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The role of the educator in distance education: formative assessment and perspectives in the context of professional and technological education

O trabalho de pedagogo na educação a distância: avaliação formativa e perspectivas no contexto da educação profissional e tecnológica

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Abstract

This article seeks to understand how pedagogy and learning can work together to help teachers in professional and technological education take advantage of the potential of virtual learning environments to promote formative assessment. For this purpose, it presents the assessment concepts and practices of teachers in the institutionalized virtual learning environment (VLE) at the Federal Institute of Brasília (IFB), based on the results of a questionnaire. It is inferred that teachers' conceptions of assessment and their assessment practices demonstrate characteristics of formative assessment, despite their limited knowledge of the institution's assessment guidelines. It is emphasized that, for teachers, the resources available in the VLE do not always support formative assessment, which limits the potential of these resources for this purpose. The results indicate the need to expand the role of the educator, who serves as a teaching and learning advisor, within the multidisciplinary teams working in the IFB's Distance Education program. As this professional is responsible for planning, monitoring, and pedagogical coordination, their work is essential for ensuring the pedagogical quality of the courses offered in the distance education format.

Keywords: Teaching and learning advisor; distance education; virtual learning environment; formative assessment.

O artigo buscou identificar como o pedagogo e aprendizagem pode colaborar para que os professores da educação profissional e tecnológica façam uso das potencialidades do ambiente virtual de aprendizagem para promoção de uma avaliação formativa. Para tanto, apresentou a concepção e as práticas avaliativas dos docentes no ambiente virtual de aprendizagem institucionalizado (AVA) do Instituto Federal de Brasília (IFB) a partir dos resultados de um questionário. Infere-se que a concepção de avaliação e as práticas avaliativas dos professores apresentam características da avaliação formativa, apesar do pouco conhecimento das diretrizes de

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avaliação da instituição. Destaca-se que para os professores os recursos disponíveis no AVA nem sempre favorecem a avaliação formativa, o que relativiza a potencialidade desses recursos para essa finalidade. Os resultados indicam a necessidade de ampliação da atuação do pedagogo, orientador de ensino aprendizagem, nas equipes multiprofissionais que atuam na Educação a Distância do IFB. Por ter como atribuições o planejamento, o acompanhamento e a articulação pedagógica, o trabalho desse profissional é essencial para a garantia da qualidade pedagógica dos cursos ofertados na modalidade de EaD.

Palavras-chave: Orientador de ensino aprendizagem; educação a distância; ambiente virtual de aprendizagem; avaliação formativa.

1 INTRODUCTION

We live immersed in technologies that are constantly improving and becoming part of our daily activities, affecting how we view and interact with the world. As part of this world, schools and their processes are also influenced by technology, meaning that teaching and learning—regardless of the instructional modality—are shaped by available technologies. In this article, we will discuss Distance Education (DE) as a mode of instruction present worldwide and which, in Brazil, is regulated by Decree No. 9,057/2017 as

> [...] an educational modality in which didactic-pedagogical mediation in teaching and learning processes occurs through the use of information and communication technologies and media, with qualified personnel, access policies, and compatible monitoring and assessment, among other elements, and involves educational activities carried out by students and education professionals who are in different places and at different times (Brazil, 2017. Art. 1).

Dealing with school learning in the digital age means recognizing that technology pervades school spaces. Nevertheless, it must be noted that Digital Information and Communication Technologies (DICT) are not fully used in the educational context due to a number of factors, among which we highlight the lack of pedagogical training focused on their use and the limited access to these technologies in the school environment.

In this context, the role of the educator as a professional in educational technologies with a focus on distance learning stands out. At the Federal Institute of Brasília, the setting for this research, this professional is referred to as a teaching and learning advisor (OEA), and their role is to “monitor, guide, and support teaching activities” (Gontijo & Costa, 2021, p. 31). In this regard, the educator plays a prominent role as

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> [...] a professional who works in various areas of educational practice, directly or indirectly linked to the organization and processes of transmission and active assimilation of knowledge and modes of action, with a view to human development objectives previously defined within their historical context (Libâneo, 2010, p. 33).

The teaching and learning advisor is an integral part of the multidisciplinary team that supports pedagogical management processes within the context of distance education and operates in various capacities, assisting teachers in their pedagogical work and educational processes. In this article, we will focus on assessment as a category of pedagogical work that pervades the entire teaching and learning process (Freitas, 1995). Therefore, we will emphasize monitoring activities, which involve support, dialogue, and guidance for distance education teachers (Pereira Filho; Reynaldo; Vieira, 2018).

Since the distance education is grounded in multimedia communication that does not require the spatial and temporal co-presence of participants, we are interested in discussing it within the context of Professional and Technological Education (PTE), as it has an inclusive nature that integrates workers into the educational and training process for the world of work.

Therefore, the objective of this article is to identify how the educator can collaborate so that teachers of professional and technological education make use of the potential of the virtual learning environment to promote formative assessment.

