

Diversity of Electronic Educational Games Concept

José Walter Santos Filho^{*}, Henrique Nou Schneider[†]
Fecha de Recibido: 14/02/11 Fecha de aprobación: 15/05/11

ABSTRACT

The aim of this paper is to report the state of the art on the concept of Educational Electronic Game, in view of the diversity of existing conceptions about the use of games in Education. To achieve this we investigated the scientific literature of the late twentieth century and the first ten years of the century on the subject, noting that the ownership of the video game from the education you intend to use games developed with recreational function and apply them in ways tailored to reach educational goals. This opportunity offers space to be used in teaching games that were developed by observing conditions psycho-pedagogical selection and adoption of strategies of teaching, breadth of content to be treated, modeling behavior of User, and other aspects of the video game education.

Categories and Subject Descriptors: [Computer Uses in Education]

General Terms: Experimentation.

Keywords: Games, Electronics, Education.

1. INTRODUCTION

Namely, the construction of an educational electronic game follows a set of steps similar to the project of developing a game with role play, goal setting, rules, script, creating characters, setting, movement, perspective, and others. Issues involved in any educational software, which requires planning and an interdisciplinary team, adding some variables to electronic educational game, besides increasing the complexity of its design and modeling. It becomes imperative to consider variables such as selection of scenarios and significant related goal of the game and target audience, environmental performance against the chosen hardware platform, solving problems like image processing, moving objects and characters within the scene, coding the simulation and the characters, among others.

As a form of software, electronic game educational aims that students learn concepts, skills and content contained therein, with playfulness. Therefore, build an educational video game that includes in a satisfactory and proper that task, considering aspects of Education and New Information Technologies and Communication, is a complex task. Involves the problem that this article seeks to cover: the finding about the diversity of concepts identified by reviewing the literature, as well as the lack of consensus among scientists researching the topic for the unique expression that represents the Educational Electronic Game.

To address this research, this article is divided into four sections. Section 2 presents a theoretical framework with important concepts adopted in the recent literature on educational games, such as educational games, digital games, electronic games in education and development of games for education. Section 3 introduces the features and game ratings that influence the concept of educational

^{*} Universidade Federal de Sergipe Campus Universitário José Aloisio Campos Rosa Elze – São Cristóvão +55 79 88140186, jwsfilho@gmail.com

[†] Universidade Federal de Sergipe Campus Universitário José Aloisio Campos Rosa Elze – São Cristóvão +55 79 9962 0150 hns@terra.com.br

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electronic games. Section 4 describes the final considerations about the concepts covered and proposes a common denominator for all. Finally, section 5 presents the references

2. THEORETICAL

The definition of play is complex and subject to multiple challenges theoretical and practical arguments. Who has ideas for games defines them, if a sociologist, through its social and psychological functions, as the anthropologist, according to their historical origins, as the entrepreneur, in terms of their commercial potential. Currently, researchers computer games still debating the definition of games, and the involvement of educators in this discussion intensifies the complexity of the debate.

Thus, the interest in games and learning comes from discussions on the role of childrearing practices in the new century, leaving only be originated from the simple belief that young people find the games a fun and motivating environment and, therefore, that they should be exploited in educational contexts. These discussions suggest, among other things, that computer games are designed to show the "modes of learning" and therefore provide models of good learning practices. Still suggest that through games, young people are developing skills and social practices, and are preparing for the workplace of the 21st century, dominated by collaboration and communication, and prepare for social life. ([26], [13] [12], [9], [20] [22]).

The review of scientific literature to produce this report on the state of the art on the concept of educational electronic games has identified a variety of terms and expressions used to understand the subject. We found in reviewing 29 studies, 4 PhD Theses, Dissertations 5, 3 monographs and 15 scientific articles. The studies were selected by the criterion of relationship between the theme of the Electronic Game and Education, however, most studies remains a concern in conceptualizing the game smoothly and directly address its relationship with Education.

