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Gabriel Savonitti;Joao Mattar

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Entertainment Games for Teaching English as a Second Language: Characteristics and Potential

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Abstract

This article explores the use of entertainment games for teaching English as a second language. It is a narrative literature review of theories of motivation and learning. To facilitate the choice of didactic resources to be used in the English classroom by teachers, this study brings to light the characteristics relevant to teaching that can be found in games, associated with different genres. In this sense, 14 researches involving digital games of entertainment were analyzed, using as basis Gardner's theories of motivation in the teaching, games and the active learner of Gee, zone of proximal development of Vygotsky, tangential learning model of Portnow and Brown, model of the monitor, Krashen's input hypothesis, Schumann's acculturation model, and the hypothesis of the interaction proposed by several authors such as Gass and Larsen-Freeman and Long. The results obtained were the definition of the relevant characteristics to teaching and learning in games and the identification of the genres associated to these characteristics. The discussion used the following characteristics found in the analyzed texts: motivation, classroom interaction, social interaction in the game, tangential learning, grades, complementary material, vocabulary, repetitive written content, big written content, need for text interpretation, audio and text.

Keywords: games; learning; English; ESL

1. Introduction

This article presents a narrative literature review to identify characteristics and potential of entertainment games for teaching English as a second language.

For the literature search, Google Scholar and Brazilian Portal of Periodicals Capes were used as databases. The general search criteria was: the teaching of English (as a second language) with the use / aid of digital games (or games) aimed at entertainment. The following keywords were used:

allintitle: English game OR games –“english game” –“english games” L2 OR “foreign language” OR ESL OR “second language”.

tudonotitulo: Inglês OR “língua inglesa” game OR jogo OR jogos OR games OR MMORPG OR RPG.

The exclusion criteria used were: non-digital games (since the interest of the research is about video games), creation of games (since the interest of the research is about existing entertainment games) and only empirical works (since the interest of the research is empirical work).

As a result of the search and the application of the filters, 14 texts were chosen for review. For each text, a brief summary was written, especially highlighting its target audience, the games used, the methodology, and the results. These summaries were then compared, resulting in the following categories, present in several of them or that deserved attention: students' motivation, learning improvement, students' fear, and teachers' difficulties, besides some peculiarities.

The relevant data of each analyzed text, such as number of participants, game used, and observed game effects in the learning were then crossed, trying to identify which characteristics of the games obtain the best results when used in teaching, which games genres are most suitable for teaching, and the universe where the game takes place (futuristic / fantastic / medieval / etc.).

These results were also analyzed from the perspective of the theories discussed in the next section and the various types of game genres.

The next section presents the theoretical framework used in the analysis. The following section summarizes the reviewed articles. The discussion identifies categories in the analysis of the texts. Finally, the conclusion points to future works.

2. Theoretical framework

This section presents theories that will be used to analyze the results of the literature review. These theories were chosen for their contribution to the analysis of the results of experiments that applied entertainment games to the teaching of languages.

2.1 Motivation in teaching

For Gardner (1985), motivation involves four aspects: a goal, effortful behavior, a desire to reach the goal, and favorable attitudes toward the activity in question. A motivated person would exhibit three main characteristics: attitudes related to motivation, goal-directed behavior, and a kind of integrative motivation.

Brown (2007) and Ryan and Deci (2000) separate motivation into two types. Extrinsic motivation, on the one hand, would come from someone else and target future earnings, which could be money, prizes, grades, and even a positive response. Intrinsic motivation, on the other hand, would involve no reward except the activity itself. Jobs that are intrinsically motivating are those that bring a sense of competence, self-determination, pleasure, and interest. Thus, learners who develop a task that is fun, interesting, and challenging would work harder than those aiming at a reward.

2.2 Games and the active learner

For Gee (2003, 2008), one of the reasons why games are appropriate teaching tools is that they let players take risks, but in a way that the consequences are lower than in real life, as there are ways of saving the game and going back when someone makes a mistake, or even lessen the difficulty of some stage so that initially it is not so complex. There is a low cost associated with failure and a high reward for winning something in games which do not annoy or frustrate players, while constantly provoking them with new challenges so they continue to want to play. This is not to say that players do not care about failures; they matter, but the game does not have a weight in real life, such as school grades.

Gee (2008) believes that digital entertainment games are great teachers, comparing their functioning with the working of the mind. He explains that the human mind works based on experiences, which must contain certain conditions to produce effective for learning. Five properties are mentioned:

- a) experiences must be structured from goals;
- b) the experiences must be interpreted, that is, reflection is needed (in action and after action) on how the goal relates to our thinking in the situation, and to extract lessons learned and anticipate why and when they may be useful;
- c) people learn best if they have an immediate response to their success or failures so they can recognize their mistakes; it is also important that they be encouraged to explain their mistakes and tell what they might have done differently;
- d) learners need opportunities to apply their past experiences, which can be interpreted as new situations, and can thus gradually enhance these experiences, generalizing beyond specific contexts;
- e) students need to learn from the interpreted experiences and explanations of others, including colleagues and specialists. Social interactions, discussions and tips are important; talking about why things happen in such a way is very important. Mentoring is best done with dialogue, with examples, and in most cases right at the time the tip can be used, or at the time the learner is prepared for the hint.

