ACTIVE METHODOLOGIES AND NEW TEACHING COMPETENCES: AN EXPERIENCE OF IMAGING TEXT PRODUCTION WITHIN THE DIGITAL MEDIA

METODOLOGIAS ATIVAS E NOVAS COMPETÊNCIAS DOCENTES: UMA EXPERIÊNCIA DE PRODUÇÃO DE TEXTOS IMAGÉTICOS NO MEIO DIGITAL

METODOLOGÍAS ACTIVAS Y NUEVAS COMPETENCIAS DOCENTES: UNA EXPERIENCIA DE PRODUCCIÓN DE TEXTOS-IMÁGENES EN AMBIENTE DIGITAL

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ABSTRACT: Supported by active teaching methodologies, this article presents an account of a pedagogical experience - production of imagery texts - developed in mobile digital technology, proposed for initial teachers under formation. Methodologically, we carried out a case study, with teaching degree students in Languages and Literature of a private university located in the state of Pernambuco. We conclude that teachers under formation expand their skills when they use autonomous paths which make them advance towards knowledge, socio-emotional skills and in new pedagogical gestures.

KEYWORDS: Formation. Teacher. Active methodologies. Digital technology.

RESUMO: *Respaldado nas metodologias ativas de ensino, este artigo apresenta o relato de uma experiência pedagógica – produção de textos imagéticos – desenvolvida em tecnologia digital móvel, proposta para professores em formação inicial. Metodologicamente, realizamos um estudo de caso com licenciandos em Letras de uma Universidade particular localizada no estado de Pernambuco. Concluímos que os docentes em formação ampliam suas competências quando utilizam caminhos autônomos que os façam avançar em conhecimento, competências socioemocionais e em novos gestos pedagógicos.*

PALAVRAS-CHAVE: *Formação. Professor. Metodologias ativas. Tecnologia digital.*

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RESUMEN: Respaldado en las metodologías activas de enseñanza, este artículo presenta el relato de una experiencia pedagógica – producción de textos-imágenes – desarrollada en tecnología digital mueble, propuesta para profesores en formación inicial. Metodológicamente, realizamos un estudio de caso, con estudiantes de profesorado en Letras de uma universidad privada ubicada em el estado de Pernambuco. Concluimos que los docentes en formación amplían sus competencias cuando utilizan caminos autónomos que os hagan avanzar en conocimiento, competencias socioemocionales y en nuevos gestos pedagógicos.

PALABRAS CLAVE: Formación. Docente. Metodologías activas. Tecnología digital.

Introduction

21st century education requires new meanings about who they are and what place agents (teachers, students and school community) occupy in the new learning scenario intertwined by Digital Technologies of Information and Communication (DICT). New concepts are incorporated into what we are used to defining as a classroom in a traditional or classical perspective: a closed space for learning, with only one exit or entrance, where agents occupy organized and pre-established positions, forming/constituting what we understand by class/grade/year. In the new educational paradigm, the classroom becomes the world, with various possibilities of arrangements and paths to be followed during the learning process.

However, there is still a tendency for schools to work massively in the production of verbal-written texts, in the educational model of the 19th and 20th centuries, promoting print literacy at the expense of digital literacy, which will require contemporary literacy, including visual literacy, the which incorporates social practices of producing and reading picture texts. Given this school trend, students have difficulties in understanding and producing texts, commonly found in textbooks and in the tests of the National High School Exam - Enem, which depend on the dialogue between image and verb (CAIADO, 2011).

The strengthening of a collaborative educational paradigm, which works with the ability to associate traditional linguistic knowledge, centered on verbal-written text, with visual knowledge, is possible from a more image-centric approach to the detriment of an approach focused only on the verbal text, as stated by Almeida (2011). In this way, promoting visual literacy in classroom contexts helps teachers and students to collaborate collaboratively in the teaching and learning process and also promotes the reading and production of contemporary texts in a more critical and reflective way.

