

ASSESSMENT OF LEARNING AND THE TEACHING PROCESS IN BASIC
EDUCATION: A STUDY OF THE STATE OF THE ART

*A AVALIAÇÃO DA APRENDIZAGEM E O PROCESSO DE ENSINO NA EDUCAÇÃO
BÁSICA: UM ESTUDO DO ESTADO DA ARTE*

*EVALUACIÓN DEL APRENDIZAJE Y EL PROCESO DE ENSEÑANZA EN
EDUCACIÓN BÁSICA: UN ESTUDIO DEL ESTADO DEL ARTE*



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ABSTRACT: The subject of this article is research conducted between 2010 and 2019 on education assessment, with a focus on the dimension of learning, encompassing the review of theses related to this topic. The primary purpose of this work was to analyze and comprehend the progress of research addressing the utilization of formative evaluation in education, particularly within the context of basic-level educational institutions. To achieve the outlined objective, an initial survey was initially conducted in the database of the Digital Library of Thesis and Dissertations (BDTD). Ninety-three doctoral theses were identified, of which only ten were selected that directly relate to the proposed topic.

KEYWORDS: Evaluation. Formation. Quality. Basic Education.

RESUMO: O objeto de estudo deste artigo é a pesquisa realizada no período de 2010 a 2019 sobre a avaliação da educação, com foco na dimensão da aprendizagem, abrangendo a revisão de teses relacionadas a este tema. O propósito principal deste trabalho consistiu em analisar e compreender o progresso das pesquisas que abordam a utilização da avaliação formativa na educação, em especial no contexto das instituições de ensino de nível básico. Com o intuito de alcançar o objetivo delineado, foi inicialmente conduzido um levantamento no banco de teses e dissertações disponíveis na Biblioteca Digital de Teses e Dissertações (BDTD). Foram identificadas 93 teses de doutorado, das quais foram selecionadas apenas 10 que se relacionam de maneira direta com o tópico proposto.

PALAVRAS-CHAVE: Avaliação. Formação. Qualidade. Educação Básica.

RESUMEN: El objeto de estudio de este artículo son las investigaciones de 2010 a 2019 sobre la evaluación de la educación, en la dimensión de aprendizaje. La investigación revisó tesis sobre el tema. El objetivo del trabajo fue aprehender el avance de las investigaciones sobre el uso de la evaluación formativa en la educación y en particular, en el contexto de las instituciones escolares, de la educación básica. Para cumplir con el objetivo propuesto, inicialmente se realizó una encuesta con el banco de tesis y disertaciones del BDTD. Inicialmente se plantearon 93 tesis doctorales, de las cuales se seleccionaron 10, las cuales se identifican con la asignatura propuesta, ya que su tema central es la evaluación y el aprendizaje, en alguna etapa / contenido de la educación básica.

PALABRAS CLAVE: Evaluación. Formación. Calidad. Educación Básica.

Introduction

Adopting assessment as a tool to contribute to the student's learning process is not a trivial task. The appreciation of evaluation as a significant tool for enhancing the teaching process in the daily work of educators has not materialized within the scope of primary education. The evidence of this reality is supported by several studies conducted in basic education institutions, which demonstrate the persistence of the organizational culture of assessment as a performance verification tool for pass/fail purposes and as a means of maintaining discipline and attendance in the classroom. Furthermore, there is a lack of emphasis on evaluation as a content area in initial and ongoing teacher education. Most courses only superficially address the topic, failing to recognize the complexity it demands.

This research aimed to assess the state of the art of doctoral-level studies on using assessment as a guiding instrument in the learning process within primary education. Theses dedicated to this theme between 2010 and 2019 were selected for examination. The search was conducted in the Digital Library of Thesis and Dissertations (BDTD), as it houses our country's most extensive collection of theses. The investigation utilized the keywords "assessment" and "learning" in a title search, with subsequent refinement in selecting theses.

Initially, the search yielded 93 theses that addressed the topic of assessment and learning. A more refined selection process, considering keywords and abstracts, revealed that most of these works did not specifically address learning assessment in basic education. Among these works, 38 dealt with evaluation in higher education, not necessarily with a focus on the assessment of learning; 24 were related to the healthcare field, with no direct connection to education or professional training; 21 had diverse topics unrelated to the association between assessment and education; and finally, ten works focused on the evaluation of learning in their research approach.

In an introductory analysis, it is evident that during the examined period, there was a particular scarcity of works dedicated to the assessment of learning in primary education, especially concerning its advancements, continuities, and, above all, its consequences for the teaching-learning process and outcomes, namely, the performance and education of students.

The productions on learning assessment

The thesis developed by Osmar Pedrochi Junior, defended in 2018, within the Graduate Program in Science Education and Mathematics Education at the Federal University of Londrina bears the title "*A avaliação formativa como oportunidade de aprendizagem: fio condutor da prática pedagógica escolar* (Formative assessment as an opportunity for learning: The guiding thread of school pedagogical practice)." Conducted entirely to understand formative assessment as a promoter of the success of the teaching and learning process, this dissertation, as the author himself declares, focuses on producing "theoretical statements about other theoretical statements" (PEDROCHI JUNIOR, 2018, p. 8, our translation).