The core of the pedagogical model "[1] " in distance education (DE) within VTE is student development, emphasizing their agency—that is, fostering their active role in knowledge construction. It is also important to note that the times and spaces for teaching and learning differ for students and teachers. This "pedagogical distance" (spatial and temporal) is minimized by ICTs, as they facilitate communication and interaction among participants (Behar; Passerino; Bernardi, 2007).

The organization of content, the curation of materials, the *design* of the virtual environment, among other factors, must consider the processes of "knowledge construction, autonomy, authorship, interaction, the construction of a heterarchical space of cooperation, mutual respect, and solidarity; centered on the learner's activity, problem identification, and problem-solving" (Behar; Passerino; Bernardi, 2007, p.26), in order to promote meaningful learning within the context of EFA. To this end, it is essential that the teacher be committed to a practice that fosters the development of citizenship, critical thinking, awareness, creativity, ethics, and student autonomy, as a promoter of action and reflection (Belloni, 2008).

From this perspective, the importance of the student being the protagonist of their own learning process is reaffirmed. To achieve this, it is necessary to consider pedagogical strategies that promote autonomy, self-regulation, interactivity, and collaborative learning. It is emphasized that autonomy and self-regulation are related to compliance with regulations, deadlines, and rules outlined throughout the course;

[1] A pedagogical model is "a figurative system that reproduces reality in a more abstract way," and is based on epistemological, pedagogical, organizational, technological, and methodological pillars (Behar; Passerino; Bernardi, 2007, p. 27).

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the organization of study materials; the management of study time; and the production of summaries of texts and central ideas. Collaborative learning refers to the creation of learning networks in which students can interact and gain access to new ideas and perspectives in a wide variety of styles and forms. Interactivity is related to collaborative learning constructions that, when encouraged, help students become "more responsible for their own learning and for the learning of their peers, given that all students are involved in this methodology" (Torres; Lopes; Camargo, 2021, p. 279), which brings us back to autonomy and self-regulation. Therefore, this is an organization of pedagogical work based on a model that feeds back into the development of student protagonism.

In addition to these elements, the adoption of a pedagogical model in distance education must consider the institutional availability of ICTs, as these enable the creation of educational tools to be used in teaching and learning processes. The creation of a Virtual Learning Environment (VLE) at an educational institution depends on this technological availability. There are several virtual teaching platforms available for creating a VLE, such as *Blackboard*, Eadbox, *Google* G *Suite for Education*, Samba *Tech*, *Udemy*, E-Proinfo, and Moodle, among others. In the case of IFB, Moodle was institutionalized under the name Distance Education Center (NEaD) and can "be supplemented by other technological resources to promote educational and academic activities" (Brasília, 2019, Art. 14).

For distance education to be fully utilized, education professionals—teachers and support staff—must be familiar with the available resources. The OEA is responsible not only for supporting professionals working in distance education but also for developing training initiatives.

Considering the processes (planning, monitoring, and coordination) and the activities related to them, Table 1 outlines the actions carried out by the educational specialist (OEA) within the scope of pedagogical work in distance education:

Table 1: Roles of the educator (teaching and learning advisor) in Distance Education

PROCESSES	ACTIVITIES
Planning	Teaching methodologies Guidance manuals Course schedule Assessment strategies and strategies to address dropout rates
Monitoring	Teaching methodologies, development and implementation of guidance manuals Courses under development Implementation of assessment strategies and strategies to combat

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	dropout rates
Coordination	Validation of produced teaching and learning materials Collaboration with teacher training programs Presentation of guidance manuals to teacher-authors, trainers, and mediators

Source: Adapted from Gontijo; Costa (2021).

Therefore, the educator plays an essential role in the development of the distance learning pedagogical model at IFB, since the existence of the VLE alone does not guarantee that the foundations of EPT—work as an educational principle (the relationship between work and education, with a humanizing character); integral human formation (omnilaterality—integral human formation, aiming at the development of the individual in all their dimensions) and polytechnia (intellectual, physical, and technological education, encompassing all dimensions of life) (Moura; Filho Domingos; Silva, 2015) are developed in the pedagogical plan, promoting quality, retention, and student success.

In both the planning and monitoring phases, the OEA is dedicated to assessing student learning. However, it is important to note that assessment lies at the core of pedagogical work, alongside the other categories. For Freire (1995), pedagogical work is organized into interconnected and dialectical pairs: objectives and assessment, and content and methodology. Although there is no hierarchy among the categories that make up pedagogical work, we set aside assessment for the purposes of this study.

According to Luckesi (2000), the processes of diagnosing and deciding are present in assessment, regardless of the teaching modality. The diagnostic process involves verifying the current state of students' learning. Thus, once a diagnosis of learning is established, the decision-making process begins. The "adoption of a favorable or unfavorable stance toward the object of assessment, with a consequent decision on action" ( ) will guide the organization of pedagogical work regarding the most appropriate teaching and learning processes (Luckesi, 1997, p. 36). This qualitative analysis for the promotion of learning is termed by Fernandes (2006) as formative assessment.