In order to guide the article, you must differentiate the use of expressions and Educational Game Electronic Game Electronic Education. The Electronic Educational Game expression leads to the idea of a game in which they are intertwined features of the electronic nature of the recreational function and the educational function of the game, handing the fact that the software was developed with the aim to entertain and teach. Otherwise, the term Electronic Game in Education, the idea presented is a game of electronic nature, but done with the goal of entertaining and adapted to teach. The difference is crucial for obtaining results with satisfactory quality didactic and pedagogical education and the understanding of a concept on Educational Electronic Game Another highlight is the development of the discourse on games. When discussing Educational Electronic Game, the reasoning of the writer, it must be the paramount need to define the concept of the game, before treating on an educational game about video game, and the subsequent approach to electronic educational game.

According to the Meaningful Learning Theory [5] [6], the development of concepts is facilitated when the elements broader, more inclusive of a concept, an idea, are introduced first, and then later, this is progressively differentiated and terms of specificity and detail. This structuring of concepts makes it easier for humans to capture different aspects of a more inclusive all previously learned, than to reach the whole from different parts. In our case, all the more inclusive concept of the game, primarily learned, then to differentiate electronic game, educational game to reach the concept of educational electronic games. This will be the order of treatment of the concepts within the article.

2.1 Diversity of Educational Electronic Game Concepts

Researchers interested in the literature on video game and education are distributed in various areas of knowledge. The main ones are related to the area of Education, which investigate using terms and phrases such as educational games, educational games, digital gaming in the teaching-learning, games

and video games in education. Researchers in the field of computer science in their research using expressions like computer games, digital games, or just for fun games in education. These two areas comprise the majority of research in the review of the literature on educational games, but there is research produced by professionals in Engineering, Arts, Sociology, Physical Education, among others, demonstrating the great importance of diversity in subject matter and production of terms and expressions of educational electronic games

2.1.1 Concepts of Diversity Game

The game always start discussions on the implementation of these children. This approach indicates a strong influence of Piaget's genetic epistemology. Understanding the evolution of children from early cognitive stages to its teenage phase of establishing a link between the behavior it has in the infant stage with that found in adolescence. This link shows that all the considerations that apply to children have a reflex similar if properly applied to teenagers.

From its early years, children use a great deal of time playing, playing and conducting recreational activities. The play occupies a special place in his world. Adults, in turn, have difficulty understanding how play and play for the child is his reason for living, where they forget everything around them and surrender to the fascination of the game. The teaching experience shows that many children are sometimes hours watching a single game and not be faint. Most of the time in childhood is dedicated to the game. It is a vital necessity, preparation for life, balancing the external world and internal channeling the energies of children and turning their troubles into pleasure.

In the study [11] the definition of game shows as "an art form which participants called players, make decisions to manage resources through game pieces in search of a goal. " In [23] is defense game as having a structure because it consists of a system of rules that impose a certain order to form socially produced. In his doctoral thesis, [23] considered the game as "a cultural phenomenon and repeatable at any time, an action that brings the confusion of life and the imperfection of the world a temporary, limited perfection", a definition of withdrawal who discovered in Huizinga.

For [19], the game is a free and voluntary activity, not everyday life, not real life, is like a gap in our daily lives; distinguished from "ordinary" life both the place it occupies on the duration , ie is characterized by isolation and restriction, the other of its features, perhaps the most striking, refers to the fact that in dual-drive of the game and culture, it is to play the lead: it creates order and is order.

Meaning virtual environments, [23] uses the word games as places of learning where we co-inhabit the co-construction of knowledge, interactivity, inter-subjectivity, autonomy and scope of a critical consciousness in people, making new epistemological paradigms of education . According to the same author, the game helps develop social, cognitive and affective subjects, is thus, in a universal activity, with unique features that allow the redefinition of different concepts. Therefore, the different games and especially games, can be termed as intellectual technologies.

Finishing the game concept, [3] in his doctoral dissertation, described the concept established by [19] about the game being more than a physiological phenomenon or a psychological reflection. He goes beyond the purely physical or biological activity. It is a significant function, ie, ends a specific sense. In the game there is something "at play" which transcends the immediate needs of life and gives meaning to action. Every game means something.