The work, focusing on mathematics education, delves more deeply into three types of evaluation: summative, formative, and diagnostic or prognostic. According to Pedrochi Júnior (2018), the primary differentiation between these assessments lies in the function each one performs. The summative evaluation seeks to verify outcomes and generally focuses on student certification; formative evaluation is attentive to the regulation of learning and, therefore, seeks to identify deviations present; prognostic assessment, in turn, aims to identify the student's learning characteristics. Although the author refers to different scholars in the field of formative evaluation, the main theoretical guidelines used in the research are those of Hadji (1994; 2001) and Allal (1986).

Allal (1986) understands that the teacher's fundamental role is to support student learning. Therefore, the assessment conceived by the author is configured as an opportunity for learning, and formative evaluation is characterized as the type that best suits this configuration. Allal (1986) analyzes the conception of formative assessment, describing the origin of the understanding of this type of evaluation as a means to regulate student learning difficulties, meaning there was a focus on the expectation of the learner's change. The deepening of the understanding of this assessment model expanded its scope, encompassing teaching action, the teaching process, and learning strategies and tools (ALLAL, 1986).

The line of reflection and discussion by Hadji (2001), follows the same conception as Allal (1986). According to the author, the understanding of formative evaluation is configured as a field in construction. It is an ongoing path, and thus, achieving the complexity of the meaning and practice of this type of assessment remains a utopian endeavor.

The author positions formative evaluation as the effort to construct an object, objective, and instrument whose essence is understanding the learning situation, aiming at regulating the process. The utopia in which formative assessment is inscribed lies in conceiving it in such a

way that paths are built for self-assessment and self-regulation, passing through the construction of a relationship between the teacher and the student with a view to the intentionality and systematization of the action of both social actors in favor of a regulation that promotes the success of the learning process (HADJI, 2001).

Pedrochi Júnior (2018), while discussing assessment in mathematics education and addressing issues related to this theme, makes formative assessment the main subject of his doctoral thesis as a facilitator of the teaching-learning process. In his work, it is possible to observe the strong presence, even in contemporary times, of understanding this type of evaluation primarily as a regulator of students' difficulties. This occurs because, although the work mentions using this assessment to adjust the process, there is little focus on regulating planning and learning choices.

Another thesis identified in our research is titled "*Avaliação para a aprendizagem em modelagem matemática na educação matemática: elementos para uma teorização* (Assessment for learning in mathematical modeling in mathematics education: Elements for theorization)," authored by Gabriele Granada Veleda. This thesis was defended in 2018 within the State University of Ponta Grossa Graduate Program in Education. Veleda's research (2018, p. 8, our translation), also focusing on mathematics education, aims to "discuss elements that underlie the beginning of a theorization on assessment in mathematical modeling." According to the author, mathematical modeling represents a teaching methodology aimed at shaping citizens through using mathematics as a tool in social contexts, thus promoting active student participation in society.

Veleda (2018) emphasizes that the importance of mathematical modeling in the classroom has been recognized for some time. However, some obstacles hinder the effective use of this methodology, and one of these obstacles is assessment. The author points out that in the literature, no studies explore criteria, parameters, and guidelines for evaluation students' learning in primary education in the context of developing practices with mathematical modeling. This gap motivated the author to contribute to research in this area.

The collaborative study collected data from 7th-grade students in elementary school and the teacher responsible for this class. Veleda (2018) sought to answer how assessment manifests itself in teaching practice when using mathematical modeling as a teaching methodology.

In her work, Veleda (2018) discusses the conception of learning assessment in line with various authors. Among the highlighted contributions, the perspective of Rodrigues (1994 apud VELEDA, 2018), deserves attention, advocating for assessment as an act that transforms the

roles of teacher and student. Additionally, the author uses the reflections of Hadji (1994) to elaborate on the different approaches to learning evaluation: diagnostic, formative, and summative. In the context of assessment generations and formative assessment, Fernandes (2008) is also referenced by the author, considering it an interactive evaluation based on the participants' contexts and learning improvement.

Regarding learning, Velede (2018) discusses the contributions of Vygotsky (1991 apud VELEDA, 2018) about the development of cognitive processes and Freire (1967 apud VELEDA, 2018), considering the importance of problematization and motivational dialogue for understanding student learning. The research results reveal that, in practice, various conceptions of assessment that are integrated emerge. However, specific situations related to the mathematics methodology are identified, such as studying topics based on students' interests, interdisciplinary approaches, and stimulating curiosity. These factors lead to a new dynamic in the relationship between teaching and learning, demanding a reevaluation of the evaluation approach.

The author proposes a "systemic-critical assessment based on the dialogical-critical paradigm". This proposal is grounded in the principles of formative evaluation, aiming to support an integrated assessment of teaching and learning processes. It systematically identifies students' prior knowledge and what is still under construction to enable teaching interventions geared toward promoting learning (VELEDA, 2018, p. 8, our translation).

The following study is Gabriel dos Santos Silva's doctoral thesis, defended in 2018, within the Graduate Program in Science Education and Mathematics Education at the Federal University of Londrina. It is titled "*Um olhar para os processos de aprendizagem e de ensino por meio de uma trajetória de avaliação* (An examination of the learning and teaching processes through an assessment trajectory)." The research aims to present the teaching and learning processes in Geometry and Drawing based on assessment. The theoretical discussion in Silva's study (2018) involves mathematics education and learning evaluation authors. Referenced authors include Esteban (2002); Pedrochi Júnior (2012) and Hadji (1994).