For Luckesi (1997), decision-making completes the act of assessment, since once the diagnosis of learning has been made, it is time to decide, based on the learning objectives, the content, and the methodologies to be employed. In summary, "the act of assessing involves two interconnected and inseparable processes: diagnosing and deciding. A decision is not possible without a diagnosis, and a diagnosis without a decision is an aborted process" (Luckesi, 2000, p. 9).

In distance learning, assessment can take place in the VLE, using the various tools and resources that are configured there. In the case of IFB, which uses version 4.1 of the Moodle *software*, the available resources and tools—referred to in this study as assessment instruments—can be applied synchronously, asynchronously, individually, or collectively. During planning, it is necessary to ensure that assessment

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instruments are not selected at random, as they must be aligned with the diagnosis of students' learning. Thus, it is essential to plan the assessment and monitor its development, a responsibility of the educator in distance learning.

2 METHODOLOGY

Considering that the research aims to identify how the educator can collaborate so that teachers in vocational and technological education can make use of the potential of the virtual learning environment to promote formative assessment. Initially, we sought to identify the concept of assessment held by teachers working in a course offered in the distance learning modality and the assessment practices developed in the institutionalized virtual learning environment of the IFB.

A case study was conducted on a technical course offered in distance learning. It should be noted that "despite its limitations, the case study is the most appropriate method for gaining an in-depth understanding of all the nuances of a given organizational phenomenon" (Freitas; Jabbour, 2011, p.16). The essence of the case study is to clarify a set of decisions regarding the research topic and to analyze the possible choices and decision-making processes related to the phenomenon under study.

Yin and Grassi (2001) state that the structural organization in the design of a case study should incorporate, in particular, the research questions and the unit of analysis—the research *corpus* derived from the results of the questionnaire answered by the teachers, which aimed to: a) identify teachers' conceptions of assessment, and b) characterize teachers' formative assessment practices in the IFB's virtual learning environment.

The field research began with a meeting with the teachers to clarify the research objectives and encourage their participation in completing the questionnaire. All nine (9) teachers answered to the questionnaire. These professionals have teaching experience ranging from four to twenty years; however, in distance education, this experience ranges from two to eight years.

Content analysis (Bardin, 2011), which involves a rigorous process of organization, categorization, and analysis, was used to process the results. This analysis of the questionnaire yielded three central categories related to assessment in IFB's distance education, directly linked to the concept of formative assessment in the virtual learning environment, namely: teachers' conceptions of assessment, highlighting perceptions regarding the assessment process and its importance in distance education, especially with regard to continuous monitoring and the development of students' competencies; formative assessment activities developed at NEaD, highlighting the strategies used by teachers to diagnose and monitor student progress in the virtual environment; and alignments between teachers' conceptions and practices and the IFB's official documents on assessment. Below, we discuss the results found in each of the aforementioned categories.

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3 ANALYSIS AND RESULTS

According to Ciavatta (2019), the categories of work and education are fundamental for reflecting on the aspects that comprise the processes of training (education) and professionalism (work), and considering this relationship (education-work) is essential when investigating the pedagogical context of professional and technological education.

In this article, we analyze the results of a study conducted with instructors of a technical course offered in a distance learning format, whose objective was to identify perceptions regarding formative assessment practiced in distance learning, since, as Villas Boas (2017) points out, “assessment is a continuous process of analysis and reflection on students’ learning and on one’s pedagogical work in the classroom and throughout the school, accompanied by the development of strategies for its advancement” (p. 15). Therefore, it is not restricted to students; it also has a formative aspect regarding teaching practice.

In the context of this research, listening to teachers working in distance education regarding assessment served as a guide for analyzing how educators (teaching and learning facilitators) can contribute to leveraging the potential of the virtual learning environment in the practice of formative assessment.

The first category—**teachers’ conceptions of assessment**—was constructed based on different questions in the questionnaire. The first concept we highlight is the conception of grades, grounded in the results of the analysis of the following question: “Based on your daily pedagogical practice in the institutionalized virtual learning environment, choose the option that best reflects your reality.” Teachers were presented with 18 statements summarized in Table 2. It should be noted that a five-point *Likert* scale was used, ranging from never, rarely, sometimes, often, and always.

Table 2: Teaching Practices in Distance Education

ORDER	STATEMENT
1	I reorganize and implement teaching interventions when most students do not perform as expected.
2	I quickly review my students’ assessment activities.
3	I make several written observations on my students’ work when necessary.

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4	I continue with the activities after confirming that students have constructed their learning
5	The grades my students receive on tests reflect their learning.
6	I discuss the assessment process I use with my colleagues.
7	The instructional program does not always meet students' educational needs.
8	My main focus in assessment is student learning.
9	The deadlines for assessment activities allow students adequate time for reflection.
10	My practice in the virtual classroom changes as a result of the assessment methods I use.
11	Students' mistakes encourage me to support their learning.
12	I plan lessons in a way that allows me to monitor students' progress.
13	I encourage my students to share their learning.
14	I ensure that the pace of the class is appropriate for the students' learning level.
15	I make clear to my students the objective regarding their learning needs.
16	I create spaces in the virtual classroom for students to ask questions about their learning needs.
17	I use office hours to address any questions students may have about their learning progress.
18	When students encounter difficulties, I provide pedagogical interventions whenever necessary.

