The Construction of Learning Object: Tools for the Teaching[*]

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The main objective of this work was the construction of a Multidisciplinary Learning Object as a tool for teaching, enabling the use of information and communication technologies for use by teachers acting in elementary school, based on Discourse Analysis, Theory Cybernetic-systemic, the Multiple Intelligences and Collaborative Learning. All of them are informed by Foucault, Pêcheux, Bakhtin, Gardner, Levy, and others. The theoretical contribution is justified to the extent that the student is above all a being inserted into a user company tool created by it over time, to act on the world. Theoretical principles underlying the construction of learning objects as tools for teaching are related to teaching and learning. The developed learning object establishes the link between the fields of pedagogy and usability, the step by step construction of each of them and their purposes, characteristics, and all detailed in the development of research. The construction of the learning object follows the steps of a methodological construction for the development of a computerized product, followed by a systematic planning and the design and construction.

Keywords: learning theories, learning object, construction

Introduction

Man has developed numerous technological artifacts throughout human history to facilitate their actions on the environment they live in. Currently, such inventions stand out and permeate many areas of human activity especially those related to Information and Communication Technologies (ICTs) related to the use of computers and communication networks. Significantly, these technologies are influencing the way of man to develop activities related to work, leisure, communication, and more recently, to the processes of teaching and learning. With regard to teaching and learning, the constant development of ICT has provided a variety of resources that can be integrated for the development of educational materials for both classroom uses as distance, in which the multimedia and interactive resources gain featured.

Pedagogical approaches have undergone changes with the increasing use of computer technologies and the constant need to improve the quality of teaching-learning process, because of educational practice that aims to prepare individuals for active participation and transforming the various transforming the various levels of social life.

With the advent of the Internet, especially the development of information technology and communication and multiple web-based learning opportunities, educators, experts, and teachers need to make use of these resources in the field, but there are a number of difficulties in manipulating effectively technological tools. On

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[*] This article is part of the defended dissertation, in 12/05/2014, to obtain the Master Title Letters in Universidade Federal de Rondônia (UNIR).

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the other hand, there are computer professionals with difficulties in dealing with cognitive and pedagogical issues that must be present in learning objects exclusively for educational purposes.

As Valente says (1998), "the use of modalities in educational computer technologies, have the student as an active agent, preferably" (p. 7). Enriching and diversifying ways of conducting the process of teaching and learning, as well as expanding the contents of the approaches levels studied to perform the curricular activities are the contributions of computer technology in education, says Oliveira, Costa, and e Moreira (2001).

While these tools affect the environment, they also have an influence on the individual, transforming their way of thinking and acting. Thus, the technological artifacts—computer, Internet, OAS—created by human beings, change society and, consequently, their ways of acting in society.

Theories of Learning Education

We assume that teaching is learning, so Schimitz (1982) describes as "a process of acquisition and assimilation, more or less consciously, new standards and new ways of perceiving, being, thinking and acting" (p. 53). But there are scholars who prefer to define learning as the acquisition of new behaviors. For Fernández (1998), the reflection on the current state of the process of teaching-learning allows us to identify a movement of ideas in the different theoretical perspectives on the depth of the binomial teaching and learning that exist.

Although this subject leads us to a broad discussion, it requires the knowledge of the fundamentals of their own area of learning and psychology as a science, and considering that this is just a moment, we aim to contextualize the learning theories so that the study contributes to a specific understanding of this subject needs for the construction of learning objects.

Thus, we describe the theories that actually have supported this work.

Speech Analysis

The Theory of French Discourse Analysis was founded by philosopher Michel Pêcheux in the early sixties, whose object is the speech. Many factors influenced its appearance, but Pêcheux structured such a theory based on three areas of knowledge such as linguistics, from Saussure studies that accentuates not only the language but also to speak, pointing to the singular, specific; psychoanalysis, based on the reinterpretation that Lacan made of Freud's work and the way you work the inversion of meaning/significant for significant/meaning, identifying the unconscious structured as a language; and Marxism, based on reinterpretations that Althusser made of Marx's writings has historical materialism. Thus, discourse analysis aims to be a discipline of "inset".

Foucault (2001) admits: "the truth does not exist out of power or no power" (p. 12). From this statement, there is a clarified understanding of Foucault (2004), when he points out that "the speech is not simply that which translates struggles or systems of domination, but that why, for that struggle is the power that we want to seize" (p. 10).