Based on text production practices, this article presents the report of a pedagogical experience - production of imagery texts - developed in Mobile Digital Technology (MDT), from project-based learning, proposed for teachers in initial formation in a course of Letters from a private university located in the state of Pernambuco. In order to achieve this goal, students from the last period of the Letters course, teachers undergoing initial formation, were challenged to develop a project related to textual image production, carried out in Mobile Digital Technology.

Thus, this article begins by discussing the current proposal for active methodologies for education, focusing on project-based learning. Then, we present the profile and skills of teachers for a pedagogical practice in digital environments. We end with the methodology and the report of the lived experience, following the considerations and references.

Active Methodologies: Project-Based Learning

In an attempt to understand how people acquire knowledge, Bransford, Brown and Cocking (2000) point out indicators that support the proposals that guide active teaching thought from the student and for the student. Namely: 1) There is an early predisposition in subjects to learn about some things, but not others; 2) Subjects develop strategic and metacognitive skills for learning; 3) Contact with other subjects plays an important role in the search for knowledge. These indicators respond to what active methodologies advocate: i) Respect for the individual and life project according to the student's time and maturity; ii) The search for a solution to the proposed challenges encourages learning; iii) The relationship with peers and the world through the web encourages the expansion of knowledge.

Objectively, the active methodologies correspond to the educational paradigm centered on the student, contrary to instructional classes focused on the teacher. In this last model, according to Valente and Almeida (2014, p. 36, our translation), "the formal space of the classroom has a close relationship with the positivist vision, [...] founded on an illusion of stability of the context arising from the fixed place, common resources, the teacher and a previously molded curriculum".

Differently, in the active learning model, the student is the protagonist in the acquisition of knowledge. He learns by solving the proposed challenges, interacting with other agents (class/classmates and teachers), confronting his ideas and sharing experiences and information. The construction of knowledge takes place in a personalized way in actions

carried out based on theoretical reflections and the sharing of ideas, respecting individual and collective times and involving personal life and learning projects.

These ideas have already been exposed by Paulo Freire (2011), who argues that learning is driven by overcoming challenges, by discoveries arising from previous experiences and knowledge, and by the autonomy of the student.

For Moran (2018), all learning, as a whole, is somehow active, as it requires different forms of internal and external mobilization, motivation, selection, interpretation, comparison, evaluation and application from students and teachers. The ability to use digital technology, especially mobile technology, is essential for full education, as it involves the skills mentioned by Moran and, also, according to Caiado, Fonte and Barros (2018), allowing ubiquity in the construction of knowledge, interactivity, the use of different languages, personalization, planning and re-elaboration in its pedagogical action.

As one of the strategic possibilities of active methodologies, Project-Based Learning (PBL), according to Moran (2018, p. 16),

> [...] is a learning methodology in which students engage with tasks and challenges to solve a problem or develop a project that has a connection with their life outside the classroom. In the process, they deal with interdisciplinary issues, make decisions and act alone and as a team. Through the projects, their critical and creative thinking skills and the perception that there are several ways to carry out a task are also worked on, competences considered necessary for the 21st century[4]. Students are evaluated according to performance during activities and on project delivery (MORAN, 2018, p. 16, our translation). [author's note]

Faced with an anchor problem[5], students are encouraged to develop skills and abilities that meet the challenges presented by the teacher, but which, of course, could also be necessary to meet the challenges imposed in a professional situation. In this way, there may be more than one acceptable solution to the problem according to the individual or group's perception and need.

Enabling the process of solving the problem, those involved in project execution plan and organize a series of tasks that, according to Bender (2015), are variable, but generally include: brainstorming; select the guiding descriptors for collecting information; share responsibilities and tasks; raise the state of the art on the subject; research to solve the problem; synthesize the information collected; cooperatively define the paths to be followed

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[4] Learning to know, learning to do, learning to live and learning to be are the four skills for learning in the contemporary world.
[5] The term anchor is used as a metaphor in the sense of anchoring, to support teaching in a scenario that portrays reality (BENDER, 2015).

based on the information collected and determine other relevant information; develop products that enable students to share the results.