The valuation conception adopted is based on the development and formation of individuals, as opposed to a vision centered on the product and classification. Silva (2018) clarifies that assessment is a reflective process and a space for learning. According to the author, "taking the assessment as an opportunity for learning implies, among other things, understanding that valuation, teaching, and learning are intertwined processes, and in this sense, evaluation serves the other processes" (SILVA, 2018, p. 30, our translation).

Furthermore, Silva (2018) also analyzes the investigative purpose of assessment in the recontextualization of errors as a starting point for future learning, in the opportunity for teachers to reflect on their practice, and through the diagnostic function of assessment, which reveals the knowledge already acquired by students.

Silva (2018) addresses different valuation instruments and the formative approach, following Hadji (1994) perspective. According to this author, the constructive system consists of analyzing the information provided by various assessment tools in service of student learning and progress. In other words, assessing to contribute to education goes beyond the choice of evaluation instruments, involving the formative use of information.

Focusing on the field of mathematics education, Silva's (2018) research presents problem-solving as the central proposal, which, for the author, allows students to think, reflect, generate, and verify hypotheses. Based on the formative concept of valuation, Silva (2018) outlined the assessment trajectory of the Geometry and Drawing course within the Mathematics Education program, analyzing various instruments used and the modifications that occurred during this trajectory.

The study's data demonstrated that the evaluation process can be "used as a catalyst for conducting classes in different dynamics". Silva (2018) states that assessment is longitudinal in guiding teaching planning, investigating teaching and learning conditions, and building students' knowledge (SILVA, 2018, p. 8, our translation). Through his research, the author reveals the potential of formative assessment in the teaching and learning process, especially in the analysis of valuation instruments that involve oral, written, and non-verbal communication between students and teachers.

The subsequent research we examine is Marcio Pironel's doctoral thesis, defended in 2019 within the Graduate Program in Mathematics Education at São Paulo State University Campus Rio Claro. The theory is titled "*Avaliação para a aprendizagem: a metodologia de Ensino- Aprendizagem- Avaliação de matemática através da resolução de problemas em ação*" (Assessment for learning: The Teaching-Learning-Assessment methodology in mathematics through problem-solving in action)." This study aims to understand how evaluation for learning in mathematics education occurs or could occur through the problem-solving methodology, assuming an evaluation with the purpose of promoting learning.

To achieve the stated objective, the author conceived and executed a project to implement the problem-solving methodology for 7th-grade students in elementary school in Lisbon, Portugal. Pironel (2019) conducts an analysis of the concept of assessment in a

historical context, drawing on the studies of Luckesi (1992) and references Fernandes (2009 apud PIRONEL, 2019), when addressing the various generations of valuation and the concept of formative evaluation, relating it to the regulation of teaching processes. The author relies on Vygostsky (2007 apud PIRONEL, 2019) and sociocultural theory regarding the learning method.

According to Pironel (2019) in the 1990s, there were significant changes in the legal documents related to education in Brazil, in which assessment came to be perceived as a fundamental part of the teaching-learning process. The author examines the records of this period, highlighting the 1996 Law of Guidelines and Bases of Education (LDB) and the 1998 National Curriculum Parameters (PCN). The PCN considers valuation as a learning strategy, provided it is conceived to develop critical and reflective skills.

In the context of these documents, the teaching of mathematics also underwent modifications, adopting a contextualized perspective that meets the new demands of society. This aims to promote the education of students by applying mathematical knowledge in a modern, dynamic, and ever-evolving world. In this context, problem-solving is a relevant approach.

Pironel (2019) emphasizes that despite the evolution of assessment as a fundamental and integrated element of the teaching-learning process in legal and curricular documents, this discourse has not materialized in classroom practice. In the author's view, this change is not simple and quick; it requires the understanding of the entire school team regarding the need to conceive, plan, and implement assessment practices focused on promoting learning, overcoming the predominantly classificatory bias that still prevails in assessments.

Pironel (2019) argues that evaluation through problem-solving can contribute to the critical and reflective education of students, constituting itself as a learning strategy. His research revealed that the stages defined by the proposed and analyzed methodology have the potential to serve as participatory and formative valuation tools. The author highlights the following aspects of assessment:

- Being identified as part of effective planning;
- Focusing on how students learn;
- Being a central practice in the classroom;
- Needing to be a critical professional activity;
- Being a sensitive and constructive activity;
- Can encourage motivation;
- Promoting the understanding of goals and criteria;
- Helping students know how to improve;
- Developing self-assessment skills;

Recognizing all educational achievements (PIRONEL, 2019, p. 278-284, our translation).

Assessment through problem-solving allows the teacher to intervene during the resolution and challenge the student to develop arguments that mobilize the concepts constructed and the strategies chosen for the specific solution.

As a challenge, Pironel (2019) reports the difficulty of aligning the planned teaching program with the proposed methodology since the time required for valuation through problem-solving strategies affects the curriculum program time. The author believes this challenge can be overcome with methods and pedagogical management adaptations. Once again, examination proves to be indispensable, in this case, to evaluate the curriculum planning.

