



CHAPTER 48

Assessment of learning as a pedagogical act: constructive error

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ABSTRACT

This article deals with assessment as a pedagogical act, considering the learning and development of students. Overall, the importance of error as a didactic factor in learning is addressed. In this regard, it aims to reflect on a constructive error as a component of the pedagogical act, from the perspective of learning assessment. As a method, it uses bibliographic research, in an approach characterized as qualitative.

1 INTRODUCTION

This article emerged from the reflections experienced during the second semester of 2021 in the discipline "Evaluation and Management of Learning" and with the participation of these authors, respectively, a master's student and doctoral student of a *Stricto Sensu* graduate program in education. On this occasion, 15 meetings were held with presentations of seminars in which several interfaces related to the issues of the evaluation phenomenon were discussed. Among these, the evaluation of learning as a "pedagogical act: constructive error" was highlighted, which was considered one of the emblematic themes presented because it provoked in-depth debates with the group of students.

Hence, the proposal of this study aimed to discuss the ideas of authors who discuss the evaluation of learning as a pedagogical act and the relationship with constructive error. For this, the following question is projected: can error be considered a pedagogical component of learning evaluation? No intuito de responder a esta questão problema, se tem como objetivo principal, refletir sobre o erro construtivo como componente do ato pedagógico na perspectiva da avaliação da aprendizagem.

It is justified to carry out this investigation in the authors' intention to bring contributions to the field of evaluation, especially because of the importance of teachers conceiving the errors presented in the evaluation processes, not as a thermometer to measure the best or worst performance of students, but as an opportunity to work aiming at improving the learning of all, independent of the series in which they are

The study is justified to answer how error can be considered a component of the pedagogical act of learning assessment. The results show that constructive error, as a way of evaluating, is configured as one of the components of the pedagogical act of learning evaluation. It is concluded as urgent the need to understand that the errors presented in the evaluation processes can be interpreted not only as a thermometer to measure who was better or worse but as a starting point for progress. As a future contribution, there is a possibility of promoting an improvement in student learning, thus assuming a pedagogical function.

Keywords: Pedagogical Act, Learning Assessment, Constructive Error.

studying, because Hoffmann (1993, p. 55) points out: "A teacher who does not constantly evaluate the educational activities, in the inquiring, investigative sense of the term, installs his teaching in absolute, precast and terminal truths".

Given the above, this article presents itself in three topics that are addressed, namely (I) first- discusses evaluation as a pedagogical act, concepts of a pedagogical act, describes a brief differentiation between the evaluation of learning and evaluation for learning; (II) second – it deals with learning evaluation and constructive error to understand the pedagogical function of error, placing it as a fundamental element as a starting point for the advancement and signaling of the process of knowledge construction; (III) third- includes the analyses of the discussions held, aiming to reflect whether the error can be considered as a pedagogical component of the evaluation of learning; (IV) concludes with some conclusions regarding the theme addressed and references.

2 METHODOLOGY

Considering that this part is extremely relevant for the good progress of research, after reflecting on the theme to be studied, the authors defined the qualitative approach allied to bibliographic research for the methodological design of this article.

In this sense, considering that the qualitative approach has as one of its characteristics the work with data in text format and as Teixeira (2003, p. 127) points out "[...] the researcher seeks to reduce the distance between theory and data, between context and action, using the logic of phenomenological analysis, that is, the understanding of phenomena by their description and interpretation. The researcher's personal experiences are important elements in the analysis and understanding of the phenomena studied." In this line of thought, the researchers explored and deepened the reflections to better understand the phenomenon studied, based on the authors presented later and their experiences as educators- one with 20 years and another with 18 years.

Thus, in relation to procedures, bibliographic research has guided the best direction to be followed within the theme, a research that according to Fonseca (2002, p. 32). "[...] it is made from the survey of theoretical references already analyzed, and published by written and electronic means, such as books, scientific articles and web pages", which makes it possible to have an overview of what has already been discussed on the subject to be studied and use this information to direct new reflections. In this same line of reasoning Marconi and Lakatos (2021, p. 63) endorse stating that bibliographic research "[...] it is not merely a repetition of what has already been said or written on a certain subject, but it provides the examination of a theme under a new approach or approach, reaching innovative conclusions."