By stating the subject is positioned in a place marked by a discursive formation that is linked to an ideological formation. The discursive formation, in turn, regulates to tell where it comes, or dictates what should and what should not be said in certain circumstances. Pêcheux (2006) states:

> The individual interpellation on the subject of his speech is effected by the identification (of the subject) with the discursive formation that dominates (this is, in which he is established as a subject): this identification, founder of the unit (imaginary) of the subject, supports if the fact that the elements of interdiscourse [...] that constitute the subject of the speech, the traces of what determines are re-enrolled in the subject's own speech. (pp. 167-177)

Since the contributions of Bakhtin (2006) are very important to reflect this theoretical foundation. For him, the discourse is the social phenomenon of verbal interaction, considering the interlocutor as an indispensable element for the constitution of speech, and also considering the process that way in real interaction and imaginary. The particularities of each speech occur in the sense that the words are the meaning of what is being said, fulfilling the function of filling the incomplete and vague way. In this sense, Bakhtin says:

> The words are woven from a multitude of ideological strands and serve as a plot to all social relations in all areas. It is therefore clear that the word will always be the most sensitive indicator of all social, even those that come out that have not yet taken shape, which has not yet opened the way for structured ideological systems and well-trained [...] The word is able to register the transitional phases more intimate, more ephemeral social change. (Bakhtin, 2006, p. 40)

In the light of discourse analysis, we see that language is not a simple instrument of communication or transmission of information. It is more than that; it also serves to not communicate. Language is the place of conflict and confrontation, because it can only be caught in the process of social interaction. There it is a comforting rest of stabilized direction.

There is a range of discourse on speakers' courseware. Among them, we can mention the discourse of educational policy, the pedagogical discourse, and the discourse of teachers. Each of these speakers participates and contributes to the construction of knowledge about the materials in teaching, for the construction of a discourse surrounding these objects. However, it is important to consider that there are specifics in the discursive practices of speakers related to their place in the educational field and the context in which they are inserted.

Make use of a material in the classroom in order to make more concrete teaching-learning process, less verbal, more effective and efficient; it is a concern that accompanies the Brazilian education throughout its history. Historically, the use of diverse materials in classrooms, supported by a discourse of educational reform has become synonymous with pedagogical renewal, progress, and change, creating an expectation as to the teaching practice, as teachers won the effective role of use these materials in order to achieve good results in the learning of their students.

We can say that discourse analysis enables the teacher to be based theoretically and methodologically through conceptual features such as speech, sense, discursive memory, subject, ideology, stated, inter alia, through which can make interpretative exercises figures, images, speeches, and texts.

Systemic Theory Cybernetics—The Systems Theory

The Systems Theory emerged from a perception of scientists that certain principles and conclusions were valid and applicable to different branches of science. The German biologist Ludwig Von Bertalanffy advocated the idea that not only the general aspects of the different sciences are the same as their own specific laws of each of them can be used synergistically by the other. From this principle, Bertalanffy developed the General Theory of Systems. This can be seen as one that is dedicated to studying the social interaction processes, making the notion of pass system to appear and to be part of scientific research and the "general systems theory is considered as the third great contribution a unified theory of human behavior" (Osório & Valle, 2002, p. 26).

The General Systems Theory (TGS) has experienced a growing and gradual expansion of the approach that was from the classical approach, through humanistic, neoclassical, structuralist, the behaviorist to the systemic approach. In his time, the classical approach was influenced by three dominant intellectual principles in almost all sciences at the beginning of this century: reductionism, analytical thinking, and mechanism.

Another theoretical contribution came to join the systems theory in order to better understand the process of human interaction, in the 1940s, which is cybernetics, which deals with behavior changes of the members of a system and the influence of a member of other such behavioral changes.

Systemic theory—and within that cybernetics—assumes that every human being is part of a system (in this case the family), and this system is regulated by a larger system (society). Being part of a micro and a macro system, humans will gradually build your "I" from social interactions. These theories take on that humans from birth relate and interact socially with others, and that these interactions determine the identity construction process and determine also the entire construction of the psyche.

Vasconcellos (1995) teaches that "cybernetics is concerned with the fact that changes occur in the system behavior and not on hypotheses about the possible causes of these changes" (p. 76). The author believes that these shifts of focus from intrapersonal to interpersonal caused systemic approached cybernetics, theory were looking for at the time to understand the relational patterns.

It is noticed that cybernetics is an attempt to understand the communication and control of machines, living beings and social groups through analogies with electronic machines. Such analogies were only possible in cybernetics, in this study the processing of information within these processes such as encoding and decoding, feedback, learning, among others.