Pironel (2019, p. 277, our translation) highlights an essential characteristic of assessment for learning: "fostering the construction of knowledge by the student." The focus of this evaluation lies in the process, not in the performance results, which does not exclude the need for integration with evaluations that also serve relevant purposes for the educational process.

The thesis titled "*Avaliação da aprendizagem na Educação Física escolar: caracterização e habitus de professores do Paraná* (Assessment of Learning in School Physical Education: Characterization and Habits of Teachers in Paraná)," authored by Evandra Hein Mendes and defended in 2016, has as its central concern the characterization of assessment practices used by Physical Education teachers in the primary education system of Paraná. The work was developed within the Interinstitutional Graduate Program in Physical Education, established at the State University of Maringá and the Federal University of Londrina.

The author points out that most studies on learning assessment in Physical Education focus on analyzing assessment practices in primary education, while research dedicated to addressing theoretical foundations and interventions remains quite limited. Mendes (2016) believes that this reality is due to the current context of these studies being characterized by "intense epistemological reflections on the assessment process" (MENDES, 2016, p. 30-37, our translation). The work briefly discusses the concept of formative valuation and some of its challenges; therefore, the research considers the theoretical foundation of the subject as a secondary concern.

As mentioned earlier, the thesis is essentially dedicated to "identifying the professional habitus in the assessment routines established in the pedagogical practice of Physical Education teachers working in basic education" (MENDES, 2016, p. 68, our translation). The author

concludes that, in general, the "objective and subjective dispositions of the educational field" and, in particular, the evaluative system established by each school exert a decisive influence on the characteristics of evaluation routines adopted by basic education teachers (MENDES, 2016, p. 100, our translation).

Mendes (2016) also found that assessment practices focused on theoretical tests prevailed, with less emphasis on assignments. When analyzing teachers' assessment practices, it is essential to note that the thesis addresses specific aspects of school Physical Education, with limited prospects for generalization to other fields of knowledge.

We will now proceed to discuss Sandra Maria Coelho de Oliveira thesis, titled "*Avaliação formativa como regulação da aprendizagem: desafios para a práxis no ensino médio da rede pública estadual de Fortaleza – uma análise fenomenológica* (Formative Assessment as Regulation of Learning: Challenges for Praxis in Public High Schools in Fortaleza - A Phenomenological Analysis)," defended in 2015, which was presented in the Brazilian Education Graduate Program at the Federal University of Ceará.

Oliveira (2015) conducted a study investigating the evaluation practices of high school teachers in the public school system of the city of Fortaleza. Her study aimed to identify the obstacles and prospects for the implementation of formative assessment as a means of regulating learning. Although this research, as Mendes's (2016) study mentioned earlier, focused on identifying the state of valuation practices in primary education, with an emphasis on the final stage of this level of education, there is a clear and deep concern in this work with building a solid theoretical framework on formative assessment and its regulatory role in the learning process.

The author employed a phenomenological methodology guided by Heidegger's approach. In terms of theoretical foundation, the primary choice was the works of Hadji (2001); Perrenoud (1999; 2000b); Depresbiteris (1989; 2009); Luckesi (2001; 2002; 2011); Vianna (1989; 2000a; 2005) and Hoffmann (1996; 2001). The theoretical framework constructed highlights the researcher's conceptual focus on analyzing educational practice, providing more excellent substance to the central objective of the research. In this context, valuation is conceived as regulating the teaching-learning process regarding student regulation planning and learning strategies. In Oliveira's words (2015), this theoretical foundation contributes to understanding:

[...] the meaning of assessment as a constitutive element of the teaching-learning process, evolving pedagogical practices to promote student learning

and, consequently, improving educational quality. It is believed that monitoring the learning process of students, supported by constant diagnosis of their difficulties and advancements, tends to enable teachers to replan and guide their actions, aiming at student development (OLIVEIRA, 2015, p. 36, our translation).

In analyzing the assessment practices adopted by high school teachers, the author identified the teachers' perception of the formative function of evaluation, going beyond mere concern for student performance. According to Oliveira (2015), teachers expressed a desire to use assessment to promote learning improvement.

The author identifies challenges in translating teachers' intentions into effective evaluation practices. Oliveira (2015) found that teachers are not limited to traditional assessment practices, but they still prevail in daily school life. She attributes this situation to the lack of appropriate approaches to the topic in teachers' ongoing training and the overemphasis on large-scale valuations and results at the expense of the learning processes (OLIVEIRA, 2015, p. 227-237).

The doctoral thesis titled "*A avaliação da aprendizagem em processo (AAP): SEE-SP (2011-2016): da proclamação à execução: estudo de caso do programa em uma escola* (The Assessment of Learning in Process (AAP): SEE-SP (2011-2016): From Proclamation to Execution: A Case Study of the Program in One School)," authored by Marcio Alexandre Ravagnani Pinto, was defended in 2016 at the School Education Program of the Faculty of Sciences and Letters at UNESP/Araraquara. This research analyzes the *Avaliação da Aprendizagem em Processo* (Assessment of Learning in Process) (AAP) program implemented by the state government of São Paulo in 2011. The analysis was conducted through a case study to evaluate to what extent this program contributes to improving student learning and pedagogical practice.