It is necessary to be careful, however, as, according to the same author, not every proposed project is configured as a PBL approach. The activity must be characterized as personally significant for the students, so that it generates in them the maximum involvement in solving the problem, the specifications on the roles of the students within the context of the project must be clear and start from a highly motivating question as it is related to the real world.

According to Krajcik and Blumenfeld (2005), Bender (2015) and Cunha *et al.* (2019), the PBL privileges the development of desired competences for an effective teaching and learning methodology, namely: independence, responsibility and discipline. It also promotes the abilities to: communicate, negotiate and collaborate, necessary for the 21st century citizen.

In this sense, in the next section, we will focus on the profile and skills needed by teachers to work with DICT.

Profile and skills of teachers in digital environments

Teachers, who are mediating agents in the transposition of knowledge, must develop skills that meet the demands of what is proposed in 21st century education, supported by active methodologies that require the use of digital technologies, in particular Mobile Digital Technologies (MDT), directly correlated to mobile learning, m-learning, at school.

> [...] m-*learning* is the learning that takes place from the subjects' social, cultural, academic and digital practices, on mobile devices (smartphones, tablets, notebooks, among others), based on the principles of interactivity, mobility, portability, multimodality provided by the present and accessible multimedia integration in mobile technology. (CAIADO; LEFFA, 2017, p. 112, our translation)

Thus, according to the authors, mobile learning/m-learning is a multimedia and multifunctional means of teaching and learning that can help and even influence school pedagogical practices, within what active methodologies propose. In this sense, we affirm that MDT have positive effects for teaching and learning, as their use reveals a range of characteristics that trigger mental processes that favor the apprehension/resignification/re-elaboration/redescription of knowledge.

We understand that new educational scenarios can arise from the pedagogical use of MDT, which are more collaborative and characterized by: student and learning mobility; for

portability; by the possibility of interaction in different contexts, promoting the development of skills necessary for digital literates of the century. XXI. Among them, we highlight: the autonomy of the teacher/student that leads to reinterpretations, re-elaborations and intentional transgressions; self-organization understood here as the construction of personalized, individual and collective knowledge; and time-space management in the sense of ubiquity provided by MDT.

We believe, like Bonilla (2005), that teachers need to understand that understanding the specifics of technologies goes beyond their functionality and execution, being able to incorporate them into the contemporary context, reading their language from a new way of being, thinking and acting. If we want the formation of new thinking and active beings, considering teachers committed to differentiated, autonomous, disturbing and constructive teaching, based on new, active methodologies, we need to train them for this purpose, reflecting on relevant issues imposed by the new digital society[6].

They must, above all, understand why the use of digital technologies at school - in favor of meaningful teaching and learning processes -, demystifying criticisms about the pedagogical incorporation of DICT in the school universe and reflecting on how DICT could become a medium teaching and learning in the subject they teach and not just a didactic resource.

We corroborate the ideas of Caiado (2011), who proposes that digital information and communication technologies are a means of learning, a means loaded with content that will require the development of new skills, favoring the digital literacy[7] of students and teachers, giving rise to their inclusion in the school's pedagogical political project. We understand new skills, as Pérez Gómez (2015, p. 74, our translation) proposes: "[...] complex, personal, understanding and acting systems, that is, personal combinations of knowledge, skills, emotions, attitudes and values". We believe, according to the author, that these new skills, especially for teaching with DICT, are required at work based on active methodologies and "involve the ability and desire to understand, analyze, propose, develop and evaluate" (PÉREZ GÓMEZ, 2015, p. 74, our translation).

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[6] "New digital society" is an expression used by Pérez Gómez (2015, p. 15) in his book: *Educação na Era Digital: a Escola Educativa*.