Based on the bibliographic research carried out, the authors were able to define the cutout of the theme and had theoretical support that directed their reflections as educators and graduate students. The study is anchored in the following works: Demo (2001), Hoffmann (1991, 2015), Luckesi (1997, 2011, 2015), Perrenoud (1999), and Santos (2010, 2016); but it is also based on more recent articles as it is

possible to observe throughout the article. Supported by these works, it was possible to revisit literature scans of renowned authors and to learn more recent research, thus deepening the discussion about the relationship between evaluation as a component of the pedagogical act and constructive error.

3 RESULTS AND DISCUSSION

3.1 EVALUATION AS A PEDAGOGICAL ACT

Notably, when revisiting the ways of making an evaluation, it is pertinent to clarify the express meaning of the pedagogical act that composes the teaching and learning processes. Thus, Luckesi (2015) conceptualizes the pedagogical act that is concretized in different ways in evaluating, planning, and executing, from the initial moment of the preparation of the planning by the teachers to detailing the activities in each class to be taught. This prediction can be initiated with a diagnostic activity that will serve to plan based on the knowledge acquired by the students. This author warns of the need to think that the act of evaluating should not be dissociated from the pedagogical and seen as an obligation of the end of the month or the bimester, in which the time is available to assign grades to students if they learned the contents measured by tests.

In another analysis, Luckesi (1997) identifies three elements that compose the pedagogical act with future implications for desires related to the objectives desired within the teaching-learning process.

Reaffirms,

[...] it is important to know what desire with pedagogical action we practice to the students and whether we want to be delivered to it, so that we can build satisfactory results with the help of planning, execution, and evaluation, helping the development of the students, while processing our self-growth. (Luckesi, 1997, p.167)

In this reasoned understanding of the pedagogical act, it has alluded that the act of evaluating is one of the essential elements within the teaching-learning processes. However, it divides opinions regarding the various ways of conceiving and conducting such a process. In another sense, it is added today that one lives in a plural and demanding society concerning issues with a big scope about the act of evaluating and becomes a duty to rethink for students from various social contexts and participants of this process. For this, one must resume the reflections originated from the desired objectives to be achieved through evaluations within the teaching-learning process.

Of all, Luckesi (2015) predicts that the evaluation proposal is related to the investigation of the quality of something and varies according to the object linked to school learning. Opines, it is necessary to compare what will be evaluated with reflections on the quality of learning. Now, what is intended to be evaluated, for this author will imply the quality of learning within schools when assessing the development of the student's knowledge.

On this, it is important to reflect on what is put, considering that we live in a positivist society and demand high results. Although, despite social pressures, the school cannot lose sight of one of its roles within the teaching-learning process, that is, to train people with quality for a democratic society. However, the questions emerge: how to do this? Is it possible to follow the same line in the ways of evaluating?

Another point of attention of the evaluation refers to people who do not learn equally, because they have different forms of understanding and assimilation times. Therefore, it would not be fair to evaluate "all" in the same way, by the existence of external variables that can influence the performance of a student on a specific day. Even under similar conditions, the results would be diversified due to the time of each. Therefore, the need to diversify the evaluation instruments occurs throughout the process.

Moreover, it is necessary to take into account that the evaluative view is interpretive, that is, it has a subjective character, considering that through evaluation the teacher reveals his theoretical conceptions and his individual perceptions about the student's development. Hoffmann (2015, p. 86) points out that "Evaluation always comes from the interpretation of what is seen. It involves the perceptions, feelings, previous experiences and knowledge of those who evaluate." In this perspective, there is no escaping the subjective character of the evaluation because there is a risk of misusing it from its purpose, which should be understood as an act of reflection and decision-making of each evaluator. Thus, "The way then is to be aware of this interpretative character of the process, because we will begin to doubt our certainties and hypotheses, taking new questions about what is seen, and not definitive answers" (Hoffmann, 2015, p. 87).

Thinking of answers to the questions listed, the evaluation is unveiled as a component of the pedagogical act, as opposed to an instrument used for punishment or classification as an aid in the learning development process. About this, Paulo Freire (1998, p.52) juxtaposes that schools and teachers are aware "Knowing that teaching is not transferring knowledge, but creating possibilities for it's own production or construction". He credits that the perspective of the act of evaluating helps students in the process of building learning.