The author states that AAP has characteristics similar to large-scale assessments, such as SARESP and SAEB, primarily using standardized tests focused on student performance and teacher assessment. Pinto (2016) also observes that, as with other external valuations, a significant amount of time and activities dedicated to students are focused on specific preparation for the tests used in AAP. This emphasis on external test preparation compromises the possibility of developing more dynamic classroom activities and building more relevant knowledge for students' education (PINTO, 2016, p. 98-108).

The case study conducted by Pinto (2016) revealed that teachers perceive AAP as a form of curriculum oversight by the São Paulo State Department of Education. Consequently, there

is a greater emphasis on covering the curriculum content than monitoring the teaching process and students' learning. The author notes that in this manner, AAP does not exhibit any characteristics of a diagnostic and formative evaluation in any aspect (PINTO, 2016, p. 138-139).

The following study we examine is Francesca Danielle Gurgel dos Santos's doctoral thesis, defended in 2015 at the Postgraduate Program in Education at the Federal University of Ceará, titled "*Avaliação ensino-aprendizagem na área de ciências da natureza e suas tecnologias na 10ª CREDE- Coordenadoria Regional de Desempenho da Educação- no Estado do Ceará, período de 2011-2014* (Teaching and Learning Assessment in the Natural Sciences and their Technologies Area in the 10th CREDE - Regional Coordination for Education Performance - in the State of Ceará, from 2011 to 2014)". The research aims to assess the teaching and learning of high school students in the Natural Sciences area through internal and external indicators, teacher training, and planning.

This exploratory research focuses on the analysis of the High School National Exam (ENEM) as an external assessment method, as well as internal institutional indicators such as enrollments, dropout rates, age-grade distortion, and teacher training. Although this article does not address aspects of external and institutional valuation, Santos's discussion (2015) contributes to our objective, especially in her literature review, in which she discusses learning assessment as a pedagogical instrument.

Santos (2015) analyzes the historical landscape of assessment generations and the evolution of the evaluation concept over the last decades, focusing on large-scale performance valuations, which have gained prominence and significance in the educational context, and formative and summative assessment in the learning regulation process. Formative evaluation is defined by Santos (2015) as the pedagogical monitoring of students' learning through various assessment activities, while summative valuation aims to reveal the outcome of student performance or an educational program. The author emphasizes that both are necessary to assess learning and the established educational project.

Drawing on theories presented by Correia (2002); Silva (2003); Freitas (2007); Gatti (2013); Vianna (2000a; 2000b) and Perrenoud (1999), the author asserts that the assessment of learning for pedagogical purposes has not evolved, particularly concerning teacher training for competence in evaluation and the development of valuation tools based on lesson planning and content. These tools should indicate what the student has or has not learned and how to qualify

and use this data to enhance the learning process. Therefore, it is essential to understand and incorporate regulatory formative assessment.

While educators currently have a conception regarding the use of assessment as a management tool for results-driven policy formulation, there has not yet been significant progress in integrating evaluation into daily school life as a pedagogical instrument that regulates learning processes (SANTOS, 2015, p. 59-60, our translation).

Santos (2015) questions to what extent the internal organization of the school facilitates or hinders the adoption of formative assessment, as the demand for improved outcomes, as emphasized in external tests, does not align with this valuation approach, whose role is to monitor the process rather than evaluate the final performance. Therefore, the author highlights the intrinsic relationship between assessment and planning, emphasizing the teacher's role in the evaluation practice by developing various valuation tools and defining criteria aligned with educational objectives.

According to Santos (2015), the necessary shift towards achieving the dimension of formative assessment in pedagogical practice will only occur "[...] if the teacher is open to self-assessment based on the results of the evaluation activities they produce, where the idea of classification and exclusion is surpassed by the constructive concept of knowledge" (SANTOS, 2015, p. 68, our translation).

We analyze the thesis "*Diário de aula: registros do repensar docente a respeito da avaliação de ensino-aprendizagem no contexto de privação de liberdade* (Diary of Class: Records of Teacher Reflection on the Assessment of Teaching-Learning in the Context of Incarceration)," defended in 2019 by Carla Poennia Gadelha Soares, in the Program of Graduate Studies in Brazilian Education at the Federal University of Ceará. This research aims to "investigate how teachers and incarcerated students narrate their experiences related to the assessment of teaching and learning through the practice of keeping a class diary" (SOARES, 2019, p. 9, our translation). This case study was conducted in an educational facility exclusively dedicated to serving incarcerated students in Ceará. The target audience falls under primary education in the youth and adult education (EJA) modality.

Soares' study (2019) emphasizes three main aspects: the meanings attributed to assessment by students, the dilemmas faced by educators regarding valuation, and teachers' understanding of the concept of evaluation after their pedagogical experience with using diaries.

The author initiates her discussion with an approach to youth and adult education (EJA), drawing on Freire (1998). Subsequently, she characterizes the concept of learning assessment,

considering that after decades of exclusionary education in which valuation had that purpose, studies point toward a new sense of learning evaluation, which aims to "help the student learn and develop," namely formative assessment (HADJI, 2001 apud SOARES, 2019, p. 68, our translation). The references utilized in this assessment approach include Luckesi (2001; 2005; 2011), Demo (2010a; 2010b); Perrenoud (1999) and Hadji (2001). Furthermore, the author adds the political aspect of assessment to this discussion, based on Freire (1998), emphasizing learning as a transformation of oneself and the context in which one lives.

