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Academic Literacies and gamification: "strengths" and "weaknesses" in the visual-verbal textualization process

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Abstract: This article analyzes discursive positions in visual-verbal productions of a *Skills Tree* (mechanics of the digital online game *League of Legends*), based on a gamified activity. A discursive position is understood as an enunciative position which characterizes a social and ideological identity in a certain discursive field (MAINGUENEAU, 2004). The theoretical framework is based on studies of New Literacy Studies and French Discursive Analysis concerning social practices of reading and writing in academic context. The qualitative-interpretative analysis focuses on observing "strengths" and "weaknesses" recognized by the subjects themselves in this activity. The article aims to contribute to academic literacies studies, presenting game principles as didactic devices and resources which can be observed in different institutional contexts (academic and professional, for example). Furthermore, this proposal has the advantage of being able to be performed with or without the use of digital technologies.
Keywords: Academic Literacies; Gamification; Discourse.

Título: Letramentos Acadêmicos e gamificação: pontos "fortes" e "fracos" no processo de textualização verbo-visual

Resumo: Este artigo analisa posicionamentos discursivos em produções verbo-visuais de uma *Árvore de habilidades* (mecânica do jogo digital *on-line League of Legends*) baseada numa atividade gamificada. Posicionamentos discursivos são entendidos como posição enunciativa que caracteriza uma identidade social e ideológica em certo campo discursivo (MAINGUENEAU, 2004). Baseamo-nos em pressupostos teórico-metodológicos dos Estudos de Letramentos (*New Literacy Studies*) e da Análise do Discurso de linha francesa, no que se refere a práticas sociais de leitura e escrita em contexto acadêmico. A análise qualitativo-interpretativa concentra-se em observar pontos "fortes" e "fracos" reconhecidos pelos próprios sujeitos na atividade. O artigo busca contribuir com estudos

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de letramentos acadêmicos, apresentando princípios de gamificação como dispositivos e recursos didáticos que podem ser observados em diferentes contextos institucionais (acadêmico e profissional, por exemplo). Além disso, essa proposta ainda tem a vantagem de ser feita ou não com uso de tecnologias digitais.
Palavras-chave: Letramentos Acadêmicos, Gamificação, Discurso.

Gamification as a social literacy practice

Gamification, as Deterding *et al.* (2011, p. 2) explain, is the application of game principles in "non-game" contexts, understanding "games" to be not only those developed in digital platforms, but also those presented in analogical contexts. Moreover, we must consider that gamification as a process is not new or exclusive to contemporary societies. From a historical culture studies point of view, Huizinga (2009) considers that, in the development of culture, games elements have always been used with the purpose of making playful a task which, at first, would not be interesting or attractive. These elements can be found in different contexts. For instance, in a classroom, when a teacher rewards a student who completed a task (credit memo or even a candy for the "winner"); in companies, when employees must meet a target set (quantity of sales per month) to have salary bonus; in rewards credit cards, when enterprises let clients earn points which can be redeemed on gift cards, free flights, hotel stays and so on. These brief examples show the relevance of gamification studies in investigating different social contexts, especially those concerning reading and writing in academic training at different levels of education.

As Fuchs *et al.* (2014) highlight, there are two ways of studying of gamification process: (i) in a general sense, as shown above with Huizinga (2009), regarding historical, social and cultural practices that take into account the pleasure as a relevant feature in different contexts, (ii) and in a specific sense in which game principles would be interesting to be applied in non-game contexts, an emphasis already attested by different authors (as DETERDING *et al.*, 2011 quoted, but also ZICHERMANN; CUNNINGHAM, 2011; VIANNA *et al.*, 2014; SCHLEMMER, 2014; KINGSLEY; GRABNER-HAGEN, 2015; LEFFA, 2014; LEFFA; PINTO, 2014). Actually, the study of gamification as a "limited practice" (FUCHS *et al.*, 2014, p. 8) is related to different uses of gamification "as a means to embody the multifaceted, multimodal, and social aspects of New Literacies." (KINGSLEY; GRABNER-HAGEN, 2015, p. 53).

Indeed, social practices of reading and writing as related to digital information and communication technologies have the potential to endorse human progress, given the possibility of learning "new" literacy studies, according to critic, collaborative and transformative positioning (LANKSHEAR; KNOBEL, 2006; 2007). Lankshear and Knobel (2011) highlight the relationship between literacy practices, economic growth, social well-being and labor market visibility. "Evidence was advanced that countries with greater inequalities in literacy levels have greater inequalities in income distribution.", say the authors quoting OECD

(The Organization for Economic Co-operation and Development) researches from the 1990's (OECD, 1991; OECD AND HUMAN RESOURCES DEVELOPMENT CANADA, 1997 *apud* LANKSHEAR; KNOBEL, 2011, p.8). "Emphasis was given to the role of globalization and technological change in generating greater labor market competition, upping the ante for literacy skills in order to compete for better paid work opportunities." (LANKSHEAR; KNOBEL, 2011, p.8).

In Brazil, studies by the economist Marcelo Neri, from the Getúlio Vargas Foundation (FGV, in Brazilian Portuguese) in Rio de Janeiro, quoted by Neves (2018), show that for each year that a worker studies, there is an average impact of 12% on the income. If that person has a higher education level, the impact can amount to 36%. Neves (2018) also reports data from CAGED (*Cadastro Geral de Empregados e Desempregados*, General Register of Employed and Unemployed) which indicate, in the period from January to May of 2017, a decrease of 102.483 vacancies aimed at workers with complete or incomplete elementary education in Brazil. On the other hand, workers with high school or higher education, even if incomplete, have 85.000 new places available, according to CAGED.

In this scenario where academic training is highlighted as a differentiating factor in obtaining employment and generating income for the country, the gamification process can be understood as a social literacy practice which *engages* people with some or profound pleasure in specific contexts, solving specific problems. The fact that there is some pleasure in the activity is in itself of interest of institutions such as schools and universities, where subjects are obliged to perform tasks and functions which are not always desirable from their point of view. However, as Leffa (2014) argues, in the context of language studies, the proposals on gamification must take into account the emphasis not on game mechanics by itself, but on "knowledge which the student wishes to acquire" (LEFFA, 2014, p. 11, our translation),[3] according the distinction this author proposes between a "monolithic" and "adaptive" gamification. As Leffa (2014) says, an adaptive gamification enables re-elaboration, re-use and re-distribution of didactic resources in general, thus benefiting interests of language studies and the usage of digital devices.

Concerning gamification, Gee (2007a) defines video games in his study as "extensions of life in a quite strict sense, since they recruit and externalize some of the most fundamental features of how human beings orient themselves in and to the real world, especially when they are operating at their best." (GEE, 2007a, p. 95). For Gee, this *projective stance* – "a double-sided stance towards the world (virtual and real)", the one which is imposed to the person and the one "onto which we can actively project our desires, values, and goals" – fosters a kind of *deep expertise* which can linked to an "authentic professional" (GEE, 2007a, p.95-96). This projective stance can be of interest for learners and educators at all educational levels.