Anchored in the concepts and seeing the school as an open system, the General Systems Theory, being characteristically interdisciplinary, in which refers to the understanding of the use of different methods, attractive and even existential, can interrelate systemic approach and the pedagogical practice. It is becoming clear to use this as a theoretical contribution in this work. Since we cannot understand education in isolation, it is always exchanging information with several variables, internal and external, tangible and intangible, and more, Bertalanffy (2008) defines education as "an integrated system and has all the peculiarities of an open system, receiving and transmitting information, communicating and integrating facts" (p. 69).

With the purpose of creation of multidisciplinary learning objects, nothing more appropriate, make use of this theory since the systemic approach practice interdisciplinarity, because it creates a common conceptual basis and allows developments in an area of knowledge can be applied in other areas. So Bertalanffy (2008) argues that a General Systems Theory as a useful tool is able to provide models to be used without different fields of knowledge and transferred from one to another.

This approach can be adopted as a method for understanding and interpreting the frantic flow of the Knowledge Age, promoting mechanisms to couple the dynamics involving the Contemporary Education, mediate learning through practical experience—e-learning—interactivity and games electronics, respect all actors involved in the process, and ultimately, integrate and reflect on the disturbing presence of innovation that ICT promotes. It also refers to the discussion and breaking pre-established paradigms in science, the scope and complexity in solving problems, so peculiar to interpretation of the methods practiced in the educational activity.

Theory of Multiple Intelligences

In the 1980s, Howard Gardner introduced the Theory of Multiple Intelligences (MI), classified as follows: linguistic or verbal, logical-mathematical intelligence, spatial intelligence, musical intelligence, bodily kinesthetic intelligence, interpersonal intelligence and intrapersonal.

The choice of this theory for the basis of this research to be considered within the current research fields in the area of cognitive psychology applied to education, arguing that it is important for teachers and students with

the knowledge of instructional approaches. For teachers it is an essential aspect for the recognition of the potential of the students and for the students, this knowledge serves as a resource for reflection on their own learning processes.

The theory of Multiple Intelligences may be an option when one realizes the need for education to understand. Such an understanding is recognized when the student "is able to apply knowledge, concepts and skills acquired in some kind of educational environment, in a new instance or situation in which this knowledge is relevant" (Gardner, 1995, p. 162).

In education, the theory of Multiple Intelligences involves developing assessments that are appropriate to the various skills, the creation of specific curriculum for each know; where you have one the most varied options in the educational environment.

Thus, the intelligences that humans have, according to the theory of Multiple Intelligences, can be stimulated by appropriate pedagogical practice that has the motivation to learn and the awakening of the student's desire as main objectives. And an interesting way to pique the interest of learning is through material nature or virtual games; it acts as a stimulus to growth, with resourcefulness towards the cognitive development and the challenges of learning. Thus there is a clear choice for this theory in the development of this research.

To resort to the theory of multiple intelligences in the production of learning objects, the teacher will consider the student learning to their experience in society because it encourages the knowledge of the capabilities motivating them in their achievements.

Collaborative Learning

Collaborative learning refers to a method of instruction or learning where students work together in small groups around a common goal. These are responsible for learning each other, according to Gokhale (1995), so that a student helps in the learning of other students.

Although in a recent study of Irala and Torres (2004), collaborative learning related to the idea of learning and working together is being tested by theoreticians, researchers, and educators from the 18th century, in the 1970s, there was a lot of production in the field of cooperative and collaborative learning. But only in the 1990s that kind of learning gained popularity among teachers.

Gomes, Vermelho, Hesketh, and Silva (2002), believe that coupled with collaborative learning, technology can enhance the situations in which teachers and students search, discuss, and build individually and collectively their knowledge. The computer can be considered as a resource for collaborative learning, as well as serving for the organization of various activities; it can be a way for students to collaborate with each other in group activities.

Lévy (1999) teaches that humanity is in the era of telecommunications, however, it is going unnoticed greatness of this new reality, and it is totally unaware of the benefits that this revolution can come to offer us, especially in the field of knowledge. As an example, the Internet is used by most people only as an instrument of transmission and not as a knowledge construction methodology.

Constructivist and interactionist assumptions are the ones that support the collaborative learning environments. The theories that contribute to the understanding of collaborative learning are many and they all have the same common goal which is to consider individuals as active agents in the construction of their knowledge.

So we can understand that the collaborative learning theory recognizes that individuals are active agents in the construction of knowledge so that, working together, can bring their own contributions; they can examine the issues in different ways and also produce meanings based on understanding between subjects .

The teaching-learning from collaborative learning involves the promotion of a practical knowledge, forming attitudes, development responsibilities, the formation of habits and behavior, autonomy and self-learning ability. New knowledge built from this promotes a new way of being, to know and learn, creating new challenges that require new skills and ways to build knowledge.