When experiences have the conditions listed above, they are organized in memory in a way that to perform mental simulations that prepare for decision making. Apprentices can then test the events in their mind before acting, they can act in different ways and imagine how goals could be achieved, just as a player tests a game.

Gee (2003) further emphasizes that assertive learning must have three aspects. First, the learner needs to be tempted to experiment, which can be done by creating an identification with the game, by reducing risks and offering rewards. In addition, it must expend great effort on its task, which again can be triggered by the creation of identification with the game, so that the student is focused and immersed in the context of the game. Finally, the effort needs to take place at a level appropriate to the learner's developmental stage, which needs to see that different levels of effort come with different levels of rewards and learning, and for the deepest level of success it is necessary that the game be elaborated in a way that will uncover new knowledge and new identities and values to develop. For this to occur, input amplification is used, which can be somewhat simple, for example, when accelerating a car, the view of the player becomes expanded. That is, the player must feel that his actions have effect in the world.

2.3 Zone of Proximal Development

The zone of proximal development is a theory by Vygotsky (1978) based on the fact that the learning of children begins well before attending school. For every learning situation that the child faces in school, there is a previous history. When beginning to study mathematics, for example, the child already had experiences with quantities and had to deal with operations of addition, subtraction, division and determination of size. Similar learning occurs with any questions, with the assimilation of the names of objects in the environment, the imitation of adults, and so on.

Development is separated into two levels. The first is real development, that is, the development of the mental functions of the child that have established themselves as a result of certain cycles already completed. The second level is the zone of proximal development, where the tasks for which the child has the means to solve but not the necessary experience are located. In this area is all the knowledge that has not yet matured, but is in the process of maturation. That is, it is not at the moment when you can do something for the first time that the learning is complete; at that moment, it's beginning, and from there the possibilities for learning and its improvement are opened.

Thus, development and learning do not go together. The development process progresses more slowly and behind the learning process. It can then be assumed that learning, with its various experiences, is being converted into development: this is the idea of the zone of proximal development.

Thus, Vygotsky's theory might help to evaluate the effectiveness of educational methods, such as games as a teaching tool. In this sense, Vygotsky claims that play creates a zone of proximal development for the child. In play the child always behaves beyond the usual behavior of his age, in addition to his daily behavior. Therefore, it is possible to create situations that maximize the potential of games as educational tools, contributing for students learning.

2.4 Tangential learning

Portnow (2008) defines tangential learning as autonomous learning that occurs when a game, film, or story captivates the learner enough to leave him intrigued by more data, leading himself to seek information about what he desires. A game that uses this strategy is *Assassins Creed*, which has a separate section with lots of information about historical moments presented, places, etc.

One can think of some strategies to teach the player, how to put some facts or small bits of information in moments when the player is not doing anything, as while loading game's screens. You can also draw the attention of the players using references of the most diverse types. *Age of Mythology* is one of the games that, because of the stories based on mythology (Greek, Egyptian, and Roman), ends up captivating their players, sometimes motivating them to seek other information about their favorite Gods, empires or heroes, thus favoring autonomous learning and intrinsic motivation.

For Brown, Li, Nguyen, Rivera, & Wu (10), the secret of tangential learning is the search performed by the learner. As the student looks for a subject on his own, he is focused and interested in learning about it, unlike a classroom where he is "forced to learn" about a subject that sometimes does not interest him.

2.5 Monitor and input hypotheses

Krashen (2009) claims that knowledge relevant to languages is created from two systems: acquisition and learning. On the one hand, the acquisition is explained as a form of internalization of the second language in a process that compares to the learning of the first language by the native speakers, requiring a great interaction with the target language. On the other hand, learning would be a conscious process that would function as a monitor that helps to correct the errors of the formation of sentences before speaking or writing.

Krashen's theory of second language acquisition in the late 1970s, referred by several authors such as Ellis (1997) and Larsen-Freeman and Long (1994), is divided into five hypotheses:

- a) hypothesis of the distinctions between acquisition and learning, cited above, which considers both different;
- b) hypothesis of the natural order in the acquisition of morphemes, which affirms that the rules are learned in a certain order, determined by the complexity and the necessary knowledge;
- c) hypothesis of the monitor: it reinforces that the ability to create sentences in another language comes from an unconscious knowledge, and that conscious knowledge works monitoring. This conscious knowledge serves to edit, that is, to make corrections in the output before creating a text or a speech, being that the focus of this monitoring aims at the grammatical precision;
- d) input or comprehension hypothesis: tries to explain how a learner acquires the second language. The central premise is that the second language can only be acquired by the learner through understandable input that is provided to him, and that competence in the language will be developed if that input is provided in sufficient quantity. Krashen himself states that a necessary (but not sufficient) condition to evolve from stage i to stage $i + 1$ is for the learner to understand the input that contains $i + 1$, that is, that it is focused on meaning and not in the form of the message. In terms of the hypothesis of understanding, acquisition takes place through understanding;
- e) affective filter hypothesis: it deals with affective variables that can condition the acquisition of second language of oral and written texts. It is related to three factors: self-confidence, anxiety, and motivation. Krashen (2009) summarizes his acquisition theory as follows: for acquisition, two conditions are mandatory: the first is an understandable (or better understood) input containing $i + 1$, structures slightly beyond the current learner level; the second is a low or weak affective filter for the input to be learned.