Soares (2019) underscores the importance of records in the valuation process for teachers and students, drawing on the contributions of Zabalza (2004). This pertains not only to the official documents required by institutions but also to those that represent the paths taken toward knowledge construction, evidence of student learning, and the teacher's work. Therefore, the choice of a diary as a mechanism for reflection and recording is justified, as the writing genre used in the journal enables self-awareness and, according to Zabalza (2004 apud SOARES, 2019, p. 100) leads to a "cycle of improvement," which, in turn, "guides the teacher to improve their professional performance through reflective use of the class diary."

The research findings revealed that among the meanings attributed by students to learning assessment, valuation emerged prominently as an instrument of power and discipline and a means of classification. To a lesser extent, evaluation was perceived as a diagnostic tool for learning and a guiding component of teaching.

Regarding the dilemmas educators face, Soares (2019) identified, with greater frequency, the issue of qualitative records versus grades. The participating teachers in the research considered qualitative records to be bureaucratic tasks that consume a significant amount of time, preferring to record only the rates. They justified their choices by citing difficulties in writing and the lack of student motivation. Another reported dilemma is related to planning and practice. Teachers encounter significant challenges in implementing what they have planned, with planning "affected by the demands arising from the prison routine and the students themselves" (SOARES, p. 251, our translation).

Soares' research (2019) highlights that the concept of formative assessment is not firmly established among teachers and students. However, the proposal to maintain a diary proved beneficial in constructing this understanding, as Soares states (2019, p. 251, our translation) "fosters systematization of valuation practices, contributing to the realization of an evaluation committed to the quality of student and teacher development." In other words, the diary emerged as an essential assessment tool that points towards learning improvement.

The thesis by Júlio César Vieira Lopes, defended in 2018 through the Graduate Program in Brazilian Education at the Federal University of Ceará, is the latest work we are analyzing. Titled "*Validação da escala Homo-zappiens- tecnologias digitais para avaliação do uso das TICs na aprendizagem dos alunos do terceiro ano do ensino médio no colégio militar em Fortaleza/CE: estudo de caso* (Validation of the *Homo-Zappiens-Digital Technologies Scale for Assessing the Use of ICTs in the Learning of Third-Year High School Students at the Military School in Fortaleza/CE: A Case Study*)," the research aims to validate the construction of a measurement instrument to assess the academic performance of students at the end of high school.

The case study conducted by Lopes (2018) in the field of mathematics differs from the other research analyzed here in that it does not refer to the theoretical foundation of learning valuation to a greater or lesser extent. However, the field of evaluation is present in the research concerning treating students' performance records. Lopes analyzes the use of Information and Communication Technologies (ICTs) in light of the Critical Theory of Education proposed by Saviani (2013) and the studies of Piaget (2003a; 2003b; 2013) on cognitive development. In this approach, he highlights meaningful learning as linked to reality and educational practices as instruments of reflection and improvement.

Lopes (2018, p. 20, our translation) considers that "people develop learning activities in the context of virtual environments." The term *Homo Zappiens* is defined by the author as "a being of the Digital Era in an emerging technological society intertwined in the stage of world civilization", and ICTs are forms of integration between the individual and reality (LOPES, 2018 p. 22, our translation).

The study presents a comparison between students' grades obtained from tests, teaching evaluations (of a summative nature), and partial assessments (of a formative nature), as well as the impact of the use of Information and Communication Technologies (ICTs) on the enhancement of students' academic performance.

The results highlighted that the integration of ICTs was evident in the learning process. Aspects such as motivation, perception, interest, and initiative are fostered by using technologies and play a crucial role in cognitive development. "In the field of school learning assessment, it was observed that there is room for the inclusion of ICTs in the development of activities aimed at revealing student learning indicators" (LOPES, 2018, p. 97, our translation).

The research revealed a discrepancy between partial and study assessment data. The study valuation involves an individual activity conducted through a single test, and according

to Lopes (2018, p. 97), this approach can lead to "psychopedagogical stress" and have a negative impact on student performance.

The more favorable results were obtained in the partial evaluation, conducted through teacher mediators' directed and guided pedagogical practices. These practices occur at different stages throughout the educational process, including with the assistance of ICTs, and involve the presentation of problem situations that allow for research and the application of strategies that contribute to learning.

Final Considerations

After analyzing the ten studies covered in this research, conducted from 2010 to 2019, we observed a scarcity of doctoral-level studies on learning valuation. The examined works primarily focus on the later years of primary education and high school, highlighting the absence of investigations addressing evaluation in early childhood education and the early years of primary education. This finding reveals a significant gap in these two stages of primary education and a lack of contemporary discussions in this research field.

This observation underscores the existence of a common conception that restricts the understanding of assessment and its instruments to the administration of tests, certification, and result verification. Such a conception may discourage researchers from exploring these educational stages, as this understanding of valuation prioritizes decision-making related to student promotion or retention, which has limited relevance for early childhood education and the early years of primary education.

On the other hand, it is essential to highlight how this understanding and the consequent lack of research on evaluation negatively impact the possibilities of advancing the teaching and learning process in these stages of basic education. Therefore, it is crucial to emphasize the importance of discussing the concept of formative assessment, aiming to regulate procedures and contribute to improving teaching practice regarding learning. This discussion is also essential for correcting students' trajectories and developing plans and curricula focused on children's education.