Collaborative learning is an alternative, because it breaks with the fragmented and traditional view.

Learning Objects

Many concepts have been set about learning objects; some current definitions are relatively consensual, like this: "A learning object is a file (image, movie, etc.) that is intended to be used for educational purposes and has, internally or through associations, suggestions on the appropriate context for its use (Sosteric & Hesemeler, as cited in Handa & Silva, 2003, p. 2).

Some authors define learning objects as any resources used to aid learning. Others define them as a digital resource used for educational purposes. "Any digital resource that can be reused to assist learning. Its definition includes any digital resource that can be distributed over the network, on demand, be it small or large" (Wiley, 2001, p. 5).

As stated by Wiley (2002), the way that educational materials are being designed, developed, and distributed to anyone who wants to learn has undergone many changes, especially after the advent of the Internet that entered the new company forms to communicate, do business and even as study .

Although there is a closed concept of learning objects, the definition given by the working group that studies the standardization of metadata for objects learning (Learning Object Metadata Working Group (IEEE), 2002) shows well suited as follows: any entity, digital or non-digital, that can be used, reused, or referenced during learning supported by technologies.

To contribute to meaningful learning, learning objects should address concepts or experiences that bring the student reality to contribute to the exchanges between the subjects from the reflection on the action and build new concepts or improve existing ones.

Learning objects should bring the students opportunities to develop skills in their training, so that stimulate interaction and contribute to the creation of collective intelligence as regards Lévy (1999) that aim to "recognition and enrichment mutual of people, not the cult of fetishized or hypostatized communities" (p. 28).

An important definition in the process of construction of objects is the pedagogical approach. Because it is considered that digital technologies bring in its wake significant epistemological ruptures, causing the creation of a new culture, and thus do not yet know for sure what the most appropriate approach, and focus on cooperation in the use of hyper textuality in interactivity, the project pedagogy in virtual environments, among others.

Planning object has reference to the theory of instructional design or, better defining the technical system involving the analysis, planning, development, implementation, and evaluation (Filatro, 2003). The paradigm used for the preparation of objects should be the virtual, a paradigm which is beginning to think of network connectivity, interdisciplinary process, the use of the image, information literacy, and especially the expertise in virtuality.

The development of learning objects also involves thinking about the concept of learning involved in this process. For Piaget (1972),

> [...] Learning is caused by situations—caused by a psychological experimenter; or a teacher, with reference to some didactic point; or by an external situation. It is caused in general, as opposed to what is spontaneous. (p. 1)

The development of concepts occurs from personal meanings that the subject elaborates on the interrelationship of what is presented, with their prior knowledge of the subject, representing the information which constitutes meaningful learning.

The creation of a learning object is a task that requires some work because as important as the knowledge of the tools used for development we must also know how the construction of knowledge occurs. The logic of the development is somewhat simpler, but it is necessary to organize this knowledge to produce something attractive to learners; making use of new teaching methods and technologies should be considered for the development of learning object. Thus, it is important to bear in mind that in developing a learning object, we need to know, as taught in Macieira and Aguilar (2009,) that "First, all learning object must have: an educational objective clearly defined, it's not restricted to a single application context, and especially an element that encourages student reflection and referenced, with clear objective of applicability and stimulating learning" (p. 56).

Among the many existing, a learning object can also be a game, as the modality of choice for this job is the game, conceptualizing games and the program used for the production of OA in focus.

The game is necessary to our development process and has a vital role to the individual primarily as a means of assimilation of reality, besides being culturally useful to society as an expression of community ideals. According to Rizzi and e Haydt (2007), "the act of playing is as old as man himself, in fact the game is part of the essence of being of mammals" (p. 8).

Educational games are characterized as a resource that can be used in the interim, to be of great importance in the cognitive development, to have all the elements necessary for learning. The game challenges, unbalances, decentralizes thinking and behavior, encourages reflection, creativity, cooperation, and reciprocity. As Kishimoto (1994),

> The game as learning and development promoter shall be considered in school practices as an important ally for teaching, as place the student before play situation as a game can be a good strategy to approach it of cultural content to be served in school. (p. 13)

The Curriculum of Basic Education Guidelines—DCEs (2008, p. 66) teach that works with games and activities are important and contribute significantly to the development of the child, because they act as the real representation of ways through imaginary situations. Hence the need for parents and school propitiates times when children can be in direct contact with the jokes and games. And to be a playful activity, the game still has the power to arouse the interest of the student.