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Source: Research findings.

The results indicate that the statement related to **the grade dimension**—item 05 in Table 2—shows, most significantly, that teachers believe that students' grades rarely reflect their learning and that the instructional program does not always meet students' educational needs. It should be noted that two elements were examined separately—learning and grades.

In this sense, it can be stated that there is no direct relationship between learning and the grade assigned to an assessment activity, as the purpose of the assessment must be considered. Esteban (2008) warns that

> The practice of assessment, which aims to measure knowledge to grade students, presents itself as a dynamic that isolates individuals, hinders dialogue, reduces spaces for solidarity and cooperation, and encourages competition (Esteban, 2008, p. 99).

Furthermore, the author reflects on assessment instruments when she states that "we must develop instruments and procedures that help us give voice and visibility to what is silenced and erased" (Esteban, 2008, p. 32).

Thus, it follows that part of this group's conception of assessment is that grades do not always reflect learning, as they are a snapshot of the moment of assessment.

Another element that permeates the issue of grades is that, at times, the formative dimension of assessment is lost, with the focus shifting to a classificatory dimension, which, in a school context, relates to the ranking of students, failing to "consider/value students' experiences, interests, possibilities, limits, sociocultural values, and life experiences as determinants of their learning trajectories" (Hoffmann, 2019, p. 26).

Therefore, it distances itself from the decision-making dimension, as Luckesi (2000) points out, remaining restricted and centralized in the teacher. In contrast to ranking, Fernandes (2023) asserts that assessment has "a strong formative component, with the active involvement of students and teachers in analyzing learning outcomes and defining strategies to improve and/or consolidate them" (p. 40).

Regarding **assessment planning** from a collective perspective, teachers indicated, based on the results of statements 05, 06, and 09 in Table 2, that they rarely or never discuss the assessment process, the relationship between grades and student learning, or the appropriateness of deadlines for assessment activities in evaluation activities.

The dimension of collective work is paramount in teaching practice. Teachers, as critical intellectuals, are involved in the planning and organization of teaching and learning, in which

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> [...] they are seen as agents of change and must be clear about their political and moral ideals, as they must be open to the participation of social groups in educational practice, in addition to involving students in the y task of learning and collectively building the capacity to act socially (Gontijo, 2014, p. 205).

Regarding ***feedback***, it is essential to note that it plays a fundamental role in the effectiveness of learning in distance education, being indispensable in the formative assessment process, as pointed out by Fernandes (2021), Avões (2015), and Luckesi (1997). In this sense, teachers understand that *feedback* is provided to students based on the LMS settings as follows:

> P1 - In some resources, *feedback* is pre-written and appears automatically when the student makes a mistake or gets an answer correct. In other resources, *feedback* is provided in writing after the activity is graded.
>
> P4 - There are different ways to provide *feedback*, such as responses within the questions themselves, general *feedback*, discussion forums, and *chat features* for students to interact with teachers.
>
> P9 - I usually use rubrics to assess assignments, making it clear what I expect from the student before they attempt the question. In the questionnaire, I usually provide the correct answer for each option.

Formative assessment can be enhanced through planning and the selection of learning strategies. To this end, when planning the assessment, it is essential to define criteria that also facilitate providing *feedback* to students regarding their learning, enabling them to understand what they have already learned and what still needs to be done to continue learning, using the assessment as a reference.

In this regard, it is worth noting the use of assessment rubrics, automatically generated *feedback* (whether or not it presents the correct answer), and *feedback* provided by the teacher after the task is completed.

Regarding assessment rubrics, Biagiotti (2005), citing Porto (2005), states that when developing assessment rubrics, it is essential to consider the following aspects:

> Rubrics must be tailored to the tasks or products to be evaluated;
>
> Rubrics must describe levels of performance and competence in performing specific tasks or in relation to a specific product;
>
> These levels must be described in detail and associated with a rating scale;
>
> Taken together, these competency levels describe every possible outcome regarding a student's performance; and
>
> Rubrics establish performance expectations (pp. 2–3).

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As for automatic *feedback*, it can be inferred that it is not always sufficient for students to rethink the activity and construct new meanings regarding the objects of study, as the following excerpt points out:

> P4 - These approaches are not always sufficient, as students' questions are dynamic and arise at specific moments.

Therefore, *feedback* must go beyond the automated function configured in the VLE; it must provide support and motivate the student to reorganize their studies in order to enhance their learning; it is a tool that supports the self-regulation of learning.