In this article, we consider the gamification process which reaches people who play

[3] In the original: "[...] o conhecimento que o aluno deseja adquirir." (LEFFA, 2014, p. 11).

video games (as noted by Gee, 2007a, 2007b) and those who do not play video, electronic or digital online games. We are interested in *game principles* which can be systematically observed in certain institutional contexts, such as the university, for example, and can be explored, as didactic devices and resources, in benefit of new reading and writing practices in a professional citizen education.

Despite the fact that Brazil is the leader in Latin America in gaming market, as well as the 13th in the global ranking in this activity, according to the market agency Newzoo (DINO, 2018), the country is also known by its inequality in income distribution. An FGV report published in September 2018 indicates an increase in inequality and poverty as of the second quarter of 2018. According to this report, about 11.2% of the Brazilian population live below the poverty line (23.3 million people). In the last four years, from 2014 until 2018, misery has risen 33%. There are 6.3 million "new poor", more than the population of Paraguay (a neighboring country of Brazil in South America), added to the poverty statistics in Brazil. The survey shows that the worsening of Brazil's social performance also explains the poor economic performance (FGV SOCIAL, 2018).

We cannot ignore these facts in the study of Academic Literacies, since we are aiming at a critic positioning to think about gamification and its consequences to Higher Education. As Lea and Street (2006) observed in an *academic literacies model*, these social practices concern "meaning making, identity, power and authority and foregrounds the institutional nature of what 'counts' as knowledge in any particular academic context." This model involves "both epistemological issues and social processes including power relations among people and institutions, and social identities." (LEA; STREET, 2006, p.227-228). Debating Academic Literacies and gamification according to their theoretical-methodological proposal means considering that undergraduate students, professors, and universities would have the same socioeconomic conditions to be game consumers. High-performance computers, broadband internet, money for additional resources through in-app purchases and subscriptions, time to practice how to play are, among others, requirements to be players.

We need to go further and consider that the type of interest in playing games would also be very different among these social actors. Students/undergraduate students who have access to games may think that they already know many things, much more than their teachers/professors, who traditionally have none or little affinity with this activity. From the school/university's perspective, the use of a technological device identified with leisure and pleasure may seem to be diametrically opposed to traditional academic goals. As we can see, relations of power and authority effectively constitute Academic Literacies practices. Although the conflicts between the positions assumed by these different social actors are undeniable, there are innumerable institutional attempts towards the recognition of new social practices.

At the same time, we agree with Lankshear and Knobel (2011) that literacies practices (including the digital ones, such as the gamified) are related to economic growth and social well-being. It seems, in fact, valuable trying to know how principles of gamification can be

used in the academic training of future professionals. Schools and universities as institutions, in different countries, pay great attention to the type of activity which can engage learners. In this complex scenario we propose to investigate Academic Literacies and gamification believing that it is necessary to count on pedagogical educational experiences which can engage and motivate undergraduate students in their own academic and professional training, according to ethical principles of coexistence, even if economic conditions and public policies are not as expected for the development of the educational field. This is an attempt to circumvent social and economic differences that also constitute Academic Literacies practices.

An approach to the visual-verbal textualization process based on gamified activities

In this article we analyze discursive positions in a visual-verbal production of a *Skills Tree* (mechanics of the digital online game *League of Legends*), based on a gamified activity. Differently from Gee (2007a), there is not a (video) game which is used/ analyzed, but rather its principles of gamification are investigated, as discussed below. The theoretical framework is based on studies of New Literacy Studies and French Discursive Analysis concerning social practices of reading and writing in academic context. The qualitative-interpretative analysis focuses on observing points of "strength" and "weakness" recognized by the subject himself/herself in Academic Literacies practices.

Concerning New Literacy Studies, we relate to the contributions of Social Semiotics to the study of multimodal texts, such as the ones based on gamified activities, as shown below. As is known, Kress and van Leeuwen (2006) have developed a theoretical framework to analyze images, based on assumptions of Halliday's Systemic Functional Linguistics. The proposal of the authors is to link the Halliday's linguistic metafunctions to investigate visual structures. In other words, all semiotic modes, not only verbal language, perform three metafunctions, whose properties represent the human experience in its ways of understanding text as a meaningful whole. These metafunctions are: (i) ideational – any semiotic mode represents objects and their relations in a world outside the representational system –; (ii) interpersonal – any semiotic mode represents a particular social relation between the producer, the viewer and the object represented –; and (iii) textual – any semiotic mode can form texts, defined as "complexes of signs which cohere both internally witch each other and externally with the context in and for which they were produced" (KRESS; VAN LEEUWEN, 2006, p. 43).

Still according to Kress and van Leeuwen (2006), the compositional system which integrates the meaningful whole of a text is formed by three basic meanings: information value, salience and framing. *Information value* means that the placement of elements has specific values attached to the various "zones" of the image: left and right (given and new), top and bottom (ideal and real), center and margin. *Salience* means that the elements attract

the viewer's attention to different degrees, as realized by such factors as placement in the foreground/background, relative size, etc. Thus, *framing* means that, on the page, we have the presence or absence of framing devices (elements which create dividing lines or frame lines, for instance), disconnected or connected elements of the image and their meaning.

For these authors, given and new are two concepts which correspond to informational value. They mean that, in the left-right arrangement of the page space, considering how the orientation of reading happens in Western culture, the element at the left is *given*, i.e., is known by the reader, whereas the element at right is the *new*, in terms of a "key information", to which the reader must pay particular attention. Kress and van Leeuwen (2006) also propose the arrangement top-bottom in the page space: respectively, the *ideal* would tend to be some idealized or generalized essence of the information, the most salient part; the *real* would tend to be opposed, in the sense of presenting a more concrete information. Kress and van Leeuwen (2006, p.187) say that "the opposition between Ideal and Real can also structure text-image relations". Lastly, center and margin are concepts relatively uncommon in Western visualization, but refer to, respectively, nuclear elements and marginal elements which compose information in a page.

As we have mentioned, the meaning of the composition has *salience* and *framing* as a principle. Kress and van Leeuwen (2006) discuss salience in terms of the weight of an element in complex interaction, taking into account a number of factors: size, sharpness of focus, tonal and color contrasts, perspective, etc. Finally, framing concerns the degree to which an element draws attention to itself, due to its size, its place in the foreground or its overlapping with other elements. The *connectedness* is an important concept of framing, because elements can be "emphasized by vectors, by depicted elements […] or by abstract graphic elements, leading the eye from one element to another" (KRESS; VAN LEEUWEN, 2006, p. 204).

We agree with Kress and van Leeuwen (2006), to whom the way the world is conceived in the organization and structuring of visual texts holds socio-historical and cultural marks of the modes of representation and interaction between subjects in a given society. We have chosen to make reference to *visual-verbal* textual production – instead of just mentioning *visual* textual production – because in the academic sphere the reference to written textual production (verbal production) is socially marked and relevant for thinking about social practices of reading and writing.