[7] According to Xavier (2005, p. 135, our translation), "Digital literacy implies performing reading and writing practices that are different from traditional forms of literacy. Being digitally literate presupposes assuming changes in the ways of reading and writing verbal and non-verbal codes and signals, such as images and drawings, if compared to the forms of reading and writing made in the book, because the support on which digital texts are based is the screen, also digital".

The new skills will require the formation of teachers with the profile of mediators, who know how to guide than do, listen than speak, be silent than minister, who are concerned with solving real and concrete problems, prepared to rethink times, spaces, curricula, pedagogical political projects, resignifying concepts and actions, including there, also: teaching practice and understanding of DICT, implementing changes, which challenges higher education institutions in the formation of these professionals.

Thus, based on the understanding proposed by Mauri and Onrubia (2010) about the state of competences that teachers should acquire to be able to integrate DICT into education, into their pedagogical practices, we elaborated Table 1. It gives us a global view of the different conceptions of the teaching and learning process with DICT, related to the role and skills needed by the teacher. It synthesizes the teaching and learning process mediated by DICT from three areas: i) Conception of the Teaching and Learning Process mediated by DICT, ii) Teacher's profile/role, iii) Competences to be developed in teachers.

Understanding that the teacher's profile comes from the conception of the teaching and learning process mediated by DICT, we have the following: (i) conception centered on the technological dimension, in which the teacher masters the technologies in the sense proposed by Balacheff (1994), being a experimenter who chooses, plans, proposes and makes it happen, initiates the activity; (ii) a conception centered on the access, understanding and production of information that would require a teacher who encourages a critical attitude on the part of the student, intervening in the processes of search, understanding, evaluation and transfer of information in a network, on the network; (iii) conception centered on the construction of knowledge that advocates a mediator teacher, who monitors and gives control of the teaching and learning process to the student, using digital technology to create activities that result in the reorganization of their cognitive functions; (iv) conception centered on active methodologies, in which the teacher is a designer, an artist, who works with values, emotions, skills, managing autonomy, time, space, due to the development of critical and active postures on the part of the student, finally, an architect of real problems.

Table 1 – Profile and Skills of Teachers in Teaching Processes Mediated by DICT

Design of the Teaching and Learning Process mediated by DICT	Teacher Profile	Skills to be developed in teachers Ability to
Focused on the technological dimension.	Teacher who masters technologies.	i. Valuing and integrating DICT into education and teaching their use at the technical level. ii. Know and use software, applications, social networks in professional practice

		contexts. iii. Know and scale implications of the use of DICT in everyday life.
Focused on accessing, understanding and producing information.	Teacher who encourages a critical attitude on the part of the student towards the material accessed/ researched/found/prepared.	i. Intercede in the process of seeking information on the network. ii. Obtain, search, consult, manage, store new information and the criticality in front of them, using DICT. iii. Explore the possibilities of accessing information aiming at learning with DICT. iv. Read, browse, understand, post, comment, interact and produce different (hypermediatic) languages. v. Recognize risks of segregation and social exclusion, hate culture, fake news, which can be caused by DICT, due to differences in access and unequal use of them.
Focused on building knowledge.	Mediator teacher, who monitors the student's learning process, maintaining different degrees of involvement in it, giving control of teaching-learning to the student and using digital technology to create activities that result in the reorganization of their cognitive functions.	i. Develop and propose activities based on real problems, reflective, individual and collective, constructive, suitable for the student to learn. ii. Design monitoring and consultation processes, centered on student support. iii. Communicate to promote strategic and self-regulated learning. iv. Ensure access, student involvement and continued involvement in the learning process. v. Promote the use of DICT as another means of teaching and learning.
Focused on active methodologies	Teacher that is "Designer" of learning proposals, one who includes all the skills, listed in the other concepts in his pedagogical action, in partnership with other agents (teachers, students and school).	ii. Understand, analyze, propose, develop and evaluate, as proposed by active methodologies.