Regarding the *feedback* provided on an activity after its completion, it is important to highlight the importance of defining prior criteria based on learning objectives that guide the teacher's perspective, as this is "a critical and reflective teaching practice aimed at dignified and quality education for all students" (Hoffmann, 2019, p. 14).

These results reinforce the importance of OEA's collaboration in ensuring a distance education pedagogical model grounded in EFA principles through the appropriate and consistent use of resources available in the virtual learning environment. It should be noted that the diversity of assessment tools is not sufficient to promote the individual's development in all its dimensions. Furthermore, reflection is needed on the pedagogical potential that a given technological resource can foster in the teaching-learning process and its relationship with the adopted pedagogical model (Behar, 2009).

Considering the "planning" function in the professional activity of the OEA at the IFB (already described in this article), the fundamental step to maximize the use of the VLE is to make it clear to faculty members that they must always relate learning objectives to the possibilities offered by the technological resource and determine whether it enables the achievement of these objectives. Following this is the importance of understanding students' technological profiles and their ability to access these resources.

The grade remains the evaluative designation specified in the documents regulating courses at the IFB, which does not mean that it should reflect only the classificatory aspect to the detriment of the qualitative aspect in assessment practices, since these regulations require that the classificatory designation must consider all applied assessment instruments, prioritizing those of a qualitative nature. Thus, the work of the educational specialist should promote opportunities for teachers to acquire knowledge about the resources available in the LMS with a view to creating and applying formative assessments. These opportunities can be realized through the development of guides, manuals, roadmaps, or training experiences for teachers. Furthermore, the creation of spaces and agendas for the educational specialist's participation in faculty meetings is essential to foster dialogue regarding the importance of formative assessment and the opportunities that the LMS offers.

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It should also be emphasized that guidance and training on the use of the VLE should not be restricted to the technological domain, since, as Mishra and Koehler (2006, cited in Ribeiro and Piedade, 2023) state, teaching in the distance education (DE) modality requires teacher training that integrates three areas: pedagogical, technological, and content knowledge.

The second category—**formative assessment activities carried out in the NEaD**—was based on the results of the analysis of the following question: "Based on your daily pedagogical practice in the institutionalized virtual learning environment, choose the option that most closely matches your reality." In this categorization, the statements presented in Table 2 were also analyzed.

The results indicate that the statements related to formative assessment processes – 1, 3, 4, 5, 7, 8, 10, 11, 12, 14, 15, 15, 17, 18 – had higher frequency rates (always/often), especially when it comes to redoing the activity, highlighting the importance of *feedback*. This result corroborates what is pointed out by Avões (2015, p. 9) in highlighting that formative assessment is intrinsically linked to *feedback*, which, in turn, activates "students' cognitive and metacognitive processes," regulating learning.

Teachers were asked which VLE resources they had already used in the assessment process. The results indicate that all teachers, at some point, have used the "assignment" feature. The following resources were also mentioned: questionnaire, *chat*, lesson, URL, group selection, glossary, word search, and forum. To a lesser extent, the following resources were mentioned: database, crossword puzzle, confweb room, *chat*, hidden image game, assessment survey, *wiki*, millionaire, and assessment lab.

It is worth noting that the "assignment" feature consists of proposing an activity for students to complete, in which the teacher provides guidance indicating what should be produced individually or collectively. The potential of this feature as a formative assessment tool lies in facilitating the provision of *feedback* to students. Therefore, from the perspective of mediating assessment, "the teacher's role in paying attention to each student, promoting better learning opportunities for all" can be realized by using this feature. (Hoffmann, 2019, p. 36)

Hoffmann (2019) also points out that

> [...] to monitor each student, in their unique and singular expression of knowledge, it is essential to provide many smaller, gradual tasks that are immediately analyzed by the teacher. Quizzes, exercises, texts, and other written tasks are indispensable tools in formative assessment [...] The tasks will be complementary as they are interconnected and designed with reference to both the group's progress and individual learning paths (p. 108).

In this regard, teachers were asked to indicate the activities and resources most frequently used in the assessment process. The results indicate that assignments, quizzes, *chats,* and lessons are the most commonly used. Thus, for

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distance learning to foster “autonomy, interaction, collaboration, discovery, the integration of theory and practice, tutoring, and student feedback” (Vital, 2021, p. 62), teachers must understand the potential of the resources available in the VLE and configure them for effective use.

Gamification tools also stand out as instruments for formative assessment, but they are the resources least used by faculty members. It can be inferred that this difficulty may be related to the need to format the glossary tool before configuring the gamification resources. The institution surveyed offers basic and intermediate Moodle courses with open access to staff. Faculty members recognize their importance for working in distance education. As Participant 4 corroborates, highlighting the need for investment in teacher training.

> P4 - It is observed that, as time goes by, teachers are introduced to the distance learning methodology, but their basic, intermediate, and advanced training is not supported by the institution. This leads to a situation where knowledge remains individualized and, at times, monopolized by a few people within the same faculty.