The meaning of textual production will be discussed according to: (i) the "strength" and "weakness" recognized by the subjects, regarding the "higher" and "lowest" distribution of points in the Skills Tree, and their disposition to construct a hierarchical organization, in terms of the meaning of composition (information value, salience and framing); (ii) the relationship between visual and verbal aspects in the production, observing the usage of digital devices in the process. Therefore, we intend to analyze the discursive positions assumed by each subject, considering the possibility of engaging (or not) in the activities by

means of a textual production based on a gamified proposal.

Regarding this last aspect, we approach the socio-historical and cultural perspective of language presented by Kress and van Leeuwen (2006) of a discursive point of view defended in the field of French Discursive Analysis. Discursive position is thus understood as an enunciative identity, established and preserved in an interlocutive relationship in a certain discursive field (MAINGUENEAU, 2004, p.393). It is equivalent to the position which a speaker occupies in a field of discussion, and to values he/she defends (consciously or unconsciously), which at once characterize his/her social and ideological identity in a given field (MAINGUENEAU, 2004, p.393).

In the case of analyzing visual-verbal textualization process based on gamified activities, it is interesting to observe, in the field of academic discourse, what the subject understands to be his/her own "strengths" and "weaknesses" in this process. These points raised will not be considered in an individual and idiosyncratic way, but as resulting from broader literacy practices, of socio-historical and cultural character. From the professor's/institution's point of view, this is an excellent opportunity to evaluate and understand what can best be done in academic training.

Data set and methodology

This qualitative-interpretative research deploys a data set of 16 (sixteen) *Skills Trees*, understood as visual-verbal textual productions. These Skills Trees were produced in the short course "Linguagem e Gamificação" (Language and gamification), with a 16-hour course load, ministered by the authors at a public university in the State of São Paulo, Brazil, on October, 2018. Undergraduate and graduate students (degree in Languages and Linguistic Studies) and teachers are among the 12 (twelve) participants who agreed to concede their textual productions for analysis, according to the terms of the University's Research Ethics Committee (process 89504818.9.0000.5466). The main goal was to offer theoretical and methodological elements to the appropriation of the gamification concept, also offering the practice of textual production. Moreover, there were two specific goals: (i) providing to subjects the contact with gamification principles which can be used in language learning and (ii) promoting the use of digital information and communication technologies in the elaboration of gamified activities at university.

During the course, two gamified activities were carried out (A1 and A2). They have been developed by Alexandre (2017; 2018) in previous researches. In the development of these activities, two aspects have been considered regarding the academic sphere where the course was made: (i) expectations about how a professional career plan is presented in two different Brazilian Profession's Guide (*UnAN Guide*, from UNESP's Agency News; *Student's Guide*, from Editora Abril) and (ii) a survey of game mechanics and "good" learning principles

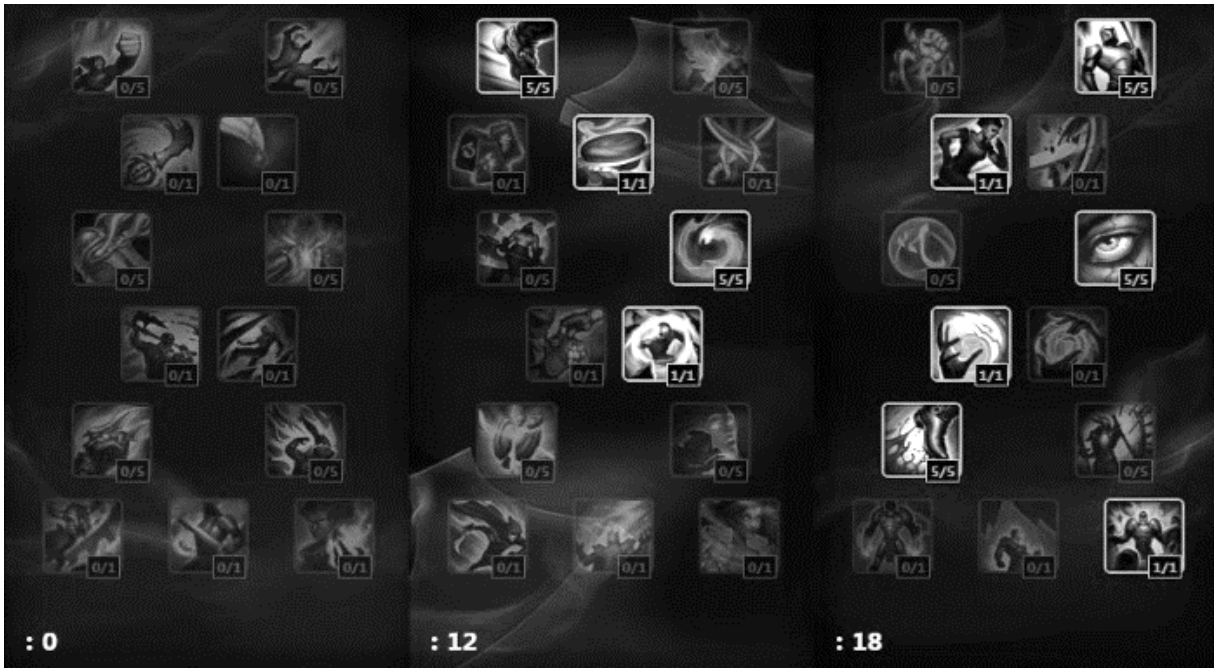
(Gee, 2007) in the online digital game *League of Legends*. Concerning (i), collecting these expectations was important so that the wording of the command of the activities would not be detached from the professional reality with which the course participant has to deal. Concerning (ii), this work is interested in exploring principles of gamification from an established reference such as Gee (2007), in a game considered to be the most played in the world.

In fact, the online game *League of Legends* was created by Riot Games, in 2008. Nowadays the American company has many servers around the world (North and South America, Europe, Asia and Oceania) and, since 2011, its first season, is responsible for promoting e-sports championships. The game has an international popularity, considered to be the one with most hours spent on gameplay in the world.[4] In Brazilian media, the final of the Brazilian Championship was shown on the channel *SporTV*, in October 2016.[5] *League of Legends* is a Multiplayer Online Battle Arena (MOBA), which combines the speed and intensity of a Real-Time Strategy Game (RTS) and the elements of a Role-Playing Game (RPG), characterized by the interaction between online multiplayers, distributed in two teams of champions (in-game avatars), each with a singular play-style, head-to-head battle across multiple battlefields and game modes to destroy the physical and strategical structure of the opponent's team.

In this article, just one of the gamified activities will be investigated, the "Production of a Skills Tree" (A1). It was based on the so-called Skills Tree mechanics, from *League of Legends*. According to Alexandre (2018), these mechanics can be defined as a visual hierarchic representation of customizations, which are applied by the player in order to attain bonuses for his/her avatar in the game. These mechanics can help the player in two senses: (i) optimizing items choices referents to a certain avatar, considering additional "strengths" a tree can offer and (ii) customizing avatars which would have predefined characteristics developed by the game developer.