2.6 Acculturation

Acculturation, in Schumann's view (1986), is the social and psychological integration of the learner with the target language group. The acculturation model has as main idea the acquisition of the language in a natural way through the contact with speakers of the target language. The acculturation hypothesis was proposed after a study of several months observing an immigrant, his successes and his limitations in the acquisition of the language.

Schumann separates acculturation into two types: one in which the learner is integrated into a second language-speaking group, providing psychological contact and openness to learn it in contact with the input

in social interactions; and another in which, in addition to the characteristics of the first type, social and cultural values are also adopted for speakers of the target language, although such adoption is not a conditioning factor for acquisition, only social and psychological contact with the second language. In the model, there are two types of variables considered very important in acculturation conditioning and, consequently, in the second language acquisition: social and affective.

Larsen-Freeman and Long (1994, pp. 252–253) expose social and affective factors. Among the social ones, can be highlighted:

- a) social dominance: related to the resistance (or lack thereof) that learners of a second language have in relation to dominant culture or politics;
- b) integration patterns: the strategies of approximation and openness with the second language group, involving preservation, assimilation, and adaptation;
- c) closure: it is the factor that involves the distancing of the culture of the speakers of the second language in relation to the learner, making him to maintain contact only with elements related to his own culture and his social groups of origin, thus reducing the acquisition opportunities;
- d) cohesion: the cohesion between the learner and the social groups of the same origin limits the contact with the groups of speakers of the second language, reducing the acquisition opportunities;
- e) size: a social group of the same origin tends to reduce opportunities with groups of second language speakers in proportion to their own size;
- f) cultural congruence: the alignment and similarity between the culture of origin and the culture of the speakers of the second language;
- g) attitude: the attitude that the student's social group of origin and the speakers of the second language have with each other can increase or decrease the acquisition opportunities, depending on numerous factors;
- h) desired residence time: related to the learner's intentions to remain (or not) in touch with the culture of the second language speakers, which could promote greater acquisition opportunities in a longer residence time.

The affective variables would include:

- a) language shock: the fear of making mistakes, more common in adults, reduces acquisition opportunities;
- b) cultural shock: anxiety, fear, or disorientation caused by a new culture can negatively affect acquisition;
- c) motivation: related to the desire to become a member of a group, or have social and (or) economic recognition through the knowledge of the second language;
- d) ego's permeability: the perception of the limits of language, less rigid in childhood.

Schumann's acculturation model has as main hypothesis the relation between the acquisition of second language and the learner acculturation degree in a group of speakers of the second language, the first being controlled by the degree of the second language. Each degree of acculturation equals a degree of acquisition of second language. However, the social and psychological variables proposed by him, even interfering with acquisition, can not be understood as direct causal relations, since they include several

factors that affect it: social, affective, personality, cognitive, biological, aptitude, personal, instructional, and input (Larsen-Freeman & Long, 1994; Santos, 2011).

2.7 Interaction hypothesis

The interaction hypothesis, proposed by several authors (Larsen-Freeman & Long, 1994; Gass, 2003), emphasizes the negotiated interaction between native and non-native speakers of a language. That is, conversational interaction is the foundation of linguistic development, and not only the exposure to linguistic input, although this is not completely discarded in the hypothesis.

One of the proposals of the hypothesis, therefore, is the negotiation of meaning, especially involving adjustments by the most competent interlocutor to make himself understood by the least competent. Negative feedback during negotiation of meaning is important for there to be a development of vocabulary, morphology and syntax specific to the second language (Gass, 2003). The acquisition takes place through meaningful interaction, and the linguistic production in an interaction with the second language speakers by the learner is a crucial event in its acquisition, which discards the exposure to the input alone.

Table 1 outlines the relationships between the theories presented in this section and the universe of games. The letters in the first column will be used in the analysis of the literature review, in the following section.

	Authors	Links to games
A	Gardner, Brown, and Ryan e Deci	Game generates students' engagement supported by the goals and rewards of the game. Intrinsic motivation can be achieved if the player feels challenged and identifies with the game.
B	Gee	The theory can be observed if the game has goals that attract the learner and feedbacks that encourages him to continue. The space provided by the game should allow the learner to make whatever experiences he deems necessary, but with diminished risks, as opposed to the great rewards that will be given in the case of success (varying according to the level of effort made by the learner). A game that lets the learner immersed is necessary, so that he realizes that his actions have an effect in the game world, generating thus effort and focus on his part. If there is a teacher, he should be attentive to help the student by giving feedback to contribute to his instruction.
C	Vygotsky	With the large amount of information passed through the game and the presence of a teacher or partner, if the learner needs help, the possibility of new content being learned is high because of the various interactions that occur in the game.
D	Portnow and Brown	The game may generate a willingness to research language related topics such as songs, movies or game items as mythological, historical, or cultural references. It can also involve other aspects of the game itself, such as ways to evolve faster or codes and tips, leading the learner to get in touch with other knowledge and the language he wants to learn.
E	Krashen, Schumann, Gass, and	There may be interactions with other players, creating a sense of group / culture that generates the motivation to become part of the community, facilitating the learner's input, thus facilitating the acquisition of the second language.