According to Vygotsky (1989), the play activity greatly influences the child's development. It is through play that children learn to act, their curiosity is stimulated; it takes initiative and self-confidence, provides the development of language, thought, and concentration.

The challenge that proposes a particular game is a challenging and demanding situation where the individual must use their skills to overcome obstacles from structured rules. So a game is a dynamic system,

but at the same time built by free player choices. So we can say that playing, the student participates in the environmental construction is so what sets the game is interactivity.

Educational Games Computerized

In referring to games, the possibilities that were unable, with technological developments, especially with the advent of internet, are now possible because the Internet connection speed (broadband) and cloud storage allow the use of simulations online, three-dimensional and digital games making them reappear with increased possibilities (Munhoz, 2012) .

When using a computer game in the learning process, one should take into account not only curriculum content that must be linked to age. Another important factor that should be considered are the indirect objectives that such a game should provide, as memory (visual, auditory, and kinesthetic); temporal and spatial orientation (in two and three dimensions); motor coordination (wide and thin); auditory perception, visual perception (size, color, details, shape, position, laterality, and complementation), logical mathematical reasoning, linguistic expression (oral and written), planning, and organization.

Thus, considering the aspects presented so far, we have built the learning object—game of multiple choice—new agreement spelling of Portuguese in PowerPoint.

PowerPoint

Microsoft PowerPoint is a program used for creating/editing and displaying graphical presentations: Images, sounds, text, hypertext, videos that can be animated from different ways can also be connected with other Office suite programs. Originally written for the Windows operating system and ported to the Mac OS platform X. The Windows version also runs on Linux via the Wine compatibility layer. There is also a mobile version for smartphones running the Windows Phone System.

Being an easy access and handling program and the user does not need any basic knowledge in programming, PowerPoint is used on a large scale on general presentations. But beyond its usual use, it can also be exploited in the production of games and here the particular form used for the production of a learning object the production of a learning object whose contents will be the new spelling reform.

Microsoft PowerPoint tool allows you to create presentations that can be played on television, broadcast over the Web, and generate video files. This program is Microsoft Corporation is not free, but has a test version provided by the company through the site: http://www.microsoft.com.

This tool was used for the assembly of images and texts, creating scenes of learning object with the use of images, presentations, and animations available in the program. Composed of 34 slides connected via hyperlinks to display buttons that when clicked will go to another image, which has a text with the content.

Game Multiple Choice: New Agreement Spelling Choice Produced in PowerPoint

This game was produced in order to assist teachers in developing their classes seeking to involve the students in a grammar activity and its potential to encourage them to carry out the activities proposed in the given content and explore content of other disciplines because the game content has this possibility and thus fulfills the role of school social function linked to potential cognitive learning of students respecting the biological and cognitive each individual as well as collaborate in Development of Multiple Intelligences and on that Gardner (1995) teaches us that the Human brain has a variety of intelligences and the same brain can operate for different actions, different skills.
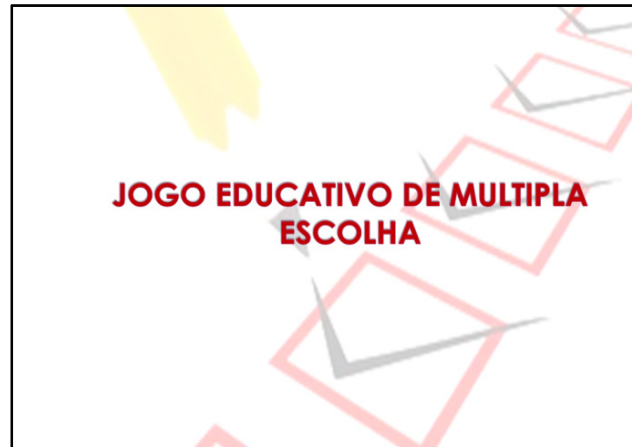
Figure 1. Home screen of the game.[1]

From the home screen is the discretion of the user who is using the system, interact as you prefer, it is held a navigation scenes by mouse click, or by navigation keys or by "try again" and "next question", as the figures below:

Figure 2. Navigation buttons.[2]

As the figure shows, to start activity students need only to click to start the activity of the object and another screen will appear as shown in the following figure:

Figure 3. Splash screen game.[3]

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[1] Source: Learning Object—Multiple Game: New Orthographic Agreement.
[2] Source: Learning Object—Multiple Game: New Orthographic Agreement.
[3] Source: Learning Object—Multiple Game: New Orthographic Agreement.