[4] Retrieved 04 June 2019 from: http://www.fdcomunicacao.com.br/jogos-de-pc-mais-populares.
[5] Retrieved 04 June 2019 from: http://www.techtudo.com.br/noticias/noticia/2016/10/sportv-vai-transmitir-final-do-mundial-de-league-legends.html.

Figure 1 – A Skills Tree of *League of Legends*



Source: Alexandre (2018)

A Skills Tree is recognized by the association of verbal and non-verbal language (image and, sometimes, sounds). In its elaboration, the player must distribute points – in the case of *League of Legends*, 30 points – representing each "strength" identified by himself/herself in his/her avatar. Moreover, the Skills Tree of *League of Legends* also has a hierarchic organization, in the sense that the most powerful attribute is located at the bottom of the Skills Tree. The player needs to unlock each attribute, according to the options provided by the game design; as we can see, in the case of the first icon of the second column (Figure 1), 5 of 5 points are used (5/5).

Identifying the *multimodality principle* (GEE, 2007) allows us to understand how different modes interact in this mechanic to potentialize meaning making in language. As Kress and van Leeuwen (2006; 2010) argue, the analysis of the composition of multimodal texts considers the pictures rather as an "integrated" mode of texts than an "illustration" of the verbal text, not "[…] treating the verbal text as prior and more important, nor treat[ing] visual and verbal text as entirely discrete elements." (KRESS; VAN LEEUWEN, 2006, p. 177). In this article, we aim to understanding the Skills Tree in terms of meaning of textual production, regarding at the same time the structuring of these visual-verbal texts, the digital devices used by the subjects of the course, and the discursive positions assumed by each one, considering the possibility of engaging (or not) in the activities and recognizing points of "strength" and "weakness".

In the case of the Skills Tree, when the player hovers the mouse over a skill – for example, the above-mentioned first skill of the second column (Figure 1), whose strength is represented by the image of a "foot in movement" – the game offers a description of this skill

(in this case, an increase of the avatar's movement speed in the game). Therefore, inside the game, this "strength" elected by the player is represented not only by means of a noise of fast movement, but also as small bundles of light which appear at the foot of the avatar. Different modes, like *verbal text* (brief description of an improvement of movement speed), *visual image* (design of a foot in movement) and *sound* (noises of fast movement), are used to make meaning. As we have seen with Gee (2007), electronic and digital games can offer to the subject meanings directly embedded in the experience of the player in the game, potentializing learning and engaging.

Concerning the objectives of this article, the distribution of points will be important to the identification of reading and writing abilities which the subjects think to have in an academic/professional context. "Strengths" and "weaknesses" will be analyzed in relation to the hierarchic configuration of the Skills Tree. We assume, according to Kress and van Leeuwen (2006), the three principles of the composition of multimodal texts: (1) information value; (2) salience and (3) framing.

In Figure 1, the information value is polarized: it means that the arrangement of elements can be understood as given and new (left-right displacement) and ideal and real (top-bottom displacement). All abilities are available to the player on the page, but he/she can only choose them as long as they sum up 30 points. The abilities are "given" information to player, because he/she can learn all of them. However, while choosing, what is "elected" by him/her is highlighted, turning these chosen abilities into "new" information. In Figure 1, the right part of the image is reinforced by the two framelines which separate the columns, turning the viewer's orientation, in the sense that what he/she sees are now important elements to discuss in comparison to another Skills Tree. In terms of the ideal and real (top-bottom) displacement of elements, in the context of *League of Legends*, however, we see that the most important "strengths" are located at the lower part, as more salient strengths. Kress and van Leeuwen (2006) already noted that "in other contexts, the opposition between top and bottom takes on somewhat different values." (KRESS; VAN LEEUWEN, 2006, p. 186). In the context of this Skills Tree, the salience of top-bottom orientation corresponds to real-ideal, in the sense that what could be an essence of information is located at the bottom of the page. The orientation is actually a salience of bottom-top. This aspect will be relevant to analyze the discursive position assumed by the subjects, identifying qualities (or difficulties) in the visual-verbal textualization process. In other words, "strengths" are assumed to be qualities and "weaknesses", to be difficulties, according to the amount of points distributed by each subject in the gamified activity. Thus, "strengths" are among those which received the highest amount of points; weaknesses, the least amount.

In creating the gamified activity instruction, as mentioned, the game mechanics, learning principles, and Profession Guides, have been considered. Based on the entry "Letras" (Languages), we identified institutional projection about how a professional of languages could work in the labor market. Among these projections, there are different activities which can be attributed to the trained professional, as secretary, for instance. We chose to prioritize

professional skills related to reading and writing in general, since these are socially recognized skills in the professionals trained in this course. The instruction was:

> Create a *Skills Tree*, considering the following tasks: (1) create your tree, considering your reading and writing abilities; (2) create pictures or drawings related to the attributes you have recognized in yourself. You have 30 points to distribute among your abilities.

The activity was performed in two different moments. At the first meeting, theoretical-methodological and practical questions about gamification were discussed, such as the relevance of games in humanity, basic notions about gamification in academic literacy practices, and principles of learning in digital games. At this meeting, the activity was requested. Participants were arranged in a laboratory in the university, with one computer for each and internet access. The only technical instruction given was that the final file should be sent in PDF, PNG, JPG or DOCX format by email. At this stage, ten of the twelve participants submitted the files on time.

At the second meeting, a feedback from the textual productions was provided. The structuring of the visual-verbal texts was discussed according to the expectations of the *League of Legend*s game developer about a hierarchical organization. Visual-verbal aspects were debated, considering effects on meaning making in the multimodal text. At this meeting, the digital devices used by the subjects to combine modes in their textual productions were also reviewed. Digital tools, some of them with free and public access, were presented, aiming to aid textual production. Tutorials of online digital devices, like *Word*, *Paint/Paint 3D*, *Gifs Generator*, *Draw.io* and *Canva*, were also presented. These online digital devices may be well-known by some subjects, but they can also be understood as "digital linguistic resources" (CASSANY, 2016), once their usage is directed to digital literacy practices. The content of what was raised by the group as strengths and weaknesses in reading and writing practices was also discussed. Subjects were then asked to remake the gamified activity of the previous meeting, based on the same instructions, sending the final file by email at the end. At this stage, eight of the twelve participants submitted the files on time.

As our interest was to investigate possible changes from one visual-verbal textual production to another, due to the academic intervention, the set of material is composed of 16 Skills Trees, eight of the first version (A1-a) and eight of the second one (A1-b), produced by the same subjects. Therefore, subjects who produced only one text were not taken into account. Two criteria were considered in data analysis: (i) the "strength" and "weakness" recognized by the subjects, regarding the "highest" and "lowest" distribution of points in the Skills Tree, and their disposition to construct a hierarchical organization, in terms of the meaning of composition (information value, salience and framing); (ii) the relationship between visual and verbal aspects in the production, observing the usage of digital devices in the process. Therefore, we intend to analyze the discursive positions assumed by each subject, considering the possibility of engaging (or not) in the activities by means of a textual

production based on a gamified proposal.

