Games, as a teaching, learning and assessment tool, are an actual topic of debate across all educational levels, and can be approached from multiple perspectives, some of them presented in the current article. In order to employ games in the educational process, it is imperative for the teacher to be well-acquainted with the ludic structures, from the most abstract and general ones to the most concrete and particular ones. The set of rules specific to each game becomes an abstract system observed objectively and represents pre-defined and relatively firm guidelines. The purpose of this paper is to outline various classifications of instructional games (by presenting the specific features of each category that we identified), inviting all teachers to a moment of reflection: can gamification of learning enliven the classroom and actively engage students in their own learning process? This reflection has to be done taking into consideration that nowadays playing comes naturally in conflict with the notion of “work” and “diligence”. Creating learning situations by using different games during classes aims to foster children’s motivation for learning and at the same time developing their skills and competences in various fields. But playing can also have other roles, such as entertaining or relaxation.

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**Keywords:** Instructional game, acquisitions, behaviour, skills and competences.

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1. Introduction
It is interesting to observe that English speakers use two different words for playing: “play” and “game”, which designate two different practices. “Play” is associated with free and unconstrained playing, whose ending is unknown, whereas “game” refers to contexts with a clear finale (a winner, an achievement). The history of game-based learning is complex and its origins are deeply rooted into the past. Renaissance Humanism has been widely associated, in an innovating manner, with playing and learning. Gargantua, the character of Rabelais, plays cards in order to learn Math. In the 18th century, Rousseau proposed a playful approach to education. Later on, at the turn of the 19th century, the development of sciences allowed the emergence of several theories which justify the use of games in the educational process. Children’s play will provide support for the psychoanalytic activity and playing will be acknowledged its therapeutic value. It “can no longer be considered a useless or merely entertaining activity” (Bailly, 2001, p.41-45).

2. Classification of games used in learning environments
In 1997, Nicole de Grandmont identifies, in his “Pédagogie du jeu”, 3 distinct types of games:

1. ludic games
2. educational games
3. pedagogical games

Ludic games are characterized by free and emotional wellbeing-centered activities, emerged under the impulse of the moment, during moments of relaxation. These games are imagined progressively, as the child submerges more and more into the game. This type of games requires divergent thinking, always allowing multiple personal solutions, which promote individual development. Ludic games are not structured according to clear rules, and they help players organize, structure and develop their inner and outer world. Cognitive, affective, and psychomotor development is also promoted by these games.

Games are not only enjoyable; they also contribute to building understanding, and are therefore widely used in formal education. Consequently, teachers are encouraged to introduce games as a tool to enhance understanding, selecting those games which are specific to the target teaching activity and can bring added value to the educational logic. Brougère states that play is not only diverse in its particular manifestations, but also flexible and chameleonic (Brougère, 2005, p. 65). As such, “it will support the projection which enables some children to see in it what others cannot normally see. It can help protect values and interests which are related to its educational value.” (Brougère, 2005, p.65)

In leaning contexts, teachers use two types of games: “educational” games and “pedagogical” games. Educational games are defined by Nicole de Grandmon in the book referred to above as the first step in building a certain structure required to understand acquisitions. These games allow adults to observe the strategic behaviours displayed by children, concealing at the same time the educational goal pursued by the teacher. Even if the intrinsic pleasure is reduced, these playful moments sprinkled during class are entertaining; they do not require visible effort on the part of pupils and are focused on learning. Educational games have pre-established structures and rely on players’ desire to engage. They lead to
better defining, structuring and understanding each child’s inner and outer world, fostering cognitive, affective and psychomotor learning. Moreover, educational games allow teachers to assess each and every child’s learning and behaviour.

Since they are learning-centered, these games must captivate children and engage them in the proposed task. Otherwise, they lose their very playful quality, especially since children are not always aware of the learning logic when they play, even if they know they are at school and the purpose of school is to teach.