The following screen will show the instruction set, which should be closely watched by educating:
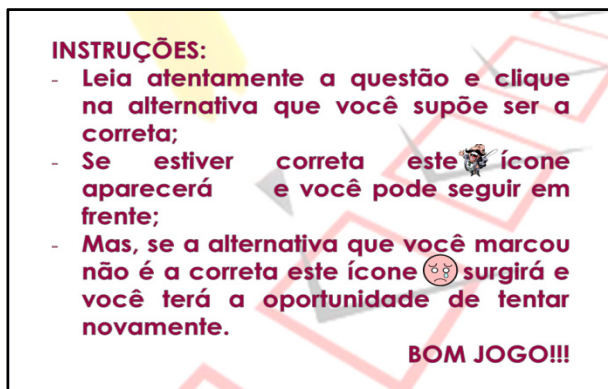
Figure 4. Screenshot of the game instructions.[4]

After read the instructions, the user can click on the left arrow command, which automatically changes the screen, and the game starts as we can see in the figure below.
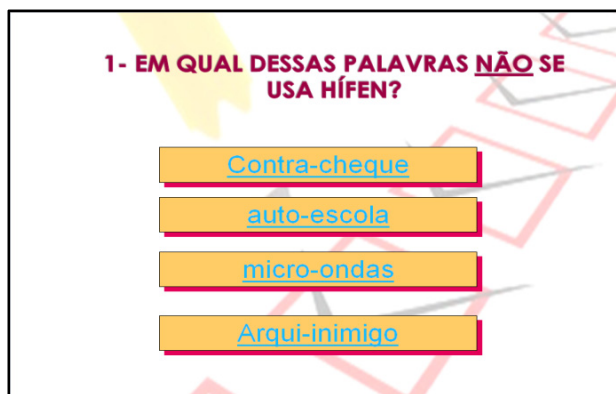
Figure 5. Exercise 1.[5]

At this point, the user can choose one of the options and click, and according choice will be directed to one of the screens as shown in Figures 6 and 7:

Figure 6. Error alert screen.[6]

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[4] Source: Learning Object—Multiple Game: New Orthographic Agreement.
[5] Source: Learning Object—Multiple Game: New Orthographic Agreement.
[6] Source: Learning Object—Multiple Game: New Orthographic Agreement.

Figure 7. Setting alert screen.[7]

Advances are different for each user according to the types of intelligences and strengths limited by the content of the domain levels. However, that does with the user to make a return decision provided by the object, especially when you see the screen shown in Figure 2. No need of teaching interference in student's thought process, it alone has the autonomy to make their feedback and think in a logical and coherent situation.

We produced Portuguese-speaking OA content: the new orthographic agreement that can be used with students from the sixth to the ninth grade of elementary school. In the second Silveira recent study (2008), the number of specific learning objects to Portuguese area was greatly reduced. However, any one of professor disciplines of curriculum can produce specific learning objects, and the game presented here can serve as a model for teaching in other subjects.

As can be seen in Figures 8, 9, 10, and 11, the analyzed content is accentuation graphics, such as acute accent, differential accent, accent on verbal inflections and in doubles "o" the letter, but in developing the game will notice that there are exercises emphasizing other contents.
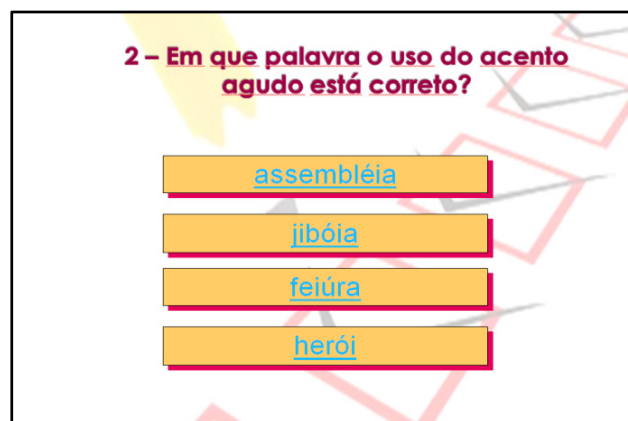

Figure 8. Exercise screen 2.[8]

Figure 9. Exercise screen 3.[9]

Figure 10. Exercise screen 4.[10]

Figure 11. Exercise screen 5.[11]

The use of this learning object refers to a new learning mode computer-mediated. While teaching resource provides an active participation apprentice in the construction of knowledge and their own cognitive development. The learning objects are configured as previous organizers, as a bridge cognitive, facilitating more specific learning begins with an understanding consistent of the more inclusive concepts considered theme (Tavares, 2006).