"Strengths" and "weaknesses" in the visual-verbal textualization process: Data analysis

The first criterion – "strengths" and "weaknesses" recognized by the subjects, regarding the "highest" and "lowest" distribution of points in the Skills Tree, and the subjects' disposition to construct a hierarchical organization, providing meaning to the composition (information value, salience and framing) – is relevant to think about the visual-verbal textualization process, but it is also important to reflect on institutional requirements made to the professional (or future professional) on languages. As the Professional guides emphasize, the professionals on languages must know how to deal with the production of multimodal texts and with the use of digital devices. The gamified activity demanded the distribution of 30 points between skills recognized by the subject. We did not consider the abilities which are not scored.

Adding up the first and second versions (A1-a; A1-b) produced in two different moments, 166 of 184 abilities in the Skills Tree were scored. It means that almost all abilities have received points, just as the operation in the *League of Legends* Skills Tree. We distinguished those 166 scored abilities into two categories, considering their recurrence in the data set: linguistic aspects (grammatical and textual aspects) and extralinguistic aspects, as we can see in the following table.

Table 1 – Total of abilities scored by A1-a and A1-b

Categories		**Total (%)**
Linguistic aspects	Grammatical aspects	25 abilities (15%)
	Textual aspects	63 abilities (38%)
Extralinguistic aspects		78 abilities (47%)
Total		166 abilities (100%)

Source: own elaboration.

As we can see in Table 1, 88 abilities (53%) in total are concerned with linguistic aspects, and 78 (47%), with extralinguistic aspects, according to the classification made by the subject himself/herself. The percentage between these two major categories taken into account in reading and writing practices is very close. It means that the professional or future professional in languages is attentive to both aspects in the process of textual production.

In Frame 1, "strengths" and "weaknesses" recognized by the subjects are described. "Strength" is understood as a good "thing" about skills of reading and writing. On the other hand, "weakness" is assumed to be a more fragile point in this domain. The skills described in this frame correspond to the way the subjects verbally characterized the skill chosen and the

maximum number of points distributed in all Skills Trees produced. Therefore, only the skills which received the highest score are listed on this frame.

Frame 1 – Strengths and weakness on Skills Tree

Categories		**Occurrence among Skills Tree (A1-a+A1-b)**	
Linguistic aspects	Grammatical aspects	Strengths	linguistic system (15 points); linguistic system and socio-cognitive aspects (15 points)
		Weaknesses	Orthography (1 point); grammar rules (1 point), formal aspects [orthography and punctuation] (1 point)
	Textual aspects	Strengths	reading and writing (30 points)
		Weaknesses	Interpretation (1 point); cohesion (1 point); coherence (1 point); rewriting (1 point)
Extralinguistic aspects		Strengths	extralinguistic factors (not specified) (15 points)
		Weaknesses	media access (1 point); reference (1 point); analysis (1 point); appropriateness (1 point); elaboration (1 point); fruition (1 point); velocity (1 point); production (1 point)

Source: own elaboration.

"Linguistic system" (15 points), "linguistic system and socio-cognitive aspects" (15 points), "reading and writing (30 points)", "extralinguistic factors (30 points)" are assumed as *strengths* by the subjects. From an academic literacy point of view, this acknowledgment shows at once: (i) the dialogue with the academic knowledge endorsed by some disciplines in the university; (ii) an appropriation (although generalized) of knowledge endorsed by the university; (iii) a more specialized type of knowledge – linguistic system, linguistic system and socio-cognitive aspects, extralinguistic factors –, which shows the expertise of the one who enunciates (the quality of the (future) professional), a social and ideological identity in this discursive field.

Regarding the "weaknesses" mentioned, "orthography (1 point), "grammar rules (1 point)", "formal aspects [orthography and punctuation] (1 point)", "interpretation (1 point)", "cohesion" (1 point); "coherence (1 point) and "rewriting (1 point)" are, all of them, more *specific linguistic aspects*, while "media access (1 point)", "reference (1 point)", "analysis (1 point)", "appropriateness (1 point)", "elaboration (1 point)", "fruition (1 point)", "velocity (1 point)", "production (1 point)", were understood as *extralinguistic aspects*. The distribution of points for each aspect was low (maximum of 1 point). This acknowledgment seems to show that these weaknesses are understood by the subjects as having little relevance in comparison to strengths. At the same time, the recognition of fragile points shows an expected self-criticism in this activity.

From a discursive point of view, the *generality* of the noun phrases for the abilities of

both categories allows us to say that the discursive position assumed by subjects tries to encompass needs in terms of reading and writing in an academic context. Therefore, it seems to be an engagement with academic training. However, it is not evident what the professional's (or future professional's) engagement would/should be. Would the evaluation of one's own abilities have the same result from a student's perspective and the perspective of a professional? Or is it just the perspective of a subject in a short course, who answers the activity positioned as a student?