Larsen-Freeman and Long	
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Relationships between theories and games

3. Literature review

In this section, the concepts and theories presented in the previous section will be used to perform a preliminary analysis of the results of the literature review, ascertaining if the characteristics of digital games focused on entertainment considered relevant to English learning generated positive results. This analysis tries to find out what are the characteristics of the digital entertainment games that motivate and contribute to English learning and what characteristics should be sought in these games so that their use in English learning yields good results.

The article by Sardone and Devlin-Scherer (2010), based on 10 students from 20 to 22 years of age, presents 11 textual and / or puzzle games found on the Internet. The relevant teaching characteristics found in the games were: plenty of written content, repetitive written content (phrases / words), and the need for text interpretation. The theories of learning and motivation that can be found in the games used in the study are: A, B, C, and D. The results of the article indicate that the students showed much more interest in the subjects (increased motivation), identified more with the characters of the stories they read, and paid more attention in class. Even in the case of games that teachers thought would be uninteresting, the attention of the students was greater than in a class without the use of games.

Antonopoulos' course completion work (2014) involved 25 Greek students aged 18 to over 24 who had already played MMORPGs. All participated in a qualitative study with 19 questions (4 personal). In this study instead of a game, a game genre (MMORPG) was used. The relevant teaching characteristics found in this game genre were: social interaction, repetitive phrases, plenty of written content, need for text interpretation, audio, audio text, and complex history. The theories of learning and motivation found in the case of the MMORPG genre are: A, B, C, D, and E. The study concludes that MMORPGs can bring improvements to students' informal learning in the area of grammar and vocabulary. In their research it is evident that the participants believe that they have benefited from the use of games. The study points out that the texts seen in games, both in missions and dialogues and in the chat with other players, lead to an informal learning, given that students have, in addition to texts, a context within the game that helps them understand unknown words. Another point noticed is that games motivate their players, helping in informal learning.

Soares' Master's Dissertation (2012) presents a research carried out with 17 students in a study group and 16 students in a control group, all aged around 20 years. The game used was *Allods Online*, an MMORPG. The relevant characteristics for the teaching of the game in question are: great social interaction, much written content, repetitive written content (phrases / words), need for text interpretation, spoken dialogues, and a complex story. The learning and motivation theories that can be observed in the game in question are: A, B, C, D, and E. Theory E is often found in MMORPGs, one of the most immersive types of games, also because they have tutorials presented by the game, leveling the challenges and rewards for

the player. The results of the dissertation confirm that there is greater engagement in tangential learning activities (playing digital games, listening to music in English, communicating with foreigners, and reading in English). The use of the game may have been one of the causes for increasing the grades of the tests performed. The improvements observed were: (a) spelling development, reading, and interpretation, (b) writing focused on content, and (c) spelling improvement. It was also noticed during the data collection process that there was an increase in the motivation of the players. Learners engaged in active learning of the English language, interacted with other players in English, and learned linguistic aspects through experience with MMORPG Allods Online.

In Santos' dissertation (2011) a hybrid (quantitative and qualitative questionnaire) survey was carried out with 1,171 players between 11 and 38 years old, who spent an average of 5.22 years playing the MMORPG *Tibia*. The relevant teaching characteristics found in the game were: very written content, repetitive written content (sentences / words), need for text interpretation, and great social interaction. The theories of learning and motivation that can be found in the case of the *Tibia* game were: A, B, C, D, and E. The conclusions drawn by this dissertation show that MMORPGs can be facilitators and motivators for the acquisition of second language of their players, mainly due to the predominantly sociocultural characteristics that stimulate the integration through this second language.

The article by Reinders and Wattana (2011) studies 16 students between 21 and 26 years old who played up to 27 hours a week the MMORPG *Ragnarok Online*. The relevant educational features found in the game are: intense social interaction, repetitive written content (sentences / words), plenty of written content, and need for text interpretation. The learning and motivation theories found in the game were: A, B, C, D, and E. The results of the study show that digital games for entertainment can bring benefits to learners, but pedagogical planning is needed for their use.

Shahriarpour and Kafi's article (2014) is a study of 25 students between 14 and 16 years who had an hour and a half of class per week for three weeks plus two to three hours of play four times a week. The game used was *L.A. Noire*, an action / adventure crime drama. The relevant learning characteristics observed in the game are: plenty of written content, repetitive written content (phrases / words), spoken dialogues, complex history, and the need for text interpretation. The learning and motivation theories that can be observed in the *L. A. Noire* game are: A, B, C, and D. The conclusions drawn by the article are that games caused increased motivation in learners, helping to improve learning, as well as improved vocabulary acquisition and increased student interactions.

In Noroozloo, Ahmadi, and Mehrdad's article (2015) two English classes were analyzed, each with 30 students (one of the rooms was a control group). The 60 students were women aged 14 to 17 and had classes three times a week for three months. The game used was *The Sims*, a life simulator. The relevant teaching characteristics found in the game are: repetitive written content (sentences / words) and need for text interpretation. The theories of learning and motivation found in the case of game are: A, B, C, and D. The conclusion of the article is that the classroom that used the game as a teaching tool obtained better results in tests, showing that the game was effective for the learning of vocabulary and use of words, as well as for the increase of motivation and interaction in class.