For a better understanding, Luckesi's thought was taken to synthesize the evaluative processes of learning with their main characteristics and suggest the consequences between assessment and evaluation. As shown in table 1:

Table 1: Differences between Assessment and Learning

Assessment	Evaluation
Loving	Unloving
Inclusive	Excluding
Meaningful learning opportunity	Opportunity to test students' resistance to teacher attacks
Constructive	It's not constructive
Searches for the best of all	Select, sort
Teaching focused on meaningful learning	Teaching focused on test and exam results
Prática pedagógica voltada para uma pedagogia do ensino/ aprendizagem	Prática pedagógica voltada para uma pedagogia do exame
Teacher-student relationship: between people	Teacher-student relationship: it becomes a relationship between things - grades
Freedom	Submission
Spontaneity, search	Fear
Permanent crossing in search of the best	Final arrival

Provas para diagnosticar	Provas para reprovar
Pedagogically: assists in the construction of satisfactory learning	Pedagogically: it centralizes attention in exams and does not help in the learning of students
Psychologically: develops creative and free personality	Psychologically: it is useful for developing submissive personalities
Sociologically: it is useful for processes of social inclusion.	Sociologically: it is useful for the processes of social selectivity. Evaluation is much more articulated with disapproval than with approval and hence its contribution to social selectivity

Fonte: Elaboração autoras com adaptações de Luckesi (1997)

Table 1 visualizes the dichotomy of the propositions between examination and evaluation. It is verified in each type of conception that can meet the different objectives within the teaching-learning process. It is noted that all questions are not limited to the right or wrong parameters but produce contributions to enhance the students' learning.

From this idea, it is established that the evaluation called formative occurs through the help and with conditions that enable didactic-pedagogical improvements in the development of the learning of each student.

From this perspective, it is stated as one that intends to perceive the difficulties of the students, organizing a pedagogical intervention with possibilities of predictions of advances. In corroboration Santos, (2010, p. 12) visions, "[...] its objective is above all to help to understand the cognitive functioning of the student in the face of a given situation proposed to be able to intervene properly", is an assessment that corroborates for personal and social training..

Regarding the evaluation of learning, Santos (2016, p. 641) compared to being very related to summative assessment, explains "[...] it is interesting to summarize what the student has learned or not, what he or she knows or does not know, what he or she is not able to do, at the final moment of a learning cycle [...]".

It is worth mentioning, although it is ideal to evaluate for learning and not learning, it is important to clarify: "[...] the predominant evaluation process is the evaluation of apprenticeships, that is, the evaluation that is characterized as the establishment of hierarchies about the performance of students [...]" (Bolzan, Fernandes and Antunes, 2019, p. 379).

3.2 ASSESSMENT OF LEARNING AND CONSTRUCTIVE ERROR

With queries to the online dictionary Infopédia (2021), it is detected that the word 'error' can be understood from among the semantic senses, as being: decision, act, or incorrect answer; quality of what does not correspond to the truth; deception; assessment or judgment that is at odds with the observed reality; false judgment; lack; blame.

These definitions, according to Luckesi (1997, p. 54.) reflect the heritage of "Western-Christian" culture and its philosophical-religious conception, in which error is seen as a sin and deserves to be punished. In addition, it identifies that our society reflects the concepts inherited from bourgeois society

and how the school reflects society, even today, the practice of evaluation directed by traditional pedagogy prevails. As a result, hopes reduce improvements in evaluation practices through tests and examinations with discriminatory, exclusionary, authoritarian, and punitive characteristics, which lead to guilt, and arbitrary and senseless judgments.

Luckesi (1997, p. 48) stresses that the idea of error "[...] only emerges in the context of the existence of a pattern considered correct." It confirms that this Cartesian view is misguided in the rhetoric that "where there is error there is no right" where the responsibility for learning is entirely the student's, exuding the teacher from all the blame. It finds that changing the look on the error consists in understanding that the error exists only imbued with a pattern to be followed, often arbitrarily defined by someone.

In contrast to overcome this traditional view Luckesi (1997, p. 48) argues that it "[...] has led to the permanent use of punishment as a form of correction and direction of learning, taking evaluation as decision support." It delimits that throughout history, the origin of the understanding of error has been transformed into various forms of punishment by exposing students and placing them in a position of guilt because they have not been able to learn.

In any case, error from the perspective of formative evaluation, according to Perrenoud (1999, p. 78) is understood as "[...] every assessment that helps the student to learn and develop, which participates in the regulation of learning and development towards an educational project." In this perspective, the evaluation is conceived as a space for diagnosis, intervention, problematization, and action at the service of the learning of everyone.