This is a plea for the systematization of the teaching and learning process. As an intentional and systematic action, assessment is the paramount tool for ensuring crucial decision-making to enhance the teaching and learning process. Due to its dynamic nature, this process needs to adapt to changes brought about by this constant movement and undergo

adjustments and course corrections, in other words, to improve teaching practices and promote student empowerment.

The research studies that provided theoretical grounding on learning valuation referred to the history and evolution of the evaluation concept in education, addressing various perspectives. They all converge on concerns related to student development. In most works, the influence of external assessments was noted, which have become predominant in institutional assessment practices and have overshadowed formative learning valuation.

In all the studies analyzed here, formative evaluation is considered the best approach to promoting and pointing the way toward improving the teaching and learning process. However, what became evident is that this configuration of assessment has not yet solidified for both teachers and students. Despite the research revealing positive experiences and progress in this direction, the classificatory nature of evaluation predominates in most representations of teachers and students.

We also acknowledge the difficulty in understanding valuation as an integral part of the teaching and learning process, as it provides essential information for reflective planning aligned with classroom practice. What frequently occurs is the use of assessment as a means to gather information about students' difficulties without systematic follow-up actions. The investigations also emphasized that review that effectively promotes learning depends on teachers' understanding of this practice and their direct involvement, encompassing everything from developing appropriate assessment tools to interpreting the information provided by the results obtained.

REFERENCES

- ALLAL, L. **Estratégias de avaliação formativa**: concepções psicopedagógicas e modalidades de aplicação. In: ALLAL, L.; CARDINET, J.; PERRENOUD, P. (org.). *A avaliação num ensino diferenciado*. Coimbra: Almedina, 1986, p. 175-209.
- CORREIA, J. A. A construção científica do político em educação. **Educação, Sociedade & Culturas**, Porto, Edição CIEE/ Afrontamento, n. 15, p. 19-43, 2002.
- DEMO, P. **Avaliação qualitativa**. Campinas, SP: Autores Associados, 2010a.
- DEMO, P. **Mitologias da avaliação**: de como ignorar, em vez de enfrentar problemas. Campinas, SP: Autores associados, 2010b.
- DEPRESBITERIS, L. **O desafio da avaliação da aprendizagem**: dos fundamentos a uma proposta inovadora. São Paulo: EPU, 1989.

DEPRESBITERIS, L; TAVARES, M. R. **Diversificar é preciso**: instrumentos e técnicas de avaliação de aprendizagem. São Paulo: Senac São Paulo, 2009.

ESTEBAN, M. T. A avaliação no processo ensino /aprendizagem: os desafios postos pelas múltiplas faces do cotidiano. **Revista Brasileira de Educação**, Rio de Janeiro, n. 19, p. 129-137, 2002.

FERNANDES, D. Para uma teoria da avaliação das aprendizagens. **Estudos em avaliação educacional**. São Paulo: Fundação Carlos Chagas, n. 41, p. 347-372, 2008.

FREIRE, P. **Pedagogia da autonomia**: saberes necessários à prática educativa. São Paulo: Paz e Terra, 1998.

FREITAS, D. N. T. **A avaliação da educação básica no Brasil**: dimensão normativa, pedagógica e educativa. Coleção educação contemporânea. Campinas, SP: Autores Associados, 2007.

GATTI, B. A. Possibilidades e fundamentos de avaliações em larga escala: primórdios e perspectivas contemporâneas. *In*: BAUER, A.; GATTI, B. A.; TAVARES, M. **Ciclo de Debates**: Vinte e Cinco Anos de Avaliações de Sistemas Educacionais no Brasil. São Paulo: Insular/FCC, 2013. v. 1.

HADJI, C. **A avaliação, regras do jogo**: das intenções aos instrumentos. Porto: Portugal, 1994.

HADJI, C. **Avaliação Desmistificada**. Porto Alegre: ARTMED Editora, 2001.

HOFFMANN, J. **Avaliação mediadora**: uma prática em construção da pré-escola à universidade. Porto Alegre: Mediação, 1996.

HOFFMANN, J. **Pontos e contrapontos**: do pensar ao agir em avaliação. Porto Alegre: Mediação, 2001.

LOPES, J. C.V. **Validação da escala *Homo zappiens*- tecnologias digitais para avaliação do uso das TICs na aprendizagem dos alunos do terceiro ano do ensino médio no Colégio Militar em Fortaleza/CE**: estudo de caso. 2018. 132 f. Tese (Doutorado em Educação) – Universidade Federal do Ceará, Fortaleza, 2018.

LUCKESI, C. C. **Avaliação da Aprendizagem Escolar**: sendas Percorridas. Tese (Doutorado. em educação física) – Pontifícia Universidade Católica, São Paulo, 1992.

LUCKESI, C. C. **Avaliação da aprendizagem escolar**. São Paulo: Cortez, 2001.

LUCKESI, C. C. A escola avalia ou examina. **Abceducativo a Revista da Educação**, São Paulo, ano 3, n. 15, p. 16-18, 2002.

LUCKESI, C. C. **Avaliação da aprendizagem na escola**: reelaborando conceitos e recriando a prática. Salvador: Malabares, 2005.

LUCKESI, C. C. **Avaliação da aprendizagem escolar**: estudos e proposições. São Paulo: Cortez, 2011

MENDES, E. H. **Avaliação da aprendizagem na Educação Física escolar: caracterização e habitus de professores do Paraná.** 2016. 127 f. Tese (Doutorado em Educação Física) – Universidade Estadual de Maringá, Maringá, PR, 2016.

OLIVEIRA, S. M. C. **Avaliação formativa como regulação da aprendizagem: desafios para a práxis no ensino médio da rede pública estadual de Fortaleza – uma análise fenomenológica.** 2015. 257 f. Tese (Doutorado em Educação Brasileira) – Universidade Federal do Ceará, Fortaleza, 2015.

PEDROCHI JÚNIOR, O. **Avaliação como oportunidade de aprendizagem em matemática.** 2012. 58 f. Dissertação (Mestrado em Ensino de Ciências e Educação Matemática) – Universidade Estadual de Londrina, Londrina, 2012.

PEDROCHI JÚNIOR, O. **A Avaliação Formativa como Oportunidade de Aprendizagem: fio condutor da prática pedagógica escolar.** 2018. 67 f. Tese (Doutorado em Ensino de Ciências e Educação Matemática) – Universidade Estadual de Londrina, Londrina, 2018.

PERRENOUD, P. **Avaliação: da excelência à regulação das aprendizagens – entre duas lógicas.** Tradução: Patrícia Chittoni Ramos. Porto Alegre: ArtMed, 1999.

PERRENOUD, P. **Pedagogia diferenciada: das intenções à ação.** Tradução de Patrícia Chittoni Ramos. Porto Alegre: Artmed, 2000a.

PERRENOUD, P. **Dez novas competências para ensinar.** Tradução: Patrícia Chittoni Ramos. Porto Alegre: Artmed, 2000b.

PIAGET, J. **O Estruturalismo.** Rio de Janeiro: Difel, 2003a.

PIAGET, J. **Seis estudos de Psicologia.** Rio de Janeiro: Forense-universitária, 2003b.

PIAGET, J. **Seis estudos de Psicologia.** Tradução: Maria Alice Magalhães D'Amorim e Paulo Sérgio Lima Silva. 10. ed. Rio de Janeiro: Forense Universitária, 2013.

PIRONEL, M. **Avaliação para aprendizagem: a metodologia de ensino- aprendizagem-avaliação de matemática através da resolução de problemas em ação.** 2019. 296 f. Tese (Doutorado em Geociências e Ciências Exatas) – Universidade Estadual Paulista, Rio Claro, SP, 2019.

PINTO, M. A. R. **A avaliação da aprendizagem em processo (AAP) SEE-SP (2011-2016): da proclamação à execução: estudo de caso do programa em uma escola.** 2016. 164 f. Tese (Doutorado Educação Escolar) – Universidade Estadual Paulista, Araraquara, SP, 2016.

SANTOS, F. D.G. **Avaliação ensino-aprendizagem na área de Ciências da Natureza e suas Tecnologias na 10ª CREDE no Estado do Ceará, período 2011-2014.** 2015. 271 f. Tese (Doutorado em Educação) – Faculdade de Educação da Universidade Federal do Ceará, Fortaleza, 2015.

SAVIANI, Dermeval. **Pedagogia histórico-crítica: primeiras aproximações.** 11. ed. rev. Campinas, SP: Autores Associados, 2013

SOARES, C.P.G. **Diário de aula**: registros do repensar docente a respeito da avaliação de ensino-aprendizagem no contexto de privação de liberdade. 2019. 282 f. Tese (Doutorado em Educação) – Universidade Federal do Ceará, Fortaleza, 2019.

SILVA, G. S. **Um olhar para os processos de aprendizagem e ensino por meio de uma trajetória de avaliação**. 2018. 166 f. Tese (Doutorado em Ensino de Ciências e Educação Matemática) – Universidade Estadual de Londrina, Londrina, PR, 2018.

SILVA, J. F. Introdução: avaliação do ensino e da aprendizagem numa perspectiva formativa reguladora. *In*: SILVA, J. F.; HOFFMANN, J.; ESTEBAN, M. T. (org.). **Práticas avaliativas e aprendizagens significativas**: em diferentes áreas do currículo. 6. ed. Porto Alegre: Mediação, 2003

VELEDA, G. G. **Avaliação para aprendizagem em modelagem matemática na educação matemática**: elementos para uma teorização. 2018. 140 f. Tese (Doutorado em Educação) – Universidade Estadual de Ponta Grossa, Ponta Grossa, PR, 2018.

VIANNA, H. M. **Introdução à avaliação educacional**. São Paulo: Ibrasa, 1989.

VIANNA, H. M. **Avaliação educacional**: Teoria-Planejamento-Modelos. São Paulo: IBRASA, 2000a.

VIANNA, H. M. **Avaliação educacional e o avaliador**. São Paulo: IBRASA, 2000b.

VIANNA, H.M. **Fundamentos de um programa de avaliação educacional**. Brasília, DF: Líber Livro Editora, 2005.

ZABALZA, M. A. **Diários de aula**: um instrumento de pesquisa e desenvolvimento profissional. Porto Alegre: Artmed, 2004.

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