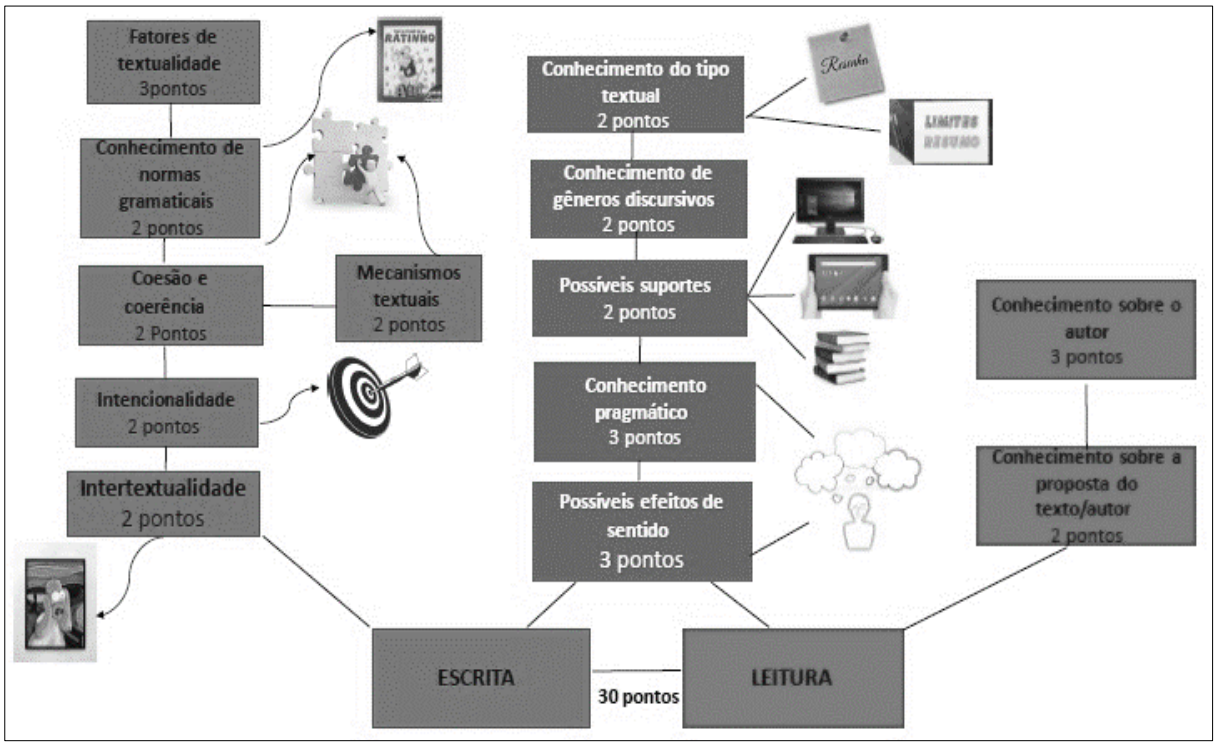
Considering the data set of 16 (sixteen) productions, and the comparison between each version, the texts are organized in top-bottom, bottom-top and centered orientation. In the first version of the activity (A1-a), there are four (04) textual productions in bottom-top orientation which corresponds to the *League of Legends*' Skills Tree, and four (04) in top-bottom orientation. In the second version (A1-b), there are five (05) textual productions in bottom-top orientation, two (02) in top-bottom orientation and only one (01) in centered orientation. It can be said that most of the subjects understood that the Skills Tree in *League of Legends* has a hierarchical orientation design, a *bottom-top orientation*, consistent with the schematization of a tree, once the strongest strengths are located at the bottom of a tree.[6] In the lower part, roots also represent history, culture, tradition, what is already instituted in the process of meaning making. This design allows us to think about informational value, the contribution of framing and salience principles related to "strengths" and "weakness" and the distribution of points recognized by the subjects.

In *League of Legends,* the Skills Tree has a bottom-top (real-ideal) organization, even if players can customize it according to the current *metagaming*. We understand metagaming in the sense of a higher strategy, as "[…] any aspect of strategy that involves thinking about what your opponent is thinking you are thinking." (CARTER; GIBBS; HARROP, 2012, p. 2). In *League of Legends*, when the player is in a match up, some rules and strategies (for example, the evaluation of what strength is more efficient than others) are taken into account before starting the match. Thus, assuming that *League of Legends*' Skills Tree is a hierarchical organization does not mean that players cannot customize the distribution of points according to their needs.

The visual-verbal textual production shown in Figure 2 is a sample of the data set. Following this figure (Figure 2.1), a translation of the verbal text from Portuguese to English is presented.

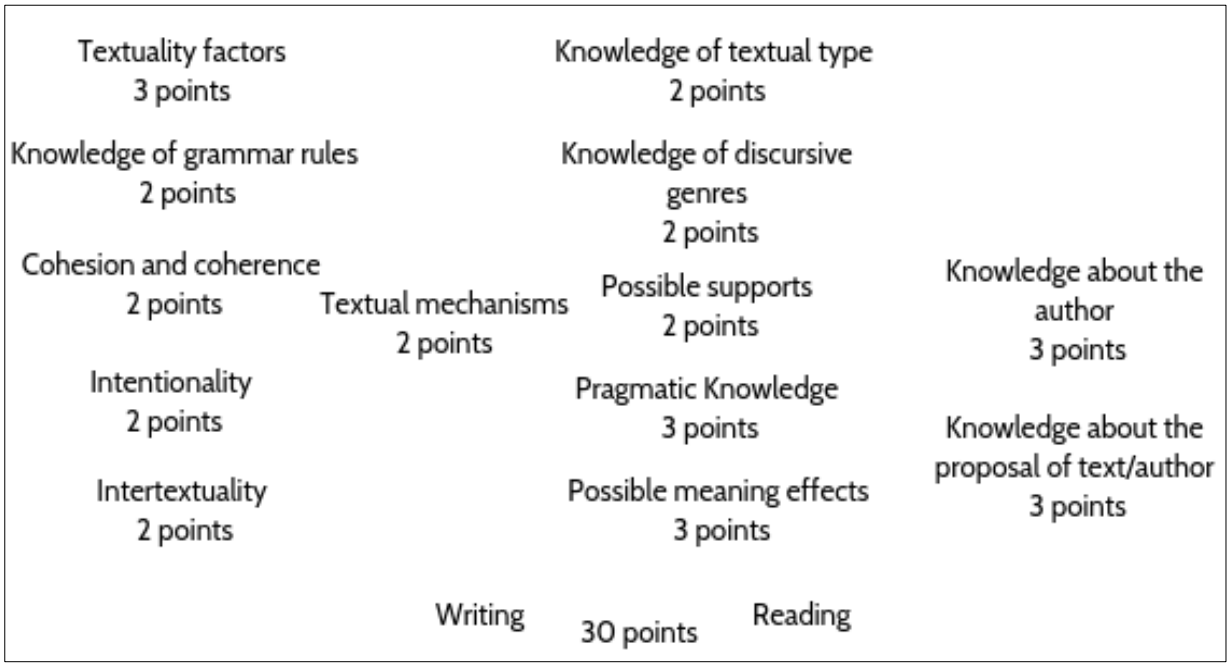
[6] On November 2017, this game underwent a preseason update on Skills Tree mechanics. Now, there are fewer abilities available to players. In the previous version, the hierarchical organization was more evident. Retrieved 28 February 2019 from: https://br.leagueoflegends.com/pt/featured/preseason-update.

Figure 2 – Skills Tree in a bottom-top organization



Source: data set (A1-a-P09)[7]

Figure 2.1 – English version of Skills Tree in a bottom-top organization



Source: own elaboration.

[7] The codification of the elements separated by hyphen (-) refers to the version of the activity (A1-a, to the first version and A1-b, to the second version) and the identification of the participant (P-X) who produced the visual-verbal textual production.

The bottom-top orientation was observed in nine (09) textual productions (04 from A1-a and 05 from A1-b). Regarding *information value*, what is *given* and *new* is always related to framelines, offering new content about which abilities the subject recognizes as relevant to the reader. Different visual-verbal resources are used in the creation of this tree. In Figure 2, the subject offers new information in framelines related to "Escrita e Leitura" (Writing and Reading). Thus, the information value of what is *real* is the idea of "Escrita e Leitura" (score 30 points), configuring *strengths*. What is *ideal* is related to specific abilities of writing (as textuality aspects and knowledge of grammar rules) and reading (knowledge about the author and the proposal of the text/author), derived from a common axis in which the knowledge of the discursive genre, the pragmatic knowledge, the possible effects of meaning and the supports used are considered. In terms of salience, the frames regarding "Escrita e Leitura" are larger than others, giving them prominence.