2.1.2 Diversity of Educational Concepts Game

In the investigation by a concept of an educational game, [2] contributed by inserting the claim [3] on the phrase "educational game" was created in the early twentieth century as a way to teach children covertly. For [3] educational games are characterized by "(...) act, learn, educarse unknowingly recreating through exercises, preparing the effort of the work itself. "

In this sense, the educational game is being designed as a directed activity and the free game is

assumed to be no benefit to education. Thus to [3], the game ends up depriving the educational game, because it loses its main features: the unproductive, pleasure, freedom and frivolity.

A well-argued against the assertion that the educational game itself would be educational, not what you would learn from him, is made by [18] shows that when usually what is meant by things that are worthwhile to be learned are issues that have traditionally been part of the curriculum. He argues that the whole issue and reading messages form a semiotic domain, which is related to a social practice and understand the messages only when you understand this social practice, beyond the messages lose their meaning.

Contributing to the broad understanding of the educational game, [15] states that educational games are based on interest in the play that is independent of age. Highlighting the importance of play in childhood, to [18] the educational games have great importance in child development to play a motivating role in the process of teaching and learning by maintaining a close relationship with the construction of students' knowledge.

According to [27], a notation that have recently appeared for the games are educational learning games. In the paper by Teixeira is found a definition quoted by Horton [27] for learning games: "[...] are simulations that lead learners to practice tasks of high interactivity, enabling them to develop skills without risk and without cost, using the computer. " It also presents a specialized extension of the concept of educational gaming, Cooperative Games, Educational learning games that are used by more than one player, or apprentice, where there is cooperation in pursuit of goals related to instructional games. All these concepts embody the implicit discourse of the electronic nature of the game, something very characteristic of the technological area in which the author belongs.

2.1.3 Diversity Concept of Electronic Games

A computer game is defined by [3] as a system composed of three basic parts: plot, engine and interactive interface. The plot sets the theme, plot, sequence and goals of the game. The game engine, also known by the name in English game engine is the mechanism that controls the reaction of the game according to user actions. And finally, the interactive interface that controls communication between the engine and the user graphically reporting a new state of the game. Thus, [3] considers educational games as a digital interactive multimedia software that tells a story through an immersive storyline, engrossing, pleasurable to be experienced, full of challenges.

In his article, [24] conceptualized the Electronic Games (JE) and applications with high complexity and requirement to use various techniques of computing as programming languages, operating systems, computer graphics, artificial intelligence and networking, as well involved in several other areas as psychology, pedagogy and arts, among others. Moving on to other terms for games, [1] conceptualizes the games as "an art in itself, a unique aesthetic field of possibilities, should be judged on its own terms." It is also the author as an expressive and complex cultural phenomenon, aesthetic and language, which was able to develop in its short existence, the rhetoric very satisfying to be investigated.

Another term is used by [2]. Video games, which are considered as a window to a new kind of intimacy with machines, featuring the nascent computer culture. The special relationship that players have with video games has elements common to interactions with other types of computer. Its dominating power, their almost hypnotic fascination, is the dominating power of the computer. According to [2], the experience of video game players help to understand this dominant power something else. At the heart of the computer culture is the idea of constructed worlds, "governed by rules."

In [24] introduces the concept of electronic games made in an interactive media or technological artifact, which feed the culture industry and go beyond simple entertainment that seduce children, youth and adults, in line with the concept presented by [2] .

2.1.4 Concepts of Educational Electronic Games

In his article on the Development of digital learning games with Toolbook Instructor, [10] introduces the concept that "digital educational games are designed to entertain the students and enhance learning of concepts, content and skills embedded in the game." For her game digital education serves to provide the student with a learning environment rich and complex, and can describe them as microworlds, because they provide an imaginary world to be mined and where students can learn. [11]

Educational electronic games (JED) operate as an extension of the game [24], as well as applications such as Computer Assisted Instruction used to entertain users, increasing the chances of learning the concepts, content or skills embedded in the game.