Vital (2021) supports this view by emphasizing that one of the key skills of a distance education teacher is the ability to resolve pedagogical issues within the VLE, to which we add the technical challenges of configuring the platform. In this context, we reiterate the importance of teacher training for promoting “critical and reflective teaching practices aimed at providing dignified and quality education for all students” (Hoffmann, 2019, p. 14).

Nóvoa (1992) asserts that training is an individual process of appropriation in which a set of information and possibilities is related to the teacher’s pedagogical practices and experiences, thus materializing into practical knowledge for the lived reality of teaching. Therefore, it presupposes a personal investment, marked by a creative and autonomous trajectory with its own paths and projects (Dantas; Nascimento, 2022).

The VLE offers a range of tools that can enhance the effectiveness of a virtual classroom. It is possible to create discussion forums, share study materials, access and record grades, collect and review assignments, administer assessment tests and opinion surveys, among other features, linked to the objectives outlined by the teacher. These are asynchronous tools, meaning they allow communication between the instructor and the student at different times, providing greater autonomy in carrying out studies and activities. Thus, instructors were asked if they use this type of resource.

The results indicate that 87% use the file feature; 57% use the book, folder, page, and label features; and no teacher uses content from the IMS package. d teachers describe that the resources are used as a shared content repository (videos, images, and files) for students to access and complete the necessary readings and studies; for sending files with *feedback* on discourse analysis; for presenting debates; and for making observation records available. However, some teachers use the resources to support assessment, as shown in the following excerpts:

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> P1 – File: report templates or documents are made available for students to download, fill out, and submit later.
>
> P1 – Page: incorporation of material (text, images, videos) that students must access and subsequently complete an assessment activity.

Therefore, the LMS provides the instructor with access to tools (resources and activities) that aid in the construction of student knowledge, such as: *chats*, forums, assignments, *wikis*, lessons, and quizzes, among others, and through these, the instructor can monitor the student's development, conducting formative assessment.

Although the resources available in the VLE have the potential to aid in the formative assessment process, this view is not unanimous among teachers, as 50% indicated that they do not support formative assessment, as shown in the excerpts:

> P1 – The NEaD offers a wide range of resources that can be strategically designed to create a formative assessment pathway for students. On the other hand, it requires the teacher to acquire the necessary knowledge to set up the activities correctly.
>
> P4 – The effectiveness of the technological resources used in teaching depends on the teacher's knowledge and mastery of them.

For these resources to serve formative assessment, teachers must understand their functionalities, which go beyond the technical aspects of the VLE, in order to identify conceptual links between formative assessment and the functional characteristics of the resources.

As an integral part of formative assessment, *feedback* should provide students with the opportunity to recognize not only what they already know, but also what needs to be learned. For Filatro (2018), *feedback* is

> a self-assessment strategy that enables students to reflect on their progress. In this sense, it is worthwhile to invest in developing detailed explanations that inform students of their degree of accuracy, approximation, or appropriateness in applying their knowledge (p. 203).

It is worth noting that *feedback* is an essential element of formative assessment and plays a central role in distance learning, as it guides the processes of regulation and self-regulation of students' learning (Avões, 2015). Therefore, it involves both the teacher and the student, since it provides elements for both to rethink the learning process. The teacher may reconsider the chosen methodologies, the tools

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used, and the need for pedagogical and curricular adaptations, in addition to providing further information to help students reflect on their learning.

In this regard, teachers were asked whether, after receiving *feedback,* students have the opportunity to resubmit a revised version of the assessment activity. The results indicate that all teachers allow for the resubmission of the assignment based on different criteria, including: 1) if it is the first time the student receives *feedback* on the assignment; 2) if it is related to the Integrative Project (IP); 3) as a submission of revisions; 4) as a make-up assignment; 5) by configuring automatic *feedback* to allow for more than one attempt. Thus, *feedback* can

> [...] represent a great opportunity for students to reflect on the content and advance their understanding of the topics covered. They are a perfect example of how to promote assessment for learning, and not merely assessment of learning (Filatro, 2018, p. 216).

Based on the results obtained in the second category, the work of the OEA serves as a bridge between technological and pedagogical knowledge, with a view to implementing formative assessment practices. The integration of this knowledge is fundamental for selecting the most appropriate technological resources to assess the achievement of learning objectives.

Ribeiro and Piedade (2023) state that the lack of training to work in distance education has led many teachers to "make the didactic transition between face-to-face and distance learning based on their professional experience" (p. 02). The authors emphasize the importance of the teacher's experience in face-to-face teaching in shaping teaching practice, but caution that distance learning has pedagogical particularities that must be considered.

In this regard, dialogue with the educator during the instructional planning phase aids in decision-making regarding which tools available in the VLE are best suited for analyzing student learning.