The textual production was made in *.DOC*, the format used on the word processor *Microsoft Word*. This format indicates that the subject already knew how to insert and resize images since the first version of the activity, before the presentation of digital devices. This type of skill, structuring multimodal texts, is strongly desirable in language professionals languages, especially if it is a teacher who deals with students who are increasingly exposed to different social media, with different visual-verbal inducements.

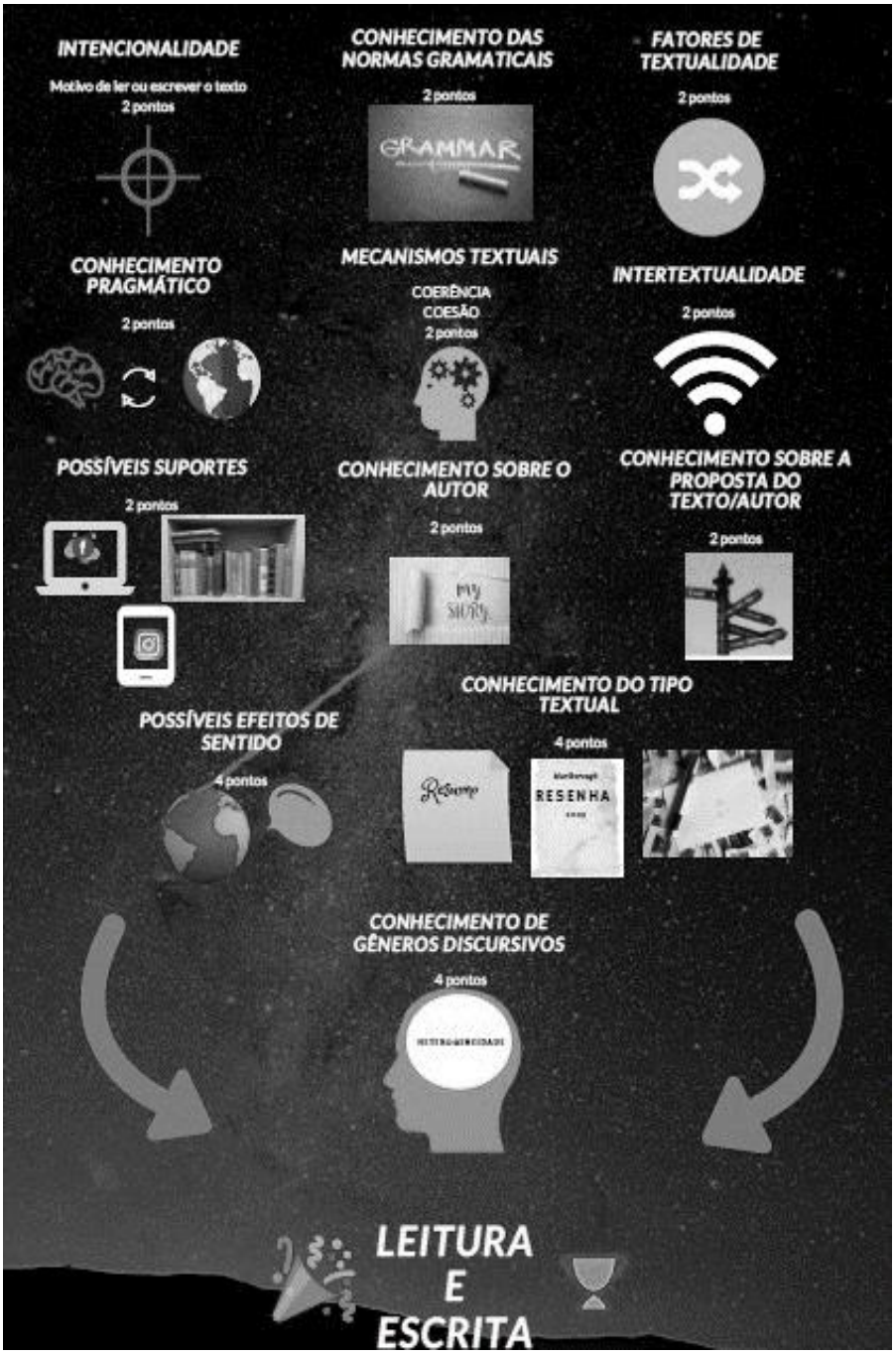
In an attempt to relate reading and writing as practices with the same nature, the distribution of points is almost equal in most of the abilities (9 of 15 abilities are scored with "2 points"). What counts as "strengths" are mainly linguistic aspects of textual dimension, scored with 3 points ("Textuality Factors", on the first column; "Pragmatic knowledge" and "Possible meaning effects", on the second column). Regarding reading skills, an extralinguistic aspects, "knowledge about the author", appears on the third column, also scored with 3 points. On the visual dimension, concerning skills which received the highest score, only "Pragmatic knowledge" and "Possible meaning effects" are represented with images. This image shows the bust of a human being with three thought balloons popping-up over his head. Recognizing those strengths as related to reading and writing, the image chosen represents these linguistics aspects in the mind of a (this) human being.

The absence of visual representation of the two other strengths may show, on one hand, a personal difficulty to choose an image, and on the other, an attempt to highlight other aspects which are equally constitutive of the reading and writing process, though less commonly observed from the perspective of common sense. For instance, the emphasis given to (new) supports (a personal computer, a tablet and books) whereby reading and writing appear in language, an aspect which can be ignored by non-specialists, is one of the ways in which the subject is positioning himself/herself in the field of knowledge, differentiating himself/herself as a (future) professional. It is not a mere illustration, but a way to make meaning and characterize a discursive position in the visual-verbal textualization process.

In Figure 3, another Skills Tree, produced by the same subject, as a second version of

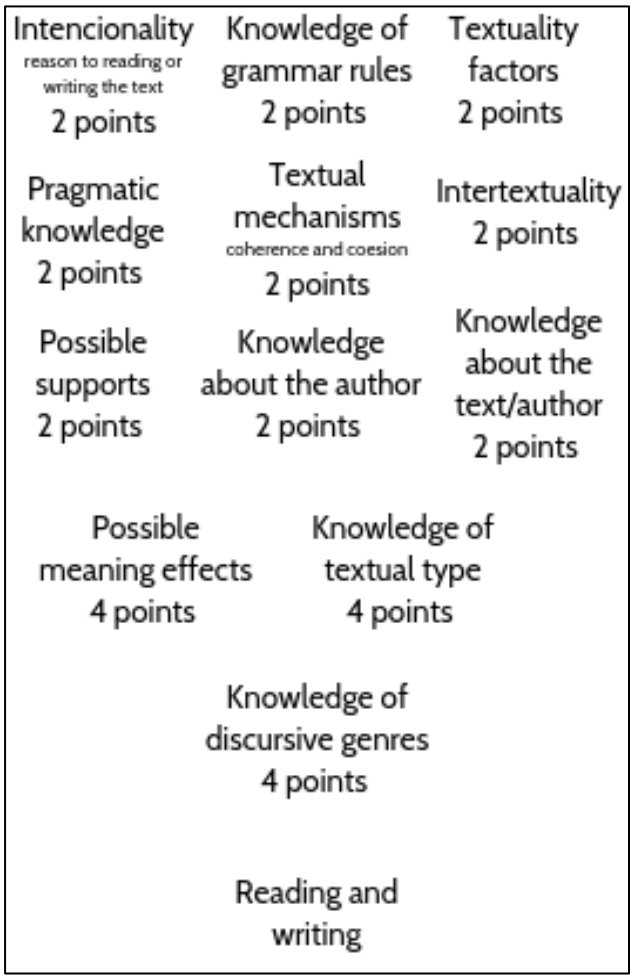
the gamified activity, is shown. Following this figure (Figure 3.1), a translation of the verbal text from Portuguese to English is presented.