Source: Caiado (2011)

We argue that all conceptions of the teaching and learning process mediated by DICT are necessary to account for the social practices of the use of subjects and the challenges that the new digital society imposes on us. In this way, the skills to be developed during the training of this teacher in higher education institutions (HEIs) are expanded; and, consequently, their profile changes, which, in order to mediate the teaching and learning process, needs to experience digital information and communication technologies, often following the paths proposed to students, without prejudice, guiding and letting themselves guide through them in an uninterrupted interactive relationship.

Other authors refer to this teacher as an e-mediator in four areas: the pedagogical (development of an effective virtual learning process); the social (development of a learning

environment with an emotional and affective climate); organization and management (appropriate instructional project); the technical (helping students to feel comfortable with the resources and tools that make up the instructional proposal) (MAURI; ONRUBIA, 2010).

The presentation of the following pedagogical experience, namely: production of imagery texts developed in mobile digital technology, proposed for teaching degree students in Letters, confirms the relevance and urgency of working with active methodologies at school in favor of a new educational paradigm that revisits the role of teachers and students, incorporating mobile learning and new teaching skills, specifically, in teaching and learning Portuguese.

Methodology

The pedagogical experience of producing image texts in mobile digital technology provided to teachers in initial formation was carried out with 15 students from the last period of the Letters Course, in the second half of 2018, from a higher education institution in Recife. This work was supported by active methodologies with a focus on project-based learning. In the search for teacher formation in a new paradigm and review of pedagogical practices that allow a transformative and collaborative education, we proposed to students a project focused on imagery textual production carried out in mobile digital technology: building a fully imagery text, with visual resources present in the WhatsApp (WA) application, on the smartphone, from the fabled textual genre (*O leão e o ratinho*; *A raposa e as uvas* - The lion and the mouse; The fox and the grapes) or the fairy tale textual genre (*Chapeuzinho Vermelho*; *Os três Porquinhos* or *Pinóquio* - Little Red Riding Hood; The three Little Pigs or Pinocchio), suggested by teacher proposing the activity.

Based on the Project-Based Learning - PBL experience, students gathered in small groups to foster collaborative learning and solve the challenge presented: to produce coherent and cohesive texts using exclusively the imagery resources of the WA application keyboard. Therefore, they planned the steps to carry out the task.

Regarding the adopted procedures, the students were motivated to: 1) choose the textual genre (fable or fairy tale) and the thematic content to be worked on based on the chosen genre; 2) identify the formal, functional, thematic content and style characteristics of the genres involved: fable or fairy tale; 3) read, understand and synthesize the main facts present in the chosen textual genre; 4) select the images present on the WA application keyboard that are related to the thematic content of the fable or fairy tale, for the production

of the image text; 5) make cooperative decisions about how to produce an imagery text, reflecting on the criteria of textuality - coherence and cohesion; 6) produce the image text in Mobile Digital Technology - MDT; 7) socialize the imagery texts produced with the class of the 4th period of the Letters course, in the discipline of Portuguese Language Semantics, aiming to discuss cohesive imagery resources present in the text related to coherence; 8) report, in detail, the discussion, reflection and the process of construction of the graphic text in the subjects Laboratory of Portuguese Language and Literature and Multiliteracies at School, providing real data for the research teachers.

Experience report: an analysis

For this experience report, we selected the work of one of the teams, composed of three teachers in formation (hereinafter, the Teachers in Formation Team - TFT), using as criteria the arguments presented in relation to the cohesive resources used to build an imagery text coherent. The textual genre chosen by the team was the fable "The Lion and the Mouse", by Aesop, reproduced below in two ways: written verbal language and visual/image language.

Table 2 – Fable The Lion and the Mouse

The lion and the mouse
Aesop
The Lion was getting a good sleep when he was awakened by a mouse that ran past his face. Swiftly, it grabbed him, and was ready to kill him.
So, the mouse begged:
- Please, let go of me, I'm sure that one day I'll be able to return this favor.
So, the Lion let out with big laughs, because a big and strong fearless one, wouldn't need a mouse.
After a while, the Lion fell into a trap of hunters. He was trapped and could barely move.
When the Mouse heard his roar, he gnawed the rope until the lion was freed and said:
- You laughed at the idea that I would never be able to help you. Never thought you might need a poor little mouse!
But now you know that a little Rat can return a favor to a great Lion!
Moral of the story: "Little friends can turn out to be the best and most loyal allies".