Miller and Hegelheimer's article (2006) is a study of 18 students, separated into three groups,

performing a weekly exercise for 15 weeks. The exercise consisted of performing certain tasks in *The Sims* with some explanations of vocabulary being given with the exercise (one group should use supplementary content, one could use it or not, and the third group did not receive the material). The relevant features for teaching raised in the game are: repetitive written content (sentences / words) and need for text interpretation. The theories of learning and motivation found in the case of game are the same as those cited in the study by Noroozloo et al. (2015): A, B, C, and D. The conclusions of the study are that the game generates a great motivation to the students, besides offering benefits for the learning of vocabulary. They also show that the use of a game along with a supplementary material to help with the doubts has a better result than just the use of a game.

Ranalli's article (2008) was carried out with nine students, who participated in a test before the classes and a new test after the classes. During the lessons, they performed several exercises and were divided first into English levels, then pairs / trios with different native languages, to force them to communicate in English, as well as to do tests with the game, teaching material and class instructions, game and class instructions, or just the game. The game used by the study was again *The Sims*. The relevant features for teaching raised in the game are: repetitive written content (sentences / words) and need for text interpretation. The theories of learning and motivation observed in the case of *The Sims* game are: A, B, C, and D. The study concludes that digital entertainment games along with theoretical orientations can be adapted for the use of indirect learning, and that their use with supporting didactic material improves the results. It has also been observed that simulation games (like *The Sims*) are popular with students (even with a great diversity of creation / culture) and that students are very open to classes with the use of games.

Menezes' dissertation (2013) was carried out with 12 students, aged 11 to 13, who were separated into two groups, each playing one of the games. They attended classes that used the games and then answered a questionnaire. The games used in this study were *The Sims Social* and *Wetopia*, both Facebook games. The relevant features for teaching raised in these games are: repetitive phrases, need for interpretation of text, and much written content. The theories of learning and motivation raised in *The Sims Social* and *Wetopia* games are: A, B, C, and D. The study concludes that there was a great motivation of the students with the use of games in the classroom, pointing out that part of the motivation comes from the teacher playing together with the students. Informal learning was observed, since the students were able to relate the contents of the classroom with the game, making thus learning more exciting and playful. It is also pointed out that a gaming group was necessary because students helped themselves and were helped, causing them to interact more, collaborating thus in the learning. There was an improvement in the students' vocabulary. Thus, the use of these social games gave the participants opportunities to learn in a playful and fun way; all described the opportunity as positive and realized that they had learned.

In the Oktafiya course completion work (2014), a case study with 22 students between five and eight years of age was conducted with guess-style games (image and action / gartic). In this study, the resource used was a blackboard, but it is also possible to use a digital game or a digital slate. The relevant teaching characteristics found in the game are: great social interaction and few words (linked to objects / actions / people). The theories of learning and motivation that can be seen in the case of "image and action / gartic" games are: A, C, and D. The conclusion of the study points out that guessing games with drawings

are beneficial for teaching vocabulary, showing results that indicate high student motivation and increase in vocabulary-related grades.

Luiz's dissertation (2011) was carried out with six students aging from 18 to 30, with two and a half hours duration. The study used the game *Dungeons and Dragons*, an RPG. The relevant features for teaching raised in the game are: plenty of social interaction, repetitive phrases and words, and complex history. The theories of learning and motivation that can be found in the game are: A, B, C, and D. The dissertation concluded that there was an increase in the motivation of students with the use of the game in class.

Smolinski's article (2013) was carried out with two seven-year-old students and analyzed 37 one-hour private lessons. The game used was *Club Penguin*. The relevant features for teaching raised in the game are: large social interaction, repetitive written content (sentences / words), and need for text interpretation. The theories of learning and motivation observed in the case of the Club Penguin game are: A, B, C, D, and E. The study concludes by agreeing with the existence of informal learning in the case of game use. Social interaction is high by the union of people through the game, but there is no information about the difference between the physical and virtual presence of the partners. Another important element observed in the study is that outside of class students continued to play, having thus a more intense contact with the second language (at least five hours a week) and voluntarily, forming thus a productive and authentic activity, generating motivation and the continued practice of the second language.

The article by Anderson, Reynolds, Yeh, and Huang (2008) accompanied eight students, all of whom had studied more than six years of English. The study consisted of five sessions with one to three students, who were led by a teacher through the game's training areas. No direct instructions were given, but the student could be in any doubt at any time. The game used by the study was *America's Army*. The relevant features for teaching raised in the game are: social interaction, repetitive phrases, and audio. The learning and motivation theories raised in the game are: A, B, C, D, and E. The study concludes that the game can and should be used as a way of bringing different materials into the classroom, pointing out that it works in a way similar to movies. A difference in the behavior of the individual student (asking more questions) is indicated in relation to the paired student (isolates more but asks questions to his pair). It is also pointed out that the students who were part of the experiment would take more advantage of the game with a word sheet of the game, since they had difficulty with the speed of speech of the characters.

4. Discussion

This section seeks to identify categories in the summarized texts in the previous section, using the theoretical framework already presented.

Most of the texts presented in the literature review use interviews, questionnaires, and observations as evaluation methods, but some also include tests or tests applied to measure students' progress in the use of the games. Noroozloo et al. (2015) and Soares (2012) used control and experimental groups, whereas Miller and Hegelheimer (2006) and Anderson et al (2008) used three groups, one with compulsory use material, one with material of non-compulsory use, and one without support material.

Chian-Wen (2014) concluded that games that engage the player over long periods are more effective

in influencing learning. Chiu, Kao, and Reynolds (2012) concluded that engaging games that are important to the player has better learning effects than those who only seek practice and better high scores. And for Sardone and Devlin-Scherer (2010), it is interesting to use games that do not proclaim a winner, besides the use of a game in which, regardless of the response or input, the player continues to advance.

Crossing the data obtained with the theories and concepts presented in the theoretical framework, one can conclude that the platform, the complexity, and the thematic of the game are not factors that influence the results in a strong way. All may be targeted by students, but they do not pose a risk of non-acceptance; even a student who does not know how to use certain equipment (video game control, PC, or cell phone), for example, will not have problems in developing skills, given the motivation generated by the game.

The following topics point out some elements common to the revised texts.

4.1 Motivation

All 14 studies analyzed in the literature review conclude that there was an increase in student motivation, whether due to the novelty in the classroom, the change of a class with digital games, or even the motivation created by the use of the game.

In the case of Sardone and Devlin-Scherer's (2010) article, the learners identified more with the characters of the stories they read in the classroom after playing the games; in this specific case, the motivation generated provokes tangential learning, since the student, on his own, begins to look for more stories of his favorite characters.

Soares (2012) study found that the increase in motivation did not influence only engagement: student-players arrived before the scheduled time and asked to stay longer at the end of the scheduled time.

For Antoponoulos (2014), one of the reasons why students feel motivated is because of the different kind of class, which brings games closer to movies.

4.2 Classroom interaction

In Shahriarpour and Kafi's (2014) study as well as those of Noroozloo et al. (2015) and Oktafiya (2014), the motivation caused by the games also brings another benefit to the classroom: increased interaction among students, focused on the subject.

Menezes's (2013) study, in turn, reveals that the motivation caused by the class using games is enhanced by the participation of the teacher as a player, demonstrating the potential that games have to increase the social interaction with people in the same physical space.

Anderson et al (2008) point out as a result of their research a relevant fact: students who play alone or with a tutor will ask more questions; students who play in pairs or more people, interact more with each other, debating and taking their own doubts instead of asking the tutor several questions. Menezes (2013) also encounters the situation of students' grouping in his research, showing that the union of students to answer questions is beneficial, helping both individual and group learning.

4.3 Social interaction in the game

Not only the existence of avatars are considered here: means of communication between players is necessary. The reasons why this is a relevant feature for teaching can be identified in theories such as:

- a) games and the active learner of Gee (2003, 2008), since the learner in this case will try to communicate with other players using the second language. In this environment, “risks” are lower than those of real life, since there will not be as much shame inside the game, for example. There are two additional points to note: the need for a great effort on the part of the learner and the need for an appropriate level for their development, which, in this case, depends a little more on the stage of the language learning in which the game is used;
- b) tangential learning theory of Portnow (2008) and Brown et al. (2014). From these theories, one can see that when a learner is interested in the subject that is approached in a game, this may lead him to seek knowledge independently, which can be done by researching on the theme of the game, or, in the case that interests this research, trying to learn more English so that you can communicate better in the game and overcome certain challenges, or even the search for a word or certain words, an internet guide, or game tips, thus leading the student to learn content related to teaching of the second language in an autonomous way;
- c) the input or understanding hypothesis of Krashen (2009) can be observed in social interaction at times when the learner tries to communicate, so that the input the learner receives would help in the development of language competence. In this hypothesis, the focus is the understanding of the messages received, which will bring the acquisition of knowledge;
- d) Schumann’s acculturation model (1986) can be observed in social interaction at the moment the player immerses in the game and begins to participate in his community, functioning as a moment of acculturation of the player. The interaction hypothesis proposed by authors such as Gass (2003) and Larsen-Freeman and Long (1994) is observed in the social interaction between the learner and the other players (native speakers or not). In this hypothesis, conversational interaction is the foundation of linguistic development. One of the points of the proposal, however, is that the most competent interlocutor helps the less competent in understanding, which can occur through feedbacks (which may or may not happen in the game).

The genres of game that usually present this characteristics are MMOs in general, of all the types, but any game that presents some form of contact between players might have this characteristic.

The studies analyzed in this article that present this characteristic are those of: Santos (2011), Reinders and Wattana (2011), Anderson et al (2008), Antonopoulos (2014) and Smolinski (2013).

4.4 Tangential / social learning (non-local)

The study by Soares (2012) points to a very common tangential learning case: learners were often curious about words or phrases seen in game contexts or being spoken by other players, and searched the meanings on their own to better interact with the game and its community. In this way, the student may end up engaging in various forms of tangential learning activities, such as listening to music and reading texts in English.

The same was observed in Santos's (2011) study, which demonstrates how MMORPGs can be facilitators and motivators for the acquisition of second language by the players, mainly due to their predominantly sociocultural characteristics that stimulate the interaction and integration through this second language. Thus, a second language teacher can use an MMO to put the student close to people who speak that language to instruct him in the reading of conversations. And because there are communities in games, a community that speaks a language other than the language of the player leads him to want to learn the new language so that he can be part of that community. In addition, you can even train reading and listening with characters controlled by the game.

Antonopoulos (2014) and Smolinski (2013) confirm the findings of Santos (2011), presenting cases in which the players themselves perceive that they evolve greatly due to social contact within the MMOs, whether talking to other players or just reading their conversation. Both point to the benefits of in-game entertainment, which is why players spend so much time in these games, keeping in touch with the English language.

Thus, it can be observed that practically all the games analyzed in this research that enabled a chat contact bring the benefit of social interaction in the second language. The research by Reinders and Wattana (2011), however, does not show similar results, since a modification was made in MMORPG *Ragnarok Online*, greatly limiting the chances of this contact. The study by Anderson et al (2008) also does not present results of this type, but the game community is active and present and helps the players evolve, pointing again to the positive results observed previously. However, the study of Menezes (2013) does not present the indicated benefits because the social games used in the research do not offer tools for direct social interaction, that is, there is no means of communicating in these games.

It can be noticed that MMOs are the most suitable gender for benefits related to tangential learning and social interaction in English for the classroom, since they bring the possibility of direct interaction among the players.

4.5 Grades

Authors such as Soares (2012), Oktafiya (2014) and Noroozloon et al. (2015) show that games associated to lectures guided by teachers have a beneficial effect on students' grades compared to students of the same levels who have not used games in their classrooms.

All the texts analyzed also show that there is an improvement in one of these points in some way: learning words, better understanding of English pronunciation, or even evolution in reading.

In Oktafiya's (2014) study, there is an improvement in students' grades. Soares' (2012) conclusion indicate that positive results were generated on the player's test grades. In Noroozlo et al's (2015) study, a test was proposed after 20 classes, in which the students taught with games had better grades than the standard room.

Chian-Wen (2014) performed a meta-analysis of 25 studies, noting that all show an improvement in student performance (0.6 ~ 0.7). In another meta-analysis, that of Chiu et al. (2012), involving 1,116 students, beneficial effects of games in learning were also detected.

4.6 Complementary material

The analyzes of Ranalli (2008), Anderson et al (2008) and Miller and Hegelheimer's (22) studies conclude that the use of the digital entertainment games together with complementary materials (translations of expressions, words, or a targeting of the tasks of the game) is more positive than the use of an isolated game, presenting better results in qualitative and quantitative researches. Students who used the extra material reported having greater ease on their own, and in surveys where tests were performed, students using the extra material scored the highest.

4.7 Vocabulary

Shahriarpour and Kafi (2014) identify an improvement in students' vocabulary acquisition. Oktafiya (2014), in turn, concludes by saying that drawing guessing games are beneficial for vocabulary teaching. Miller and Hegelheimer (2006), Noroozloo et al (2015) and Ranalli (2008), whose studies are carried out with the same game (*The Sims*), show that students had a significant improvement of vocabulary, linking this result to repetitions in conjunction with the animations of the actions performed by the students' commands, thus facilitating their understanding and learning. A similar result can be found in the Menezes (2013) investigation using two games, *Wetopia* and *The Social Sims*; the first involved several repetitions of words and tips, while the second has the same characteristics of the game *The Sims*, with some changes that make it possible to visit other players, but limiting social interaction to the avatars. The students of Menezes' research (2013) believe that the learning was facilitated by being able to relate the contents seen in the classroom with the actions taken in the game. The students analyzed by Antonopoulos (2014) follow the same line of reasoning, believing that the repetition of words, together with the content seen in the classroom and all the different contexts where the game presents the words, facilitates their understanding and learning; in this study, social (non-local / physical) interaction is also pointed out as a facilitator.

Santos (2011) believes that because of the social interaction and repetition of words within the game, even forcing the player to write in order to speak with the NPCs, a perfect learning environment is created for learning, from the actions of the player or by his observation (reading conversations of the players or of the players with the NPCs); this environment ends up being a facilitator for the acquisition of the second language.

Soares (2012) concludes that the experiment period may have generated positive results in the test scores of the gamers, in relation to the control group, mainly in: spelling development, reading, and interpretation; writing with focus on content; and spelling accuracy.

Combining these information with the theories and concepts presented in the theoretical framework, it can be observed that all analyzed games that bring benefit to the vocabulary of the players involve some kind of repetition. It can also be observed that, for the most part, these repetitions need to be interpreted, and this interpretation is aided by the game, by placing the players in different situations, facilitating thus their understanding and learning.

4.8 Repetitive writing content

The games that contain this feature are those that have somehow some written content that is

repeated; in this specific feature, other forms of content (audio) are not considered. The reasons why this is a relevant feature for teaching can be identified in the following theories:

- a) games and the active learner of Gee (2003, 2008), since the learner will be immersed in an environment, realizing his experiences to acquire new knowledge about the world of the game. In the case of repeated words seen through the new experiences, it is possible to acquire not only knowledge about the game but also about the language, since in the student's experience the language barrier itself be an obstacle to be overcome. This overcoming can be aided if the learner has a tutor who helps him with the meanings, because repetition (of words and experiences) could be acquired more quickly;
- b) Vygotsky's (1978) zone of proximal development. Since the learner will be experimenting in the game, the repeated words that are in the zone of proximal development can be understood by him. According to this theory, not only will new words be acquired: expressions, the semantics of language and the formation of sentences, all the work of reading, understanding and writing are being worked on;
- c) Portnow (2008) and Brown et al's (2014) tangential learning theory. The words you see in the game may pull some memory or make the player interested in something that is not told on the game. As an example, one can think of mythology's stories not told, or barely seen in the game, old legends, or even food recipes. This information that a game brings can awaken a curiosity in the learner that makes him study on his own some subject of his interest, contributing thus to the learning of the language. And it's not just about issues out of the game; for example, in an MMORPG, the learner may want to learn how to make a character with different abilities, and so enter sites in English to find the information;
- d) all the content seen in "social interaction", since some parts of social interaction are always repetitive, such as presentations, interaction beginnings, and farewells (here only the interactions via text are being analyzed).

It was not possible to identify a specific genre that usually presents this characteristic more intensively, but any game that includes some form of repetition has this characteristic, such as a mechanics of choices that is repeated many times during the game (games that have stores, levels battles, and / or dialogue / action choices); so games that have plenty of written content are presented here as those that bring this feature.

The researches studies in this article that present this characteristic are: Soares (2012), Santos (2011), Reinders and Wattana (2011), Shahriarpour and Kafi (2014), Noroozloo et al. (2015) Miller and Hegelheimer (2006), Luiz (2011), Ranalli (2008), Anderson et al (2008), Antonopoulos (2014), Smolinski (2013), and Menezes (2013).

4.9 Plenty of written content

Games that have this characteristic can be worked with the same theories seen in repetitive written content, since they have the same textual basis, working here reading, understanding and, in some cases, writing.

Again, MMOs appear as the genre where this characteristic is more intense.

The studies analyzed in this article that present this characteristic are: Soares (2012), Sardone and Devlin-Scherer (2010), Santos (2011), Reinders and Wattana (2011), Shahriarpour and Kafi (2014), Luiz (2011), Antonopoulos (2014), Smolinski (2013), and Menezes (2013).

4.10 Need for text interpretation

Games that have this characteristic can be worked with the same theories seen in “repetitive written content”, since they have the same textual base, working here reading, understanding and, in some cases, writing.

It was not possible to identify a specific genre that usually presents this feature more intensively, but games that have a lot of written content are presented here as those that bring this feature.

The studies analyzed in this article that present this characteristic are: Soares (2012), Sardone and Devlin-Scherer (2010), Santos (2011), Reinders and Wattana (2011), Shahriarpour and Kafi (2014), Noroozloo et al. (2015), Miller and Hegelheimer (2006), Luiz (2001), Ranalli (2008), Anderson et al. (2008), Antonopoulos (2014), Smolinski (2013), and Menezes (2013).

4.11 Audio

Games with this feature are those in which the characters (of the player or NPCs) have speech (accompanied or not of text) or have an audio chat for communication between players. This includes games that have songs sung (with lyrics).

The reasons why this is a relevant feature of teaching can be identified in theories such as:

- a) games and the active learner of Gee (2003, 2008), because the audio of the game generates new experiences to the learner (who already has some bases of English), which together with the immersive environment will bring new knowledge to the student. This experience will be amplified if the learner is with his tutor;
- b) Vygotsky's (1978) zone of proximal development, since when the learner listens to sentences in English, in addition to training his hearing to what he already knows, words or expressions that contain some new words can be understood, being seen at different moments or contexts, which happens many times in the case of games;
- c) Portnow (2008) and Brown et al's (2014) tangential learning theory. With the audio of the games, the learner can discover something that holds his attention, which can be a song, story, or a place in the real world that makes him search the game or out of it on his own. This contact with the language is beneficial to your training and learning;
- d) all the content seen in “social interaction”, since some parts of the social interaction are always repetitive, such as presentations, interaction starts, and farewells (here only the interactions via audio are being analyzed).

It was not possible to identify a specific genre that usually presents this characteristic more intensively, but games produced by big companies, better known as “AAA”, have for the most part this characteristic, regardless of their gender.

The studies analyzed in this article that present this characteristic are those of: Shahriarpour and

Kafi (2014) and Anderson et al. (2008).

4.12 Audio text

Games that contain this characteristic can be worked with the same theories identified in “audio” and “repetitive written content”, since in this case both types of inputs will be used simultaneously.

It was not possible to identify a specific genre that usually presents this characteristic more intensively, but again games produced by big companies, “AAA”, have for the most part this characteristic, regardless of their gender.

The studies analyzed in this article that present this characteristic are those of Shahriarpour and Kafi (2014) and Anderson et al. (2008).

5. Conclusion

This article has conducted a literature review to identify characteristics of entertainment games that may be useful for teaching English as a second language, trying to associate these characteristics with games genres.

The characteristics identified in the studies and games analyzed were: motivation, classroom interaction, social interaction in the game, tangential learning, grades, complementary material, vocabulary, repetitive written content, plenty of written content, need for text interpretation, audio, and text in audio. One of the possibilities to test and validate these characteristics is to create control groups to study if the manipulation of each one of them generates the results pointed out in this article.

Despite the focus on the English language, several of the results of the review serve to teach other languages. The study, therefore, works as reference to guide the choices of games by language teachers.

The fact that there was no delimitation in the age of the students that were part of the several studies analyzed can be considered a limitation of this research. In this sense, future studies can replicate this research seeking to delimit the age range, for example by preschool, elementary education, middle education, higher education, and college/university, seeking to identify specific characteristics for each age group.

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