LEARNING AND ASSESSMENT IN ONLINE ENVIRONMENT. A PEDAGOGICAL DIALECTIC

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ABSTRACT

In a traditional, classical approach, learning can be perceived as a continuous, logical and reasoned progress on a well-defined topic. It is obvious that learning through digital technology has a different aspect, mainly using technical support, focusing on shared learning, but also on cooperation between teacher and student.

Keywords: *learning assessment; online; technology; pedagogy*;

INTRODUCTION

The rapid development of communication and information technologies and implicitly the progress towards an information and knowledge society have generated changes that have an indisputable reflection in the educational area. With the evolution of technology there has been an explosion of interest and controversy about distance education, driven by the potential applications of computer-based interactive technology, which is often viewed as a new field of study. However, technology, new or old, is only one part of the distance learning system, and a relatively simple part compared to the pedagogical, organizational and content development components.

This article addresses the valorization of teachers' opinions regarding various curricular dimensions of learning and assessment in the alternative space (hybrid and online). Some of the arguments that confirm the actuality, implicitly the necessity of this topic, consist in the identification of the advantages and opportunities that online training offers, the analysis of the main educational challenges in the implementation of learning and evaluation contents in the alternative environment, the need to develop digital skills, the identification of didactic methods, strategies of assessment used by teachers in order to capitalize on school success in the alternative space, as well as validating the difficulties teachers face in this environment. Teaching staff are practically forced to find the most suitable form of carrying out the activities, so as to transform the material taught in the traditional environment, into contents that can be accessed, posted, in other words, used via the Internet, not only by merging the characteristics of the two learning environments, traditional and online, because simply including both does not necessarily create a successful learning environment. Obviously, the learning process that takes place online is student-centered. This environment will inevitably give rise to discussions about the difference between this type of learning and traditional learning. For some this is an inconvenient, for others it opens up new perspectives. The specialized literature offers an overall perspective that the alternative environment highlights about learning activities, respectively evaluation.

Most researchers who have looked into online teaching-learning, however, appreciate that no form of technology, however cleverly or sophisticatedly designed, has the capacity, by itself and in itself, to change existing practices but it actually motivates the possibility of creating an advanced form of practice through a multilateral design (expertise, theories, etc.), a design aimed at the curriculum (pedagogical and didactic design), resources (information and communication sciences), participatory structures (interaction) and the surrounding space.

The term online learning (or as it is often referred to, "distance learning") includes a number of computer-assisted instructional methods. Two approaches to online learning have emerged: synchronous and asynchronous learning. Synchronous learning is training and collaboration in real time, via the Internet; it usually involves tools such as: live chat, audio and video conferencing, data and application sharing, shared whiteboard, virtual hand raising, joint viewing of multimedia presentations. Asynchronous learning methods use the delayed functions of the Internet; usually involves tools such as: email, information groups, attached files, etc. The terminology specific to technology-related school performance assessment is quite varied in the specialized literature: electronic assessment, technology-enriched assessment, digital assessment, online assessment, computerized assessment, computer-aided assessment, web assessment, e-assessment. Such terms do not indicate a fundamental transformation of the scope of assessment through the use of technology. The specialized literature does not suggest completely new evaluation methods and tools for the online environment, but certain innovative solutions adapted to technology.

1. FROM TRADITIONAL TO ONLINE. BRIEF HISTORICAL PERSPECTIVE ON ASSESSMENT

An objective verification of the specialized literature allows the outline of a complex course of evaluation. Constantin Cucoş (2002, p. 367) proposes a distribution of theories on evaluation in three major periods: the first, with its beginning since the end of the 19th century, is called the test period and refers to the replacement of subjective, individual and random assessment, with objective, standardized tests; the second stage, the measurement period, which begins in 1910, continues to perfect the test batteries and the evaluation period, which begins in 1930 and is under the desirability of broadening perspectives, more precisely the analysis of scoring modes, its variability, subjective factors and objectives that have an influence on grading, as well as the identification of means likely to ensure the objectivity of the evaluation process.