The full potential of the technological tools provided by the LMS is based on the understanding that Moodle offers two types of tools for delivering distance learning courses: activities and resources. According to the description provided on the official website of the Moodle community platform[2] , the first—activities—consists of "something the student will do that interacts with other students and/or the instructor." In other words, this type of technological tool is designed to facilitate interaction among participants in the virtual educational process. The second type—resources—is a static tool intended to support the sharing of learning content. In other words, resources are limited to enabling interactivity between the student and the learning object. As observed in the research results, "activities"-type tools are used on a smaller scale by teachers in the course under investigation. This reality hinders formative assessment

[2] Martin Dougiamas released the first version of Moodle (Moodle 1.0) on August 20, 2002, and later, in 2003, the community-hosted version of Moodle emerged, incorporating all community forums and migrating to Moodle.org.

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since it makes interactive practices such as *feedback*—an essential element in this process—unfeasible.

The research participants' recognition that the effectiveness of the VLE's technological resources depends on seeking knowledge about these resources is valid, which reinforces the importance of the nature of the educator's formative work with teachers. In faculty meetings (or other spaces for collective development), the sharing of experiences by teachers who already use NEaD tools from a formative perspective is an opportunity to expand knowledge about the use of Moodle's activity tools.

Another training strategy—and one that is part of the educator's responsibilities in distance education—is the production and sharing of instructional content with step-by-step guides for configuring activities, such as manuals and guides in accessible formats and diverse media like text, video, or slides. It is important to note that instructional content[3] does not preclude the possibility of being supplemented by content that describes the pedagogical potential of applying technological tools.

The third category—**alignments between teaching concepts and practices and the IFB's official documents on assessment**—was constructed based on findings related to the questionnaire items presented below.

Teachers were asked if they were familiar with the document providing guidelines on classroom assessment within the IFB. The results indicate that 77% of respondents reported being familiar with the document, even if only partially, while 33% reported not being familiar with it. Teachers were also presented with statements regarding the guidelines in the IFB's assessment guidelines, their relationship to pedagogical practice, and assessment from a formative perspective. Table 1 presents the results of this question.

Table 1: Summary of results for the question regarding the guidance provided in the IFB assessment guidelines

	STATEMENTS	AGREEMENT
1	The guidelines are out of touch with the reality of the virtual classroom.	
2	The guidelines focus more on the theoretical aspects of assessment.	

[3] Imperative content is created using the "imperative" text type, designed to provide instructions and recommendations to readers. Examples of imperative content include guides, instruction manuals, recipes, etc. Available at: https://brasilescola.uol.com.br/redacao/textos-injuntivos.htm

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3	The guidelines focus more on the theoretical aspects of assessment.	55%
4	The guidelines are suited to the needs of in-person instruction.	
5	The guidelines lack practical examples of how to implement assessment in the classroom.	
6	The guidelines are difficult to put into practice in distance learning.	44%
7	The guidelines promote reflection on the formative aspect of assessment.	
8	The guidelines help teachers diversify their assessment practices.	
9	The assessment guidelines are suited to the needs of distance education.	11%
Total		100%

Source: research report.

Therefore, in this category, the results indicate a lack of knowledge—albeit among a minority—regarding the institutional document that guides assessment for learning. Furthermore, although institutional regulations encourage reflection on and the practice of formative assessment, these are not aligned with pedagogical work in distance education and may create a certain disconnect between institutional guidelines and pedagogical practice. For those who are familiar with the document, even if only partially, there is a disconnect between the guidelines and pedagogical practice in distance education.

Libâneo (2017) states that to develop assessment planning, the instructor must be familiar with the principles, guidelines, and procedures proposed by the institution. This perspective is fundamental for a practice in line with the institution's philosophical, political, and pedagogical vision and for upholding the " " principles regarding institutional integrity as stipulated in Decree 11529/2023, particularly since it is a public institution.

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Furthermore, the collective dimension in developing an assessment plan from a formative perspective requires the teacher to pay attention to collective work, for as Nóvoa (2022, p. 62) states, “it is not possible to learn the teaching profession without the presence, support, and collaboration of other teachers.”

The results of one-off assessment activities do not always align with students’ learning. Teachers recognize that the elements involved in formative assessment are important, as they are processes that accompany student development. Thus, as a follow-up, teachers were asked whether, in addition to resubmission, the grade assigned to the activity is also subject to revision. All teachers affirmed that the activity grade is updated, as shown in the following excerpts:

> P3 – They have the opportunity to improve their grade. They even receive extra points for resubmitting the assignment following the *feedback* from their instructors.
>
> P9 – I consider the higher grade.

Although the assignment of grades relates the activities to summative assessment, it is possible to observe the principles of formative assessment in action, since the teacher evaluates the work, provides *feedback*, and values the new learning achieved through the formative process. According to Silva (2006)

> Assessing learning in the *online* classroom requires a break from the traditional assessment model historically entrenched in the face-to-face classroom. If the teacher does not wish to underutilize the unique potential of *the online* digital *environment*, or if they do not wish to repeat the same mistakes of traditional assessment, they will have to seek new approaches, new engagement strategies within the very context of teaching and learning, and thereby adapt their practices for assessing learning and their own performance (p. 13).