Source: Aesop 550 a.C. (2011, p. 154)

Figure 1 – Image Production in MDT: The Lion and the Mouse

Source: Production prepared by students from the last period of the Letters course

Specifically in this experience report, the team collaboratively shares the process of constructing the imagery text, based on the aforementioned criteria: cohesion and coherence, and the autonomy provided by the use of active methodologies in the process of teaching and learning Portuguese, making teachers in training self-organize, based on the personalized construction of knowledge; manage the content in time-space and assume the position of authors of challenges and mediators of knowledge, simultaneously, capable of creating harmonious textual imagery webs for the production of meanings. We divided the report of the pedagogical experience lived by the selected team into five fragments that we started to analyze, respecting the way it was written by TFT.

Table 3 – Fragment 1

TFT: Before starting production on Whatsapp, the fable "The Lion and the Mouse" was read in order to understand the text.

Source: Devised by the authors

Regarding the knowledge shared by TFT, in fragment 1, we make the following considerations: it is of fundamental importance within project-based learning, inserted in active methodologies, that the teacher in formation identifies the project objectives in relation to the proposed challenge. Thus, the team's first action was to carry out a comprehensive reading of the chosen fable, which made it possible to identify the central ideas of the text, in order to re-signify and re-elaborate the fable in an image format.

Table 4 – Fragment 2

TFT: The second step for production was to discuss with the group how WhatApp emojis have the potential for meaning. At this point, we have concluded that they can be understood in different ways. The best way, according to our criteria, was to use just one emoji as a signifying element. Therefore, each emoji used in image production corresponds to a central word or idea.

Source: Devised by the authors

In fragment 2, which refers to the second step performed by the team, the orientation of the professor who proposed the project was for the group to select emojis related to the chosen text. The team began the search for images or visual references that would give clues to identify the thematic content of the textual production. In the fable, the semantic clue is centered on the title: image of the lion and image of the mouse, which, depending on the subjects' prior knowledge, would lead to the discovery of the fable "The Lion and the Mouse".

In this sense, the teachers in training presented the concept of teaching and learning centered on the construction of knowledge, which enabled the reflection of the potential meaning of emojis available on the keyboard related to the fable "The Lion and the Mouse", that is, they do not they were restricted only to the selection of emojis, taking an autonomous attitude in this process in relation to the guidance received.

Table 5 – Fragment 3

TFT: When starting the production, a question arose: How to leave the production with a logical sequence (coherent) so that it is well articulated (cohesive)? The resource we used to satisfy the question was to use the spaces between the lines as sequential markers. Other resources used to make the graphic text more understandable were to establish synonymous and antonymous relationships between the emojis, such as the icon of an open and closed padlock to convey the idea of stuck/fastened and released; mark at the beginning of each line (sequence), the character who speaks, so that it is possible to identify the author of the action or speech more quickly.

Source: Devised by the authors

Fragment 3 can be analyzed as a self-reflection by the team of teachers in formation, which aimed to seek solutions to the proposed challenge, being able to propose activities based on real problems, which require reflection, constructive individual and collective construction.

The solution found by the team reinforces what Caiado, Fonte and Barros (2018) and Fonte, Barros and Caiado (2019) called cohesion of the type "connection by temporal and/or spatial contiguity", since the spaces between the lines would be sequential markers, functioning as a cohesive resource for the imagery text. Another resource used by the team to make the graphic text more understandable was the establishment of synonymy and antonymy between the images, emojis, that is, the TFT demonstrated the ability to manage, involve and control the learning process, aided by the MDT, understood in this process as yet another means of teaching and learning.

Table 6 – Fragment 4

TFT: Finally, we also come to some empirical conclusions. The first is that the passive voice, if transposed to the imagery text, can cause semantic confusion. Interestingly, in written verbal texts, the passive voice alters the subject's position.

Source: Devised by the authors

The report contained in fragment 4 demonstrates that the TFT intervened in the process, sought, consulted, developed an autonomous posture by exploring the possibilities of reworking the fable, demonstrating a conception of the teaching and learning process centered on accessing, understanding and producing information. To guarantee the coherence of the imagery text, the teachers in formation changed the voice of the patient-agent subject, that is, from the passive voice they re-elaborated the text to the active voice, inserting the image of the emojis of the characters in the fable, marking the exchange of turns and the enunciator of the speech.

Table 7 – Fragment 5

TFT: The other conclusion is that, although there are several emojis on WhatsApp, they are still limited, in some cases, such as the word "trap". To convey this idea, we used the image of "spirals".

Source: Devised by the authors

In fragment 5, we can reflect on all the richness of the conception centered on active methodologies, and on PBL, as we came across, in the report, with teachers that are "designers" of proposals, also alternatives for the proposed challenge.

The TFT, given the limitation of appropriate emojis to give meaning to the imagery text, performed a "cohesive association"[8] to establish the idea of "trap", selecting an image in "spiral", thus establishing a semantic relationship between the idea of "trap" and the image of "spiral", as proposed by Caiado, Fonte and Barros (2018) and Fonte, Barros and Caiado (2019).

In this sense, we consider that the team understood, analyzed and proposed an alternative to the difficulty, a capacity centered on PBL.

Final considerations

This article presents the report of a pedagogical experience – production of image texts – developed in Mobile Digital Technology (MDT), based on project-based learning, proposed for teachers in formation.

Metaphorically, we can infer the teaching and learning relationship from the homophone words[9]: "*Agente*"/"*a gente*" (Agent/We). The first refers to the sense of one who acts or acts on something; the second reveals the collective meaning of us. We perceive the teaching and learning process in contemporary education, considering the protagonists who act collectively, permeated by active teaching methodologies, demanding that teachers, students and the school become collaborative operators and co-participants in the construction of knowledge.

We observe that the teaching and learning process mediated by DICT, inserted in the design of active methodologies, calls on the teacher to develop new skills related to the role of "designer" of learning proposals, that is, let him know, in face of each new scenario, create and recreate concepts and behaviors in their pedagogical action, sharing, collaboratively, knowledge, skills, attitudes, values and emotions with students.

After the pedagogical experience - production of image texts - developed in Mobile Digital Technology (MDT), from project-based learning, proposed for teachers in formation, we realized that there is still resistance and an absence of practices that focus on the image

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[8] Cohesive association represents the semantic relationship of images with the ideas they suggest (CAIADO; FONTE; BARROS, 2018).
[9] "Homophony is the phonic identity between two or more significant units, or between two or more graphic signs" (DUBOIS *et al.,* 1973, p. 326, our translation).

worked in different teaching axes (in the case of this experience report, in the textual production axis), and in different social contexts; consequently, the focus on visual literacy, necessary for the comprehension and elaboration of image texts present in digital platforms and devices, is impaired or relegated to the background in some educational institutions.

During the solution of the challenge proposed to the students, we identified that smartphone emojis take the place of linguistic signs in image texts, since the meaning of the images was not linked to a single signifier. When there was no image that so explicitly portrayed the idea of the group, another imagistic signifier took its place, with the new signs being taken and accepted by the small social group participating in the project.

The greatest difficulties encountered by the group were located in the establishment of cohesion and textual coherence to attend to the passage of verbal tense and, due to the imagery restrictions present on the keyboard of the WhatsApp application, the students needed to make semantic associations that ensured the coherence of the text.

Finally, we conclude that teachers in training expand and develop new skills when they use autonomous paths that make them advance in knowledge, socio-emotional skills and in new pedagogical gestures.

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