with historical information. One example is the video game Assassins Creed: Origins (Ubisoft), which was developed with the help of a team of researchers and historians so that the historical information about Ancient Egypt was accurate enough to be used in education. As a result, many teachers use this game as a didactic-pedagogical support in their classes.

One significant advantage of using GBL is that you do not have to create a new game. There is a wide range of options available on the market. Teachers only need to adapt an existing game to their specific needs and objectives.

The benefits of using GBL include:

- students' engagement in the teaching activity - as it is fun and motivating.
- easier communication between teacher and student - because games bring teachers and students closer together using a young and current language, different from the formal language of didactic texts.
- the interaction and collaboration between the participants (players) with the content (knowledge).
- more effective learning - because the student learns organically while playing and develops cognitive and social skills while having fun.

GBL has no age restriction and can be used from elementary school to university. There are already several worldwide proven cases of GBL use in Education, with great results.

Also, in Informal Education, games can play a relevant role with groups of seniors. For this group of individuals, the primary purposes of using games are to improve the quality of life of older people and to prevent their mental health.

GBL contributes to the individual's development of problem-solving skills, critical thinking, analytical skills, and logical reasoning. Besides developing memory and even reflexes, depending on the type of game chosen for adaptation in the educational context.

Games, as well as other digital resources used in didactic and pedagogical activities, are tools to engage students in learning. However, it is essential to remember that although they can be used as a support and supplement to the classroom, it is up to the teacher to become familiar with the game and be clear about its rules and operation before making it available to students. In addition, it is worth noting that any didactic and pedagogical resource to be used by the teacher must be connected to the learning objectives established by the teacher in the lesson planning.

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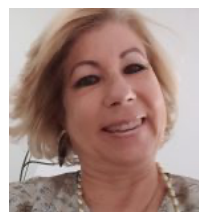
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