In this direction, Luckesi (1997) predicts that the evaluation is consolidated in a continuous process in the possibilities of verifying the constitution of the error in its origin, as well as overcoming them with significant benefits for students and teachers. As a proposition, this author argues that the teacher should accept the student's error as an indicator that something in the teaching-learning process did not go as planned. Therefore, it shows the importance of evaluation as a continuous process, because verifying the constitution of the error and its origin gives us the possibility of overcoming them with significant benefits for personal growth. It infers that, as educators, we need to transcend the view of error as a failure of learning so that it can be considered as an opportunity for reorientation of work, a springboard in search of a better path, thus becoming a source of growth for both teachers and students.

In this perspective, Hoffmann (1991) points out that the error presents great educational potential, considering that, when considering the students' mistakes, in addition to committing to the improvement of learning, the teacher has the possibility of rethinking his pedagogical practice. To this end, the author points out that the teacher needs to understand and identify the mistakes made by the students, to provide conditions to overcome them, that is, it is not enough to identify the error, it is necessary to resize its conception so that it can be transformed into something positive.

In the interpretation of Demo (2001, p. 50) "Error is not a foreign body, a failure in learning. It's essential, it's part of the process. No one learns without making mistakes." With effects, they encourage

that changes in the traditional view of error seen as a problem should be promoted and the principle of new learning should be envisioned..

In the same logic of thought, Nogaro and Granella (2004, p. 6) signal,

"Error" should be considered as a constructive form of knowledge, as a source of growth, and not as a tool of exclusion. It is up to the school, the teacher, as direct means the formation of critical identity and non-conformities, to take the greatest step in search of an education that values the experiences of each one and that aims first to raise awareness of the human being, as a social being, of the importance that each one has in the formation of a more just society, less excluding and more interested in being, not doing.

The constructive notion of error takes up the possibilities of disruptions with evaluative practices systematized from the sixteenth and seventeenth centuries in a dimension centered on the traditional ways of conceiving and conducting pedagogical action.

In line, Luckesi, (2011) says that this event has materialized within a theoretical model that presupposes education as a mechanism for the conservation and reproduction of society, that is, at the service of a dominant social model. It denotes that for assessment to assume its role as a dialectical and diagnostic instrument, it recommends placing it in another pedagogical context, to put at the service of a pedagogy that is concerned with the democratization of teaching, to work for the overcoming of authoritarianism and in favor of the development of the autonomy of the student.

For these actions, Luckesi (2011, p. 177) explains

An educational practice that has assessment as its basic resource for building the desired results must be founded on the belief that every 'student learns and by learning develops. This implies daily investment in their learning. In this case, the difficulties should not be a source of discouragement, but challenges that invite the educator to invest more and more in the students. With investment, everyone learns and develops.

It is noteless to resignify the view of error because considering it as part of the learning process certainly covers the constructive way. It is noteworthy that the error is not necessary for the student's growth, but should be inserted as part of intellectual advances and knowledge. Thus, Luckesi (1997, p. 59) reaffirms: "once they occur, we should not make them sources of guilt and punishment, but a springboard for the leap toward a conscious, healthy, and happy life."

Thus, reflect on the error as an important source of growth for students and teachers. According to Esteban (1999, p. 21) "Error offers new information and formulates new questions about the learning/development dynamics, individual and collective". From these perceptions, Esteban (1999) expresses that error often reveals more than the right, because it puts knowledge in a procedural perspective, indicating what the student knows, what he does not know, and what he may know. For this author, errors can and should be the guide elements of pedagogical actions and interventions, triggering reflections, interventions, and reorganization of teaching work

In this perspective, Santos Júnior and Barboza (2020, p. 14) indicate that "Understanding causes and motivations for student's error is one of the pillars that can help improve the teacher's teaching process

and student learning." Thus, when it comes to conceiving error as constructive, it becomes a sieve to understand itself as a constitutive element of learning, which can and should be used as a tool in the construction of hypotheses of knowledge, given respect and appreciation of the student's perspective. Moreover, it should provide reflections on the pedagogical practice of the teacher, as it provides the evaluation and reorientation of his praxis, based on the needs of the students. Resignifying the concept of error implies advances in the conceptions of evaluation as Luckesi (2011, p.294) puts it, "[...] the evaluative acts of monitoring and certification of learning will be our effective allies in achieving success in the results and democratization of teaching."

3.3 CAN ERROR BE CONSIDERED A PEDAGOGICAL COMPONENT OF LEARNING ASSESSMENT?

The theoretical contributions used in this work seek to reflect on the constructive error as a component of the pedagogical act from the perspective of learning evaluation. In this sense, we sought to systematize contributions brought by some researchers about the need to rethink the meaning of learning evaluation, from the perspective of making this process collective and plural to provide spaces for dialogue that break with the logic of the exam used in traditional school, under the positivist paradigm.