Another definition, more detailed and developed from the perspective of learning, is advanced by Gilles Brougère in his work “Jeu et éducation” (1995). In his opinion, educational games are those games which allow children to “act, learn and grow unawarely, through exercises which reproduce the world, in preparation of the effort for real-life work.” (Brougère, 1995, p. 158). This raises the question of what is the purpose to create learning situations wherein children do not fully understand that they are about to learn something. It is not about the fact that games might have educational value, in teachers’ hidden logic, but that games should be conceived in such manner so as to serve an educational purpose or to make learning more enjoyable. Games are recommended to make classroom practice less rigid and to motivate pupils. It is important to keep in mind that teachers should adjust their teaching style, whether or not they use games, always remaining inside a learning logic. Teachers’ role is to observe students and make sure that the game serves the academic goals pursued. Nevertheless, the playful and entertaining quality of games should not take precedence over learning. Playing does not have the same structure in educational framework as at home, for example. The teacher, before selecting a certain game, will review its rules, making sure it is the most efficient tool for attaining its goals.

Old-established games can be remodelled or re-adjusted to fit the educational purpose in order to be used in the teaching-learning process. When organizing such activities, the teaching materials and aids can be devised on the spot, or the teacher can use those available in the classroom.

The selection of games can serve all types of learning, whether they are purely educational, targeting a series of skills and knowledge, or focus on the understanding of everyday life, targeting specific behaviours. In reality, learning can be fun, and games can make learning more enjoyable for pupils, who will be more motivated to apply themselves throughout the class. The game should be designed or recreated in such a manner so as to target specifically the knowledge that is concealed, so pupils would be exclusively enticed by the joy of playing.

As defined by Nicole de Grandmont, pedagogical games are activities centred on the need to learn, which resort to convergent thinking and univocal solutions. They leverage on children’s pleasure to compete and test, to some degree test, their general skills. As a rule, pedagogical games trigger a specific learning process and the activities are, more often than not, mechanical.

Pedagogical games have pre-established structures, with no alternative versions, and rely on players’ skills. They usually generate precise learning patterns, and the player must resort to knowledge that has already been acquired through practice, attaining a high level of generalization. For the most part, these games serve evaluation and testing purposes, offering a minimum degree of intrinsic pleasure. It should be noted that pedagogical games usually pursue precise learning, and first and foremost test
and reinforce competences. In other words, pedagogical games represent the last link of the educational process.

“The pedagogical game is a hermetic game, without clear instructions. More precisely, it only responds to players’ actual knowledge and will highlight their performance in relation to certain knowledge. It is like a knowledge test. The player, to be able to play this game, should have passed the phases of the ludic game, which leads to the discovery of knowledge, then that of the educational game, which includes the rules of game-based exploration, so that, in the end, he/she can prove his/her knowledge socially, in order to become knowledgeable. [...] To be efficient, this game must be used after precise and theoretical teaching. Afterwards, the pedagogical game will point out what has and what has not been learned and, thanks to the other players’ influence, even an improvement in the player’s knowledge (De Grandmont, 2007). Pedagogical games are used to test whether certain knowledge or skills have been acquired, or even during teaching lessons, to reinforce certain objectives that have not been properly attained by all or part of the class. Such games can be seen as formative or summative assessment, depending on the time of the lesson when they were introduced.

According to Decroly and Monchamp (1978), games fall under four distinct categories:

1. Games related to sensory and motor skills development:
   a) visual and motility games
   b) motility and hearing games
   c) shape and size games
   d) spatial relations games

   This category of games enables children to develop their senses, such as: hearing, sight, touch, as well as space perception. They will help them build an appropriate sensory and spatial perception of the world, while promoting assertion of their unique personalities and skills. This category includes construction games, classification games, etc.

2. Idea association or inductive and deductive reasoning games
   a) idea-association games
   b) deduction games

   These games not only promote the development of sensory and spatial skills, but also introduce children to more subtle dimensions, such as time, purpose, origin, cause, effect, etc. By means of these games, children practice creative thinking, make assumptions and make choices during instructional activities. Such games entail tasks where children have to find missing items or have to identify all the elements of an assembly.