Therefore, the use of the VLE for formative assessment is effective when it fosters actions to adjust the pedagogical interventions necessary for student learning, allowing for grade revisions, and aligns with the perspective of valuing the progress students have already made, realigning pedagogical interventions based on *feedback*, and recognizing students’ efforts in their learning process (Perrenoud, 1998).

Given the results presented in this category—alignments between teaching concepts and practices and the IFB’s official documents on assessment—we can infer that there is an urgent need to develop institut -pedagogical instruments to guide teachers’ practices toward promoting formative assessment practices in the context of distance education.

Although there are procedures in place that promote formative assessment by teachers in the program under study—such as reviewing grades and providing *feedback*—this practice is not institutionalized. Furthermore, the practice of

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pedagogical *feedback* cannot be carried out haphazardly; on the contrary, Arends (2008) emphasizes that when providing *feedback*, the teacher must adhere to guiding principles, among which we highlight: adapting *feedback* to the learner's developmental level; prioritizing praise and *feedback* on correct performance; and modeling appropriate behavior when providing negative *feedback*. Villas Boas and Soares (2022) caution that when providing *feedback,* it is essential to consider its effects on student learning in order to foster progress, as without this, assessment becomes ineffective.

Therefore, the educator can support the institution in developing guiding instruments for formative assessment that incorporate the specificities of distance learning within the context of EPT, as well as in training teachers to work in this modality. This effort should not disregard the tacit experience of teachers who already use formative assessment practices, but rather make them explicit in the collaborative process of constructing and articulating knowledge to guide institutional practices in distance education.

4 FINAL CONSIDERATIONS

Assessment in Vocational and Technical Education (VTE) has distinctive features that set it apart from other levels of education, as it goes beyond the measurement of theoretical knowledge, encompassing technical, practical, and socio-emotional competencies essential for the student's holistic development. Furthermore, recognizing assessment as learning means that it extends beyond student learning and permeates the teacher's professional development process, providing an opportunity to rethink their pedagogical practice.

When it comes to distance education, the challenge lies in planning assessment while considering the specificities of VET and the resources available in the virtual learning environment. Teacher involvement is essential, given the need for collective work and the sharing of knowledge and skills regarding distance education and the VLE itself.

In this sense, this article aimed to identify how the educational specialist can collaborate so that teachers in vocational and technical education can make use of the potential of the virtual learning environment to promote formative assessment. Therefore, initially, a methodological decision was made to listen to the teachers of a technical course offered through distance learning.

The results of this listening process were organized into three categories: teachers' conceptions of assessment, formative assessment activities developed at the NEaD, and alignments between teachers' conceptions and practices and the official documents of the IFB's " " regarding assessment. Based on these, we identified how the educator can collaborate in promoting formative assessment within the context of distance learning.

In summary, it can be inferred that the assessment conceptions of the faculty members working in the course under investigation exhibit characteristics similar to

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formative assessment, despite their limited knowledge of the institution's Assessment Guidelines. The assessment practices developed by faculty members in the IFB's institutionalized virtual learning environment also show signs of formative assessment, such as a focus on *feedback*, the possibility of revising assignments, and the review of grades.

It is worth noting that, for teachers, the resources available in the VLE do not always facilitate the practice of formative assessment, which limits the potential of these resources. However, the need for training must be considered so that the full use of the VLE's functionalities can be identified as an aspect to be developed during teacher training sessions.

Furthermore, the categories of analysis derived from the research results highlight the complexity of the assessment process and the importance of the articulation between academic knowledge and the demands of the professional world, requiring teachers to develop more complex assessment tools. That is, tools that assess student learning, promoting critical reflection, autonomy, and self-regulation.

It can be argued that the educator, as a teaching and learning advisor, can assist teachers in leveraging the potential of the virtual learning environment to promote formative assessment in the distance learning courses offered by the Federal Institute of Brasília (IFB), since the research findings indicate an urgent need to expand the role of the teaching and learning advisor within the context of distance education. Among these, we highlight the importance of the educator's work in:

a) ensuring a distance education pedagogical model grounded in the principles of EPT, guiding teachers working in distance education regarding the selection and appropriate, coherent use of the technological resources available in the virtual learning environment;

b) implementing formative assessment in distance learning courses offered in the VLE through the coordination of the technological and pedagogical dimensions of teaching practice; and

c) providing institutional support for the development and design of guiding instruments for formative assessment, taking into account the specificities of distance education and the principles of EFA.

At IFB, this professional's role is still limited to courses directly coordinated by the Distance Education Directorate, which is not the case for the course under investigation. The research results indicate not only the need to expand this professional's role but also the pedagogical gaps resulting from their absence.

Teaching must be promoted, organized, and structured in a welcoming manner, and to achieve this, the instructor must be familiar with and know how to utilize the activities and resources offered on the NEaD platform to facilitate the practice of formative assessment. Because their responsibilities include the planning, guidance, and pedagogical monitoring of distance learning course activities, educators are essential professionals for promoting the pedagogical quality of courses—a quality that impacts student learning, retention, and success.

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