[9] Source: Learning Object—Multiple Game: New Orthographic Agreement.
[10] Source: Learning Object—Multiple Game: New Orthographic Agreement.
[11] Source: Learning Object—Multiple Game: New Orthographic Agreement.

In Figures 12 and 13, approached content is the Hyphen and its use in nouns compounds. In learning object in question, the interactive animation is a game with different grammatical content. We believe that their capabilities revolve around the possibilities of use as a prior step in the construction of general concepts, as well as building specific concepts, not dispensing with the mediation of a teacher to deepen the content covered.
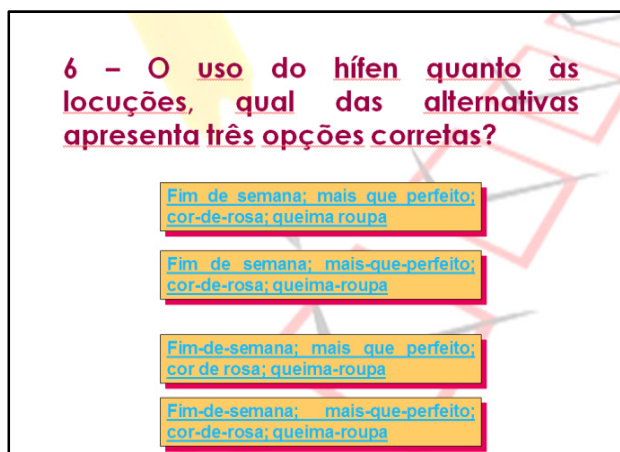
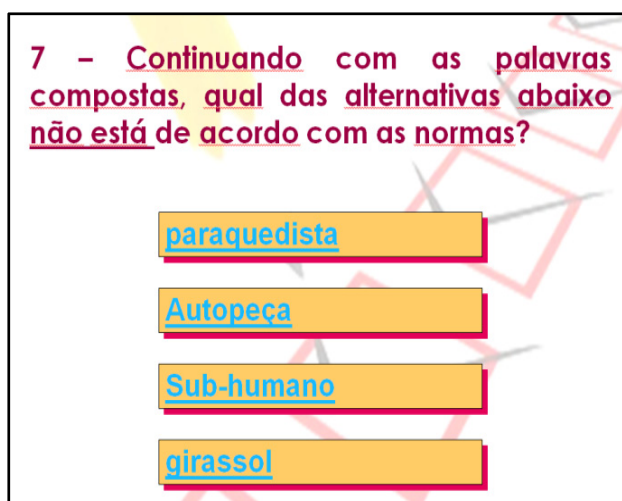

Figure 12. Exercise screen 6.[12]

Figure 13. Exercise screen 7.[13]

In Figure 14, it is the umlaut and Figure 15 is the language of the letters of the alphabet Portuguese, which from the new agreement incorporated "K", "Y", and "W". To articulate prior knowledge with the knowledge to be learned is not a trivial task. Moreover, for what to happen it is necessary the activation of metacognitive abilities of learners. On the other hand, is, to help learners to become aware of their own knowledge, their cognitive abilities, and their learning strategies as well as develop multiple intelligences.

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[12] Source: Learning Object—Multiple Game: New Orthographic Agreement.
[13] Source: Learning Object—Multiple Game: New Orthographic Agreement.

Figure 14. Exercise screen 8.[14]

Figure 15. Exercise screen 9.[15]

Already the Figure 16 refers to the countries that joined the new orthographic agreement and can be worked by on the discipline of Portuguese Language, Geography, and History.

Figure16. Exercise screen 10.[16]