In terms of how technology has influenced school assessment, distinct stages can be identified. It seems that the first uses of the computer in learning activities are marked in the year 1950, when the first simple computers allowed solving games and puzzles. Although the computers of the 1960s and 1970s were not very powerful, several specialists in the field sensed the potential of using computers as learning and assessment tools. Computerized classroom testing systems have been developed and studied since the 1970s. These emphasized the use of computers to create and administer assessments that could be used during the school year as an additional assessment tool. Computers virtually generated different sets of questions using items drawn from item banks developed by specialists, with the ability to provide immediate feedback to students in the form of total scores. Such tests were used by teachers and researchers from the 1970s until the 1990s with the aim of

measuring knowledge based on students' correct or incorrect answers to questions (Shute & Rahimi, 2017, pp. 3-4).

Although the use of computer technologies has been a feature of innovation in assessment for several decades, early applications of the technology focused primarily on its large-scale use of tests aimed at improving efficiency and reducing costs.

In the late 1990s, researchers began using computers to assess complex cognitive skills such as problem solving. Over the past two decades, advances in educational science and technology have influenced new thinking and practices related to assessment and learning.

Alison Oldfield, Patricia Broadfoot, Rosamund Sutherland and Sue Timmis (2012, pp. 11-12) list the possible advantages that technology can bring to assessment:

➢ Providing immediate feedback: providing real-time feedback that quickly diagnoses and reduces misconceptions; can lead to improved assessment experience and increased student engagement.

➢ Increasing student autonomy and self-regulation: supporting personalized responses, facilitating self-evaluative and self-regulated learning, better tracking of progress towards learning outcomes and reflection on achievements.

➢ Supporting collaborative learning: providing the possibility of peer assessment, carrying out and tracking knowledge building and sharing activities, co-assessment and social interaction.

➢ Providing authenticity: could present challenging problems and ways to assess complex skills such as problem solving, decision making and hypothesis testing.

➢ A wider range of measurement: Through the ability to create and visualize complex data sets and models that take into account multiple factors, digital technologies can elicit and measure knowledge sets and cognitive processes that were previously difficult to assess.

➢ Flexible and appropriate responses: Digital tools such as simulations offer more modalities and could provide more accessible assessment compared to text-based tests for students with varied learning styles. Regular feedback can also make students feel less anonymous and get them more engaged in their learning. These possibilities may challenge traditional assessment methods and require a rethinking of old practices.

➢ Increasing efficiency and reducing teachers' workload: improves the efficiency of data management such as marking, moderating and storing information, helping teachers to better manage their time and resources.

➢ Improving student performance: evaluations show that e-feedback can improve student performance while also leading to better student engagement.

➢ Integrating formative and summative assessments: Summative assessments tend to be retrospective in that they test previously acquired knowledge without leaving an opportunity for ongoing learning. Digital technologies can integrate assessment and instruction, such as immersive learning environments or programs that monitor how students solve problems on the computer and provide immediate feedback.

➢ Improving the validity and reliability of the assessment.

Some of the assessments used in the online learning environment are conducted asynchronously, where the assessment is completed late, outside of the presence of a teacher, while synchronous assessments can take different forms, from traditional examinations of written assignments to case studies, research projects and multiple-choice exams, to

alternative measures such as portfolios, journals, etc. Synchronous assessment models also play an important role in legitimizing the distance education process, as cheating is minimized and the teacher has continuous management of the testing environment; these models include any form of testing where the teacher and students interact in real time during the assessment. Like any notion intended to express a reality from a field of human reflection and practice, evaluation imposes itself as a challenge for the analytical approach of specialists in the educational field, especially in the current context. Thus, over time there have been marked shifts from a culture of testing to a culture of multiple assessments, from focusing on single behavioral or cognitive attributes to including multiple dimensions of intelligence, from simple measures to incorporating complex measures continuously, from exclusive individual assessment, to whole group assessment, from paper and pencil to authentic assessments.

The recent evolution of school evaluative practices has focused around the following core ideas: the triumph of cognitivism over behaviorism, the co-responsibility of the student in the evaluative process and the introduction of the metacognitive perspective in the evaluative process (Petre, 2014, pp. 21-22). The constructivist view of learning, according to which no matter how hard the teacher tries to convey knowledge through elegant and careful design of the activity, draws attention to the fact that learning remains a personal process managed by students. Therefore, the centrality of the student's role is obvious, and his status as a learning manager imposes him as an equal partner of the teacher in the educational process. Students practically become active participants who take responsibility for their own development and manage their own learning. By doing so, teachers do not lose control or authority, but build a positive relationship together and become partners in achieving the desired goals.