3. Instructional games
   a) Arithmetic games, with actual operations
   b) games with time representations
   c) introduction to reading games
   d) language and grammar comprehension games

   Instructional games allow children to develop reasoning skills. They familiarize children with basic calculation, language and communication rules, while introducing them to the world of symbols.
These games facilitate communication, harmonious interaction and self-assertion based on language resources. Examples of instructional games are images and word lotto games, domino, etc.

4. Collective games

These games help children understand the notion of rules and respect, while creating competitive situations.

School is synonymous to learning, but it is at the same time a place where pupils exchange ideas and socialize. Over the time, games have become a teaching method, used in conjunction with traditional instructional methods and tools. Games provide a different approach to certain objectives, such as self-improvement, communication and the ability to build relationships. Ball games, logic games and speed games are examples from this category.

The games proposed by the teacher must create situations that trigger the development of reading and listening comprehension skills, which compel children to induce, to deduce and to devise thinking strategies. The combination of these various forms of games has impact on multiple levels:
- enhance children’s focus and attention, compelling them to make compromises between speed and accuracy, impulse and reflection;
- guide children in devising strategies;
- contribute to children’s moral development given that, in contact with others, they understand and accept the necessity of rules, which in turn will structure their personality.

The game must allow children to reinforce their skills, urging them to apply the knowledge they have learned beforehand as an indispensible tool towards finding the solution. The proposed task should not be felt by pupils as formal instruction.

Several research papers tend to take a common stand: digital technology, which is part of today’s school children’s lives, has gained more and more ground in schools and universities. Some countries concerned with this issue (Austria, Denmark, France, Spain, Italy, Lithuania, Holland and Great Britain) participated in preparation of the “Report on the Classroom Use of Electronic Games” (Wastiau, 2009), having noticed the increasing push to use electronic games at all levels of education institutions. Education agencies are also involved at local, regional or national level to purchase licenses and games, selected by teachers chiefly according to their instructive value and in consideration of the motivation and support that they can provide to children with learning difficulties. The above-mentioned report highlights the added value that digital games can bring to education:
- improve children’s focus during the proposes tasks;
- lead to better retention of information;
- facilitate the learning of rules.

However, in implementing this game-based approach, teachers are faced with several challenges:
- to incorporate games in the instructional process, while observing all constraints imposed by the academic curricula, is not always easy;
- the equipment required by these games (computer, software, video projector, etc.) is most often scarce or unavailable;
- parents, as well as some teachers, are still skeptical about the introduction of video games in formal education.
“Educational video games are designed in relation to learning objectives. They will not turn children into engineers or scientists, and they cannot replace first-hand experience when the option is available.” (Jenkins, 2002). One advantage of video games is that they can reproduce relatable experiences from the real world. The virtual world is brought to the classroom to help pursue educational goals, allowing educational agents to leverage on the resources compatible with nowadays world and support their development.

3. Conclusions

Today, playing comes naturally in conflict with the notion of “work” and “diligence”. Gilles Brougère identifies geographies where playing is the “main activity whereby children learn” and others where playing is “a necessary completion of a child’s age, which must cease as soon as possible” (Brougère, 2006, p. 11-12). Games can be an educational tool, without being transformed into work. A difference should be made between ludic approach and ludic situation: they are both imperative. Playing cannot be defined as ludic approach outside a playing situation; and the other way around. In other words, playing needs players.

Fostering children’s motivation to learn is the supreme argument used by teachers when they employ a certain game in the classroom. Brougère claims that games allow, in fact, to “de-formalize academic teaching” (Brougère, 2007, p. 5-12): the formal framework offers specific elements, able to stir pupils’ informal interest. Sauvé highlights the extent to which playing favors learning, emphasizing the role of personal commitment, but also of emotions. Motivation creates “favorable conditions for cognitive, affective and psychomotor learning […], while playing motivates the learner, structures and reinforces knowledge, promotes problem solving and shapes young people’s behavior and attitudes.” (Sauvé, 2007, p. 89-107)

References