Figure 3 – Second version of the Skills Tree analyzed



Source: data set (A1-b-P09)

Figure 3.1 – English version of second version of the Skills Tree analyzed



Source: own elaboration.

Differently from the first version (A1-a), this Skills Tree (A1-b) has more images to represent each chosen ability. The quantitative difference implies a distinction in the quality of the textual production, considering the multimodal text issue and the institutional expectations with which the language professional might deal (produce, discuss the creation of) these texts and the use of digital devices in contemporaneity. As already mentioned, one of the goals of the course where this gamified activity was created was to promote the usage of digital information and communication technologies in the textual production. In this case, the subject has chosen the online digital image editor *Canva*, which is partially free to use. The hierarchical organization is maintained in this second version (bottom-top orientation), as the information value and salience which highlight "Leitura e Escrita" (Reading and Writing). In this version, "reading" is indicated in first place. Reading and writing continue appearing as *strengths* which deserve attention. From an academic literacy perspective, the choice of this pair of concepts shows an explicit dialogue with the requested gamified activity and its accomplishment, with the recognition of its importance in different social spheres, such as

that of the university, but also others, such as the professional ones.

In Figure 3, visual and verbal aspects are more integrated. The ability to deal with the integration of texts (with multimodal texts) is socially expected, as discussed. A teacher, for example, who can work with his students in the classroom using a free version of this digital device, could produce different genres of discourse, such as posts which circulate in social media. Although the school is not the privileged place for the reception of this genre, student interests can be the starting point for dialogues about language and its social usage and effects, including other fields of knowledge.

According to research conducted by *TIC Educação 2017*, 57% of the teachers working in urban schools in Brazil have never attended a specific course on how to use computers and internet in classroom activities. Among native Portuguese-speaking teachers, this index reaches 71%. *TIC Educação 2017* is produced by Cetic.br (*Centro Regional de Estudos para o Desenvolvimento da Sociedade da Informação* – Regional Center for Studies for the Development of the Information Society), a department of The Information and Coordination Center of Ponto BR (Nic.br, *Núcleo de Informação e Coordenação do Ponto BR*), which implements the decisions and projects of the Internet Steering Committee of Brazil (Cgi.br, *Comitê Gestor de Internet do Brasil*). Although there is the recognition of the importance of social practices of reading and writing in relation to digital information and communication technologies, as discussed by different authors, such as Lankshear and Knobel (2006; 2007), there is still a long way to go in Brazil in terms of public policies which prioritize this relationship, starting with the academic training of teachers.

The “strengths” “Possible meaning effects”, “Knowledge of textual type”, and Knowledge of discursive genres” score 4 points each, highlighting specific qualities of the professional/ future profession. These are the strongest bases of this tree. The abilities with 2 points each, on the other framelines, could be considered weaker in comparison to those. However, the complexity of the linguistic issues raised allows us to say that the professional/professional future has (meta)linguistic knowledge of textual production, concerning reading and writing, while the overall setting of all these aspects shows more strengths than weaknesses.

In addition to all the skills related to linguistic and extralinguistic aspects which would result in reading and writing, the success throughout the process is represented by a trophy and party streamers, in commemoration of the accomplishment – symbols which perform well the process of gamification in the distinctiveness and rating of each ability.

Final considerations

Based on theoretical framework on studies of New Literacy Studies and French Discursive Analysis, this paper has aimed to analyze discursive positions in visual-verbal

productions of *Skills Trees*, the mechanics of the popular digital online game *League of Legends*. "Good" game principles (GEE, 2007b) and game mechanics have been taken into account to elaborate a gamified activity in an academic context. The idea was that, through the recognition of strengths and weaknesses related to reading and writing, in a visual-verbal textual production, the subject could move from the position of a student – one who merely answers the activity – to that of a professional – a subject engaged with self-criticism, with the production of multimodal texts, with the use of devices and technological resources which can improve his professional practices. Institutional expectations about academic training and professional performance were also taken into account in the development of the instruction of this gamified activity.

The analysis of a set of 16 visual-verbal textual productions is restricted. This set would need to be expanded to allow generalizations. But it may allow to reflect on certain language issues, in the relationship between Academic Literacies and gamification. The survey of strengths and weaknesses by the subjects themselves reveals these main issues:

- the force of the dialogue with an academic knowledge endorsed by some disciplines in the university. There is a knowledge of linguistic and extralinguistic aspects in the field of Text and Discourse Studies, but it is evident that much more can be discussed about multimodality, the composition system (information value, salience and framing) which integrates visual and verbal aspects of the text, or other aspects of textuality ignored by the subject. The point is not only what can be done in the text itself produced by the subject, but what can be taught to students in the classroom, when this subject assumes the discursive position of a professional teacher. Furthermore, we think that this activity is the opportunity to revise concepts which can be thought of as strengths in the subject's textual production (but they are weak) or even those which are perceived as weak (but it is not a problem, because they are overestimated in textual production);
- the possibility of change in the re-elaboration of visual-verbal textual production, from the moment when the subject is given the opportunity to know digital tools and theoretical-methodological concepts such as those discussed in the course. There seems to be, in fact, a possibility of engagement and textual production consistent with what is expected of the professional who deals, directly or indirectly, with digital technologies. In this work, the activity was based on principles of games and the visual-verbal textual production was performed in computers with internet access. However, taking into account the different socioeconomic and political realities of countries such as Brazil, it is necessary to think that these devices are not always available, either in universities (in academic training courses) or in schools (in professional practices). We think that the principle of this gamified activity can be maintained with the use of "old" technologies, such as blackboard and chalk, pencil and paper, drawing a Skills Tree and the punctuation of aspects related to reading and writing.

The analysis intended to show how the gamification process is important not only to engage people in non-game tasks, but also in formal contexts where pleasure (attributed to games) is almost never recognized. Finally, we believe that this article can present a contribution to dealing with the process of textualization and not only with linguistic aspects taken separately.

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