Regarding authentic assessment methods enriched in the virtual environment, it seems that the methods that have a privileged status, being the most mentioned in empirical studies, are the portfolio, the digital project, self-assessment and peer/peer assessment (Popa, 2020, p. 294). According to researchers Martha Cleveland-Innes and Dan Wilton (2018, p. 26) peer assessment can be informal and formative (students respond to each other's work in individual or group tasks, or it can be formal and summative, where peer assessment is used as part of the grade. Self-assessment is referred to by David Boud (1995, p.17) as "the process by which students develop their learning skills. It is not primarily about giving grades or marks to students as it is also to reduce the role of the teacher". At the same time, self-assessment has a special connection with assigning the role of learning to the student himself by transferring responsibility for his own learning. According to Michael Minder (2011, p. 324) self-assessment is an approach that must be explicitly taught and learned, at a double level of its self-correcting and self-regulating behaviors, constituting an assessment modality with broad formative values.

There is a tendency for teachers to focus on the traditional aspect of evaluation, considering that the evaluative activity belongs exclusively to the teaching staff. Self-evaluation has the great advantage of strengthening students' autonomy in relation to their own learning path, facilitating the development of metacognitive skills. The involvement of students in self-evaluation approaches presents significant benefits: the student fulfills the role of an active participant in his own training, at the same time he learns to correctly appreciate the results obtained, he realizes what efforts are necessary to achieve the set objectives, he becomes autonomous and responsible for his own activity. Given the context

of controversy and debate, there are no single acceptable definitions or correct ways to make the assessment. For most teachers and students, the term assessment is traditionally associated with the concepts of tests, grades, reports and standards.

The online environment offers the possibility of design, individualized and flexible assessment, rapid feedback, self-paced learning, recursive learning, as well as ease of creating individual learning profiles. Online evaluation also allows for a faster rate of error identification according to predefined evaluation criteria. The challenge for teachers is to opt for appropriate, authentic, reliable online assessment that measures learning, engaging the student, and integrated into the learning process promoting further learning (Hricko & Howell, 2006, p.17).

2. TEACHING AND LEARNING LEAVE THE TRADITIONAL CLASSROOM

In recent years there have been significant changes in online learning. Distance learning today takes many forms, including fully online courses, hybrid or blended courses that contain face-to-face contact time in combination with online delivery, and technology-enhanced courses that take place face-to-face but incorporate elements of technology . The explosive growth of technology has contributed to the implicit increase in the popularity of this type of learning. Virtually online learning now takes many forms, including using technology to enhance a traditional classroom, a hybrid classroom that blends both mediums, and fully online courses. Online courses can be run either synchronously (real-time virtual classes or chat) or asynchronously, meaning that posts are staggered.

Referring to some changes such as the availability and accessibility of information, the involvement of different learning styles, the increased responsibility for teaching-learning, Palloff Rena and Pratt Keith (2007, p. 4) consider it necessary to develop new skill sets for teaching and the need of rethinking pedagogy, redefining learning objectives and even a "reevaluation of assessment".

In general, online learning studies focus more on how course content is delivered, on technology, and pay little attention on how to teach in this environment. There is, however, one important element that differentiates distance/online learning from traditional classroom settings, the key to the learning process being the interactions between the students themselves and the collaborative learning that results from these interactions. Online learning cannot be passive. When teaching, learning and assessment leave the traditional classroom, many elements are implicitly left behind and new expectations arise. Online learning offers a variety of educational opportunities: student-centered learning, the variety of online tools is based on individual learning styles, collaborative learning, teamwork allows students to become more active participants in the learning process, easy access to global resources, experiential learning through multimedia presentations, and new technologies can be used to engage and motivate students.

The online environment is perfect for developing collaboration skills. Students learn to work and depend on each other to achieve their learning goals and improve the outcome of the process. Palloff and Pratt (2007, p. 180) identify other forms of collaboration that can be promoted in this environment in order to extend the level of learning achieved: collaboration between groups, resource sharing and collaborative writing.