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[14] Source: Learning Object—Multiple Game: New Orthographic Agreement.
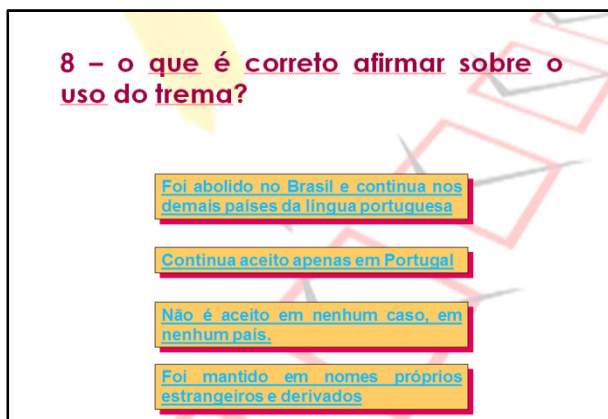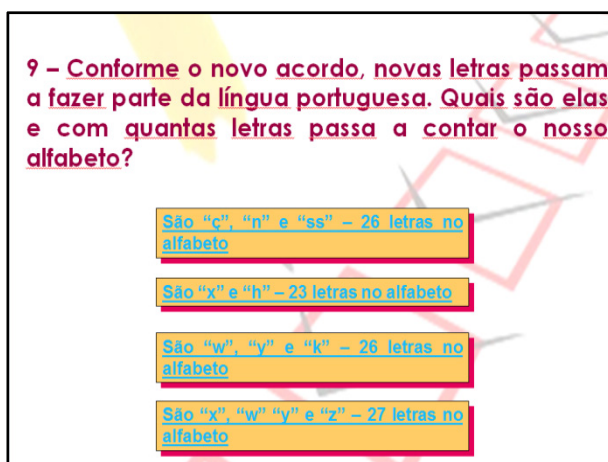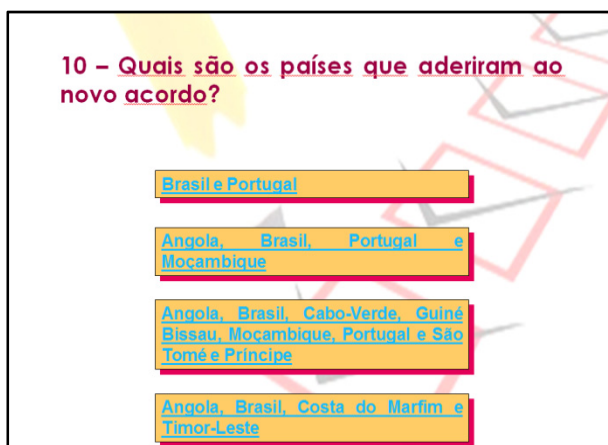[15] Source: Learning Object—Multiple Game: New Orthographic Agreement.
[16] Source: Learning Object—Multiple Game: New Orthographic Agreement.

The object of digital learning titled as multiple game choices will cause the student to learn the grammar of the mother tongue significantly and understand better in their day to day to efficient communication. It was discussed the new orthographic agreement of the Portuguese language by their relevance in understanding the relationships between the words as an important tool in verbal communication process (oral and written).

It is also goal of the game to draw attention of the target audience, as much of the Motivation for the use of a system depends on the user's motivation to achieve an external goal. The games thus aim to provide the necessary motivation, especially boring workout routine and can be helpful in making the enjoyable activity (Ebner & Hollinger, 2007, p. 873), justifying our proposed produce learning object.

Conclusion

As a starting point, we have our experience as a teacher of the State Public Education Network and a brief history of the research context and to get here, had for objective to understand the guidelines for the construction and characteristics of OA generally. Moreover, compare the lines suggested by scholars that areas as Wiley, Garcia, and Tarouco with the teaching-learning theories for the production of AO, come effectively to assist teachers, students from sixth to ninth year of elementary school in their pedagogic practice in the classroom .

Learning objects are designed and built to assist teachers in their teaching practices in order to promote the teaching and learning significantly, collaborative with the development of complex cognitive levels of autonomous and critical way. So we expect the learning object reaches the goal to provoke motivation, understanding, and recognition, since they can be used in a multidisciplinary way. But for this to happen it is essential personal will, planning, organization, professional competence, adequate physical infrastructure, and educational objectives defined so that the introduction of these materials in the teaching-learning process shows to be effective and efficient.

For teachers, especially those born from the 1980s, the computer is part of their daily activities and has shown its specific contribution in learning processes. The use of ICTs with their signs and attractive languages awakens the students' interest in learning to master more and more techniques and acquire knowledge. This audience is required a new attitude of the teacher. Thus, the teacher, the multimedia offers several features that can be didactic teaching as their willingness to learn to use and do according to the needs of education.

Thus, we leave here some recommendations that are relevant to those who are starting in this field of knowledge in their work environment:

(1) The use of a learning object is valid, which can be of great help for collaborative learning. But as the study of Leffa (2001) and Silveira (2008), it is necessary to expand production and access these objects and to delve into their specific planning and production to a quality offer to the work of teachers with their subjects.

(2) It is very important that it is appropriate in the best possible way for the use of the AO presented here. Certainly other ideas will emerge to expand the use of capacity.

(3) Rethinking many pedagogical practices and teacher training. However, this is an essential practice in decision making, planning, and establishment of educational objectives and practice effectiveness of possible changes so longed in teaching-learning processes. It is continuing with the action-reflection-action cycle and development successes, errors of perception, learning from mistakes and new hits.

So, we consider the constant search for helper methods in primary teaching and learning processes and consider the effective tools of learning objects for this purpose.

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