From the above, in this article, it is related that the assessment defines a very important role when breaking with the traditional view of classification assessment, in which the evaluative act becomes merit, judgment, punishment, and reward. This occurs when an evaluation is proposed to promote the learning of everyone, thus constituting a democratic space of reciprocity, emancipation, and promotion of learning (Luckesi, 1997, 2011, 2015). Following this logic, Alves, Oliveira, Jucá, and Silva (2020, p. 15) reinforce the importance of positioning the assessment as "[...] an instrument in favor of the student's learning." In this perspective, it is understood as a cyclical process, that allows the teacher to redirect his actions enabling the student's development.

In this context, it is necessary to understand evaluation and planning as inseparable acts, because their execution is at the service of the construction of knowledge by students. It promotes, while planning outlines the future paths to be followed, the evaluation helps redirect the course of action. In these terms, Lourdes, Gomes, and Carvalho (2020) highlight the relevance of diagnostic assessment as an important tool that allows reflection on teaching and learning processes. Thus, it is understood that the act of planning, executing, and evaluating, function as fundamental resources in the teaching and learning process by directing the paths of pedagogical action, with a view to the construction of knowledge.

Nevertheless, the evaluation of learning needs to be seen as a loving act and manifests itself to welcome the real acts and actions, without judgments. In addition, it should provide opportunities for inclusion and integration by offering students support to expand their learning and choose their own paths, focusing on meaningful learning and democratization of teaching. From this perspective, the following question emerges: can error be considered a pedagogical component of learning evaluation?

In this regard, the discussions point to the importance of understanding error as part of the teaching-learning process and consequently as an opportunity to build knowledge from the knowledge constructed by the students, because as Silva (2008, p. 102) points out, the virtue of error "[...] it is in the possibility of constituting a source of growth, for students and teachers, since it allows the recognition of its origin and the procedures and mechanisms that produced it."

From this perspective, the error is now considered as a starting point for decision-making with a view to the necessary adjustments, whether in teacher planning or in the processes that involve students' learning, constituting a rich source of learning and development, favoring the growth of all those involved in the process (Demo, 2001).

Hence, one can understand the error as constructive when used to reorient the teaching practice to know the interests, knowledge, weaknesses, and potentialities of the students, while promoting clear indications about what is necessary to do to move forward. In this perspective Abrahão (2007, pp. 196-197) points out that

The role of the teacher in the perspective of constructive error is fundamental in the sense of respecting and valuing the knowledge that the student brings, starting from these, trigger reflections so that the child can evolve and constitute new hypotheses for the solution of a problem. In addition, by valuing the student's knowledge and starting from the hypotheses constructed by him and the difficulties encountered by him, the teacher can plan the pedagogical action to intervene in this process as a mediator between current knowledge and the new knowledge that the child can develop.

Thus, the role of the teacher is fundamental, considering that he is responsible for guiding students and stimulating their attempts, making them reflect and thus progress in their final, it is considered that education addressed in democratic contexts, resignifies the role of evaluation, consequently from the view of error, in the search to provide opportunities for the development of students, to value their knowledge, driving them to overcome their difficulties in a contextualized humanized and sensitive way knowledge.

Finally, it is considered that education addressed in democratic contexts, resignifies the role of evaluation, consequently from the view of error, in the search to provide opportunities for the development of students, to value their knowledge, driving them to overcome their difficulties in a contextualized, humanized and sensitive way.

4 CONCLUSION

Of all, there is the belief that evaluation is an important component of educational activities and the learning process. Therefore, Luckesi (2011, p. 264) states that can be defined as "[...] a quality allocation, based on relevant student learning data, for decision-making." Therefore, it should be able to dialogue with the multiplicity and plurality of knowledge that students present.

It infers that as educators, we need to transcend the view of error as a failure of learning so that it can be considered as a starting point for advancement, an opportunity for reorientation of work, a springboard in search of a better path, thus becoming a source of growth for both teachers and students.

In the light of this perspective, it is understood that by resignifying the role of error in evaluative practices, a broad step is taken to break with the traditional view of the classification and exclusionary school, to commit to a dialogical school, welcoming, reflective, constructive, inclusive, that is, truly democratic.

In a sense, it is encouraged to be understandable to delegate to educators to