In the context of formative assessment, collaboration is a bridge between student progress and teacher feedback on the assessed product. Through collaboration, the approach

of critical error analysis takes on a form of mediation. Positive feedback can enhance motivation, while negative feedback, depending on the recipient's perception, can be accepted as a challenge that helps by triggering self-regulation. Wiggins Grant (1998, pp. 59-60) lends further credence to the use of continuous feedback when he states that receiving and using feedback must be an ongoing, routine part of assessment. The reason feedback is simultaneous with interpretation is that this is the only way students can learn to continuously self-assess and then adjust their intellectual performance. Sustained collaboration for the purpose of developing new knowledge for students is a new educational practice. Regardless of how collaboration is used, it is essential for the teacher to set the stage for the formation of a strong learning community. Although collaboration helps to strengthen the foundation of that learning community, surely the presence of the community helps to facilitate the successful completion of collaborative work.

Collaboration and the ability to foster interdependence are a critical element in forming an online learning community. Consequently, it is important for the instructor of an online course to pay close attention to the ways in which collaboration can be embedded and facilitated throughout the course. Failure to foster collaboration in this environment generally results in low levels of participation, both in two-way teacher-student and student-student interactions, with collaboration presupposing the student's ability to engage in a transformative learning process. As with all other aspects of a virtual classroom, collaborative learning must be intentionally planned and facilitated (Palloff & Pratt, 2007, p. 183).

The need for students to work collaboratively is not only about new ways of learning, updating knowledge, but also about the skills students need, especially in an environment where technology makes its mark. This can be difficult to achieve in large classes, but technology offers a range of opportunities for group assignments.

The learner-centered approach greatly enhances the educational experience. The sharing of resources and the implied extensive bibliography allow students to explore well beyond the limits of the readings assigned to the lesson. Moreover, a virtual library can be created and students can consult it whenever they want. Extending resources in this way encourages students to take greater responsibility for their own learning while allowing the teacher to act as an equal participant.

Over several decades there has been a growing interest in using digital technologies as a means of supporting learning and rethinking how teaching-learning-assessment are configured. Students take on new participatory and collaborative roles in online learning, eager to share their own creations while giving them a high degree of autonomy. Technology in its various forms facilitates the transmission of documents (collaborative writing). Students can work together or with the teacher to complete tasks, usually by passing documents between participants.

By email or by being able to attach documents within the lesson that seem to be extremely useful in online courses, as well as in completing team learning tasks. In addition, whiteboard software in a course allows brainstorming sessions and collaborative work completion by simulating what might occur in a traditional classroom meeting. Asking students to complete papers collaboratively and assessing those papers on a group basis also promotes interdependence.

2.1. FORMATIVE ASSESSMENT AS THE PREFERRED EVALUATION STRATEGY IN THE ONLINE ENVIRONMENT

The evaluation strategies were promoted pedagogically as action models that allow the docimological operations of measurement (quantitative), assessment (qualitative) and decision (managerial) throughout the training activity in the open context of the educational process, adapted/adaptable to the particularities of each level and educational discipline, of each school year and each curriculum area (Cristea, 2019, p. 75).

From this perspective, the temporal moment in which the evaluation strategy is integrated into the structure of the training process (at the beginning, permanently and at the end) represents a predominant classification criterion.

Although most online courses adhere to traditional practices, there is a particular interest in formative assessment in the online environment, a growing preference for integrating formative assessment into instructional activities, according to studies in the field.

Formative assessment can be conceptualized as consisting of five key strategies:

- clarifying and sharing learning intentions and success criteria;
- effective classroom discussions and other learning tasks that elicit evidence of student understanding;
- providing feedback that makes students move forward;
- activating students as teaching resources for each other;
- activating students as responsible for their own learning.

Through all these aspects, online learning can definitely become a tool that helps to better integrate assessment into the teaching-learning process. In the opinion of I. Radu "evaluation can be considered as a procedure constantly associated with educational action" (2007, p. 52). At the same time, the process of collecting and discussing information from multiple and diverse sources to develop a deep understanding of what students know, understand and can use knowledge as a result of their educational experiences culminates when the results of the assessment are used to improve further learning.

Although V. Shute and S. Rahimi (2017, p. 9) find that in general, assessment of learning tends to be more prevalent than assessment for learning, especially in online compared to face-to-face interactions, it appears that learning in the online environment offers more opportunities to incorporate formative assessment as a tool to increase teacher-student and student-student interactions.

Literature presents a diverse set of perspectives on the nature and value of formative e-assessment. Formative assessment is often presented as simply serial (or repeated) summative assessment and is equally referred to as 'hands-on' assessment, which 'does not judge or rank the student, but compares his performance to a pre-set success threshold" (Meyer, 2000, p. 25).

The fusion of formative assessment with technological insights propagates the idea of online formative assessment in carrying out this fusion. Pachler et al. (2010, p. 716) used the term "formative e-assessment" which they defined as the use of ICT to support the iterative process of collecting and analyzing information about student learning to teachers as well as students and evaluating them against previous achievements and the achievement of intended as well as unintended outcomes. This definition practically incorporates how formative assessment is applied in all e-learning environments, including the complementary part of ICT, as well as online and blended learning environments.

Mușata-Dacia Bocoș (2013, pp. 115-116) carries out an analysis of the specialist studies of some contemporary foreign authors associating some basic characteristics with the formative assessment:

➢ focus on the learning process, considered more relevant than the learning product;

➢ the systematic and continuous character is manifested by the permanent and prompt re-introduction of the findings obtained through evaluation in order to take corrective and ameliorative educational decisions in order to trigger the students' self-regulation, as a result of a quick feedback;

➢ the flexible, dynamic and creative character that manifests itself through the adoption of a diversity of methods, means and strategies that students resort to in their own training, which leads to the enrichment of skills;

➢ offers opportunities for continuous progress, avoids stagnation and even openly and directly confronts gaps;

➢ the individualized character, adapted to the psycho-individual characteristics of each student, hence the high degree of student participation in the evaluation procedures (participatory evaluation/interactive evaluation);

➢ verbal interactions or even curricular negotiations between the evaluated and the evaluators in order to have a positive relationship between them;

➢ offers the possibility of prompt correction of errors;

➢ intensifies teaching and learning and ensures increased awareness of assessment practices.

First, no technology-based assessment is formative in itself, but almost any technology can be used in a formative way if the right conditions are set.

This observation is consistent with a socio-technical view of educational systems, which sees technological dimensions (e.g. speed, storage capacity, processing, communication, construction and representation) as inseparable from pedagogical conditions (verbal/electronic/synchronous/asynchronous). In this sense formative assessment in the online environment is extremely complex, as it requires the delicate orchestration of social, pedagogical and technological systems.

CONCLUSIONS

In the current educational context, several concepts specific to learning are identified. The question arises whether we can talk about a change in the profile of human learning under the pressure of technology, about a "death of pedagogy" and implicitly a "new pedagogy", about a "digital pedagogy" or about a transition "from education as pedagogy to education as management"?

Technology is the new term added within the educational process seen as a relationship between teaching-learning-assessment, with several roles being assigned to it: to sustain, improve and support the whole process. Although the use of technology itself to access and communicate course information is an important feature to be reflected in the design of learning activities and assessment practices, specialist studies provide more information about technology, the delivery of the course itself and give very low attention to how to teach, respectively evaluate in this environment. In the online environment, where the teacher is not physically present, the teaching-learning-evaluation processes require new and

appropriate practices, built on the relationship between students and teachers, a relationship mediated by technology. Technology needs to remain an important part of our lives, but how we use it and the degree to which we use it makes the difference between threat and opportunity, not giving up on traditional learning, where students assimilate information delivered by the teacher directly, through face-to-face interaction, in a specially arranged space (classroom), in a specialized institution (school, high school) in a limited period of time (class time).

Although it is not yet clear how profoundly digital technologies could transform educational practices, the emergence of interactive technology of various forms offers significant opportunities for more engaging pedagogy and new forms of assessment. Also, online learning not only produces new and dynamic approaches to content delivery, but also offers exciting new ways for students to interact and share learning.

In this context, emphasis is placed on the development of assessment principles that support learning, a growing awareness of the role of feedback as an integral part of the learning process, and assessment, on assessment practices that explicitly serve to promote student learning.

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