The appearance of only two terms that clearly refer to electronic educational game expression identified the gap in recent research on the topic. Researchers investigating the educational electronic games use a variety of terms and expressions to refer to the game in their different natures (electronic, conventional) and functions (recreational, educational) and end up not define the scientific rigor necessary to represent an expression characteristics.

3. FEATURES AND ASPECTS OF ELECTRONIC EDUCATIONAL GAMES

The characteristics that made digital educational games are intrinsically motivating challenge, fantasy and curiosity. Games can provide some educational outcomes that are not provided and as important as previously determined. May offer opportunities for students to use logic, reasoning and organizational skills to solve problems more interesting than it would be exposed in a joint exercise. A simple game can teach various skills and concepts, stimulating the development of new cognitive abilities.

In studies of [2] are related to important characteristics that must be present in a digital educational game, especially the following:

- The game's instructions must be clear to the participants and the objectives of that must be understood by students;
- The game must attract and maintain interest and enthusiasm;
- The game should explore auditory and visual effects to keep the curiosity and imagination and facilitate the achievement of educational objectives proposed;
- Explore the competition;
- Allow the player to control the interaction and the continuation of the game's difficulty level desired, the feed rate and the possibility of repeating segments;
- Must provide positive reinforcement at the appropriate times;
- Incorporate the challenge through the use of different levels to solve a particular problem, scores, speed of response, feedback of progress, among others;
- Must keep students informed of the level of their performance during the game, providing summaries of overall performance at the end;
- Use mechanisms to correct possible mistakes, and improve their performance;
- Provide clear instructions, except when the discovery rules is part of the game;
- Provide an environment rich and complex problem-solving through the application of logical rules, the testing of hypotheses, and predicting outcomes and planning strategies.

In the words of Franciosi cited by [5] Besides the characteristics discussed earlier, a digital educational game needs to watch some quality requirements didactic-pedagogic and technical quality as well, such as:

- Quality requirements didactic-pedagogic: well defined objectives, logical sequence of content,

appropriateness of vocabulary, ability to form concepts, correct spelling and grammar, appropriate feedback, clarity and brevity of the texts presented, the possibility of direct access to different levels of program and teacher's ability to interact with the system, including, deleting or changing the proposed content;

Requirements for technical quality, fast execution and no errors, resistance to inappropriate responses, friendly interface, long enough to view the screens, you can access the help, the possibility of interactive work, the possibility of user control over the execution sequence of the game And possible correction of the responses, the possibility of leaving the system at any time and use of screens with layout following a single model of organization.

In turn, [3] has shown that what characterizes the games are "spontaneity, unproductive, traffic between the internal and external reality, interactivity, symbolism, constantly recreated, and inciting challenge, mystery, surprise and unpredictability."

Agreeing with this characterization basically people playing not only for pleasure, there is merely an unconscious desire to learn [14]. The aspect of the fantasy experience into unknown worlds and have different experiences of everyday life are also strong motivators. Besides these, there are other motivating factors: the desire for power, a large number of complete games is enjoyable for the user, the social fact, the ability to integrate into the community, the need to become recognized, the exercise cognitive abilities. Nearly every user has a kind of motivation more evident, but their primary reasons are related to learning and fantasy.

Given this context, [2] stated that the traditional digital educational games that the school community is not accustomed to conform to the basic principle of learning in a free, spontaneous and joyful. For him, in general are on the market or the gym titles produced are characterized by didatizantes and content and focusing on content transmission and relegating the emotional issues involved in the play.

As said by Brougère, the game is unproductive, pleasure, freedom and frivolity. Adopting digital games in education as a way of assessing, "broadcast" content to reinforce behavior that is certain, it is merely to transpose the blackboard and chalk teaching banking to the bits of cyberspace, fully characterizing the digital games.

The concern is to allow the meta-cognitive development and experimentation by the player in the world like this emerging new knowledge that will be articulated by the learner. It is hoped the games provide a more meaningful learning, integrated with knowledge of the player in an article available on their website, [8] highlights the difficulty in defining the games, due to the existing variety. His concern is not as philosophical as that of [6], but aims to develop a critical language that will serve the game designers to analyze and understand what games are, how they work and what makes them interesting, developing a definition that is useful for approach to the relationship between gambling and the construction of knowledge.

To establish this concept, the author departs from negative. That is, the game is not a puzzle, or maybe it was better to use the English word puzzle, which is broader, involving different types of challenges. According to Crawford, [8] states that puzzles are static, unlike the games that change according to the action of players, so it states that "one puzzle is static."

A game is interactive regarding the possibility of cognitive operations, the player needs, for example:

- (a) identify the game world (game world), the resources and the objective,
- (b) Transcoding symbols to understand what the pieces represent,
- (c) Compare your current situation with the one you want to achieve
- (d) to consider several steps to reach that goal and summarize this analysis,
- (e) represent mentally the various elements of the game,

(f) Make divergent thinking to have different ideas how to achieve your goal, and converged to take necessary actions.

These opportunities are aligned with the Cognitive Taxonomy of Educational Objectives established in 1950 by Benjamin Bloom. This list is also important to test the hypothetical reasoning mentally different moves, backed with a sense of curiosity and engagement provided by the challenge. Through this broad approach, it is worth noting that each type of game will require different actions and reasoning by the player.

Ie, identification, decoding, comparison, analysis, synthesis, mental representation, reasoning, divergent, hypothetical reasoning, curiosity and engagement represent what is expected that the student develops in an educational process, because through them it is possible to build knowledge. If the game allows the development of skills necessary for learning, we predict that it will be useful in their own learning.

Here we present several possibilities, which involve the educational game, as a special category in between games, games are appropriate for education, which are made with the aim of pure fun, but are included in education and teaching activities that involve gambling, or at least some aspects, such as balancing the challenge and the rewards obtained by completing the challenge.

The games are presented as a possible mediator in the learning process requiring and developing skills, different skills and attitudes of students and teachers, according to concepts presented by [26] about skills and abilities. This view is reinforced by [12] when he argues that from the perspective of active learning and critical, who plays learns to experience the world anew; gain the potential to join and collaborate on a new affinity group, develops resources for future learning and problem solving and learning how to think within a specific domain with specific language, a semiotic domain.

These products can be seen as skills and abilities that the game develops, according to concepts presented by [26]. The games, far from being regarded as an end in itself must be seen as a means to encourage the meeting of the subjects that build and build knowledge. When mediation is to wrap the game, we have a situation: a new type of teaching relationship, a new relationship between teacher and student based on trust in the other, the students in taking their own learning process. Introducing themselves to co-responsibility in which teacher and student time balance, rhythm, mode of learning (and teaching!) And mechanisms for self-evaluation.

Vygotsky quoted by [16] confirms that learning takes place through the intervention of others, ie, learning is a social phenomenon. Learning, therefore, refers to the idea of understanding beyond words, lighting a practical context and mediated by other subjects or, as we want to emphasize, in its representation through the games. Unlike constructivism considers knowledge as the subject's action upon reality, Vygotsky sees the resulting knowledge of mediation made by other individuals, representatives of the cultural environment of the learner.

Also, electronic games, in the second classification of software [7], "are offered for the purpose of leisure. They may come to allow use with educational use, if integrated with other activities proposed by the teacher."

However, they can be educational as well when they are constructed and used for this purpose. The game may be able to play the role of the element that makes learning fun, taking his playful as catalyst to know the educational environment and providing a pleasant image, which contradicts the yawns, naps, or even that indiscipline often are the complaints of teachers in the classroom.

In turn, [23] proposes a classification of games based on dramatic design highlighting the so-called genre as a composite of different styles in the same way as is used in dramatic works such as theater, literature and cinema. These styles are: action, adventure, strategy, simulation, puzzle, toys and

educational. These styles refer to the way the game is running and the combination of these elements can lead to a genre that features games:

- a) Action: this is a narrative with a faster pace, involving movement and quick actions. The goal is to let the player always attentive. Appreciates the skill and speed. Movies like the Matrix series, involves action. Spiderman games like Counter Strike and are examples of evidence of action;
- b) Adventure: heroic narratives that usually involves some mystery and exotic locations that need to be explored. The Indiana Jones movies, The Mummy and The Legend of the National Treasury are examples of adventure films. Titles such as Tomb Raider, Resident Evil and The Monkey Island are examples of adventure games;
- c) Strategy: involves reasoned, logical-mathematical and / or planning and resource management. A particular goal should be achieved, however, resources are limited, so s must develop a plan that maximizes the actions to achieve that goal. For example, games of the series and Ages of Empires Ages of Mythology are examples of strategy games;
- d) Simulation: it is to manipulate and experiment with a mathematical model that aims to play some real situation or artifact. Through experimentation the player is enhanced its actions in order to dominate the simulated model. Flight Simulator is a great example of simulator;
- e) Puzzle: also called a puzzle, these are problems that need to be addressed with reasoned, logical-mathematical, mainly deductive reasoning. Many casual games are puzzles, such as Tetris.
- f) Toy: conditions do not involve winning or losing and do not have a predetermined goal. Predominates free actions under computational artifact. The Sims is an example of a toy;
- g) Education: Has an explicit intention to teach a particular concept and / or develop some skill. The games of the series-Hunt Clues are educational.

It is important to note that despite having been cited example of digital games in each of the styles does not mean that the games are in a single class. A game like Tomb Raider that emphasizes adventure has a combination of styles of action and puzzle.

The educational games require compelling storylines [1]. For the author it is very important to use digital games in the educational process because of the games affect the motivation, cognitive functions and the curiosity of the learner, because these games allow experimentation and exploration of the user. A major problem of educational games is to provide the apprentice a collection of puzzles with no link, making the game uninteresting. Thus it is interesting to add these games to establish principles narrative beginning, middle and end.

In playgrounds, youth have access to simulation techniques, interactive images that, according to [22] "no substitute for human reasoning, but extend and transform the ability to thought and imagination." Using [14], all cultural expressions, the worst to best, the more elitist the most popular, come together in a digital universe that links SuperText a gigantic historical, manifestations past, present and future communicative mind. With this, the author says, "they build a new symbolic environment. They make our virtual reality "[14].

For [23], we can analyze the application of knowledge acquired in the context of game play and the contributions of different perspectives. It is known that certain attitudes such as being attentive, organized and coordinate certain points of view are essential to achieve good performance when playing and can also promote learning as the child becomes more participatory, cooperative and better observer. Moreover, the action of playing requires, for example, performing interpretations, sort and operating information, aspects that have a direct relationship with the demands on school situations.

Thus, reviewing the actions of construction and application (in this case, to play only) from an electronic game, can reveal the knowledge built. When playing, try to establish rules, exchange ideas with their peers, which can create a friendly social relationship and that makes many come out as winners. Thus, it is possible that in the game, learn the rule is not an embarrassment, but the condition of cooperation, as well as the rules are situational conventions born of the needs of mutual relations "[1]. You can see that the games play two roles in education, with regard to learning.

They present themselves as those that can provide entertainment (pleasure) at the same time it can complete the individual in his learning (knowledge and understanding of the world). In relation to the functions of the game, [14] establishes that there are at least three: the agonistic (competitive), the playful (exuberance, illusion) and dialogic (hobby, leisure). [7] presents the same ideas of Huizinga about the rules of the game: "Every game is a system of rules. These define what is or is not gambling, what is allowed and prohibited".

Like its predecessor, it underscores the pleasure, the fun that the game provides and highlights the fact that it is a free activity. Huizinga emphasizes the need for equal opportunities of the players. And to [7], the categories of play are drawn from the feelings and experiences that offer: Agon, Alea, Mimicry and ilinx, described below.

Agon (competition) - In this category, the groups have in their game play feature of the competition and can be linked to what are called sport. Present the possibility of confrontation between two opponents, between two teams or when individual isolates need to overcome obstacles and difficulties to achieve the goal, such as rappelling, trekking, mountaineering or diving. [7]

Alea (Fortune) - When the randomness and chance appear. It's the game that man has the opportunity to deal with the reality of random contingency, what is not systematic or logical in the eyes of man. Currently seeking situations is great and generates a plot of the denial of pleasure, fantasy and seriousness. Even in sports, high technology, chance and randomness are present.

Mimicry (simulation) - indicates only come into play. That phrase, in English, means mimicry. Mime, costumes and imitation are so fundamental aspects of this class of games. Involves passing another, even briefly miniature, using gestures or masks that can create an act of fantasy. This situation is defined when the big sporting events are no less privileged moments of mimicry - even forgetting that the simulation is transferred from the actors to the spectators, athletes who are not mimic, but the wizards.

Ilinx (Vertigo) - ilinx games are associated with a frantic search for a situation that puts the body into a momentary frenzy reaching exhaustion, but no later than ecstasy. It proposes that the term ilinx, Greek name which derives precisely from designating vertigo (ilingos). [7]

Both [14] and [7] advocate the game as an activity with temporal and creating their own spaces, and with rules that are present in the sense of pleasure and fun. I think the main merit of [7] was to categorize the different games available, not to disparage them, based on their degree of luck and chance. Moreover, its classification remains alive and you can see representatives in current games.

For example, Metal Gear Solid is a typical game of agon, after all there are two opposing teams and one should necessarily be the winner, The Sims Online could be considered a game of Alea, since the game is governed by the actions of their casual participants: genre of massively multiplayer games - video game style completely online - would typically involve thousands of simultaneous players in matches that can last for months. The titles of this genre are the most significant World of Warcraft and Starcraft, which generally fall as ilinx involve hours and hours of intense action and continuous, since the games in which the user must "wear a mask" could be in the games of mimicry, as the case of RPG.

The games thus appear as a model image of the company, as shown in [7] with the transition from <<primitivo>> of mimicry and ilinx to another (modern, if you prefer, but in all sure, more permeated by rationality and logic) of agon and Alea. Change, therefore, but not decline, at least until we get into this century.

In the interaction with electronic games, these cognitive functions are intensified by the day, which allows children, teenagers and adults to discover new forms of knowledge, which today also occur through the simulation of new worlds.

4. CONCLUSIONS

The literature review uncovered that there is a concern on the part of the academy on the games and their effects. Studies revealed that range from the narrative aspects, psychological links between games and education, to the emphasis on the negative and positive aspects in the development of skills and expertise developed in the players.

The most common terms used were "game", "digital educational games", "educational games", "educational games" and "digital games". There were quotes such terms as "computer game", "Play in Education", "games" and "video games".

The term "educational games" are more prominent when the studies come from researchers linked to courses and departments of computer science, statistics, engineering. When the researcher is bound to nuclei of education, arts, music, the term "digital educational games" is highlighted. The term electronic educational game occurs less frequently in scientific research investigated what the term digital educational game, and theorists were the most prominent [14] and [7], widely cited in most studies.

From a psychology point of view, education is a teaching-learning interaction between teacher (teaching) and student (learning), in which one does not exist without the other, and this process that aims to produce changes in student. The games, made it fun to order may also be appropriate for education has determined through the intentionality of the teacher.

The idea that play fosters and enriches the learning process, to the extent that the subject is led to reflect, to forecast and interrelate objects and events, and helps to provide information about the child thought, which is fundamental for the professional who will assist in overcoming any difficulties.

Among the diversity we encountered, we conclude this study suggesting a definition for the Electronic Educational Game as an educational software developed with the balance between its role as a learning and educational function, drawn from psycho-pedagogical assumptions for selection and adoption of strategies education, scope of the treaty content, user behavior modeling, planning and interdisciplinary, combining the freedom typical of the games with the proper orientation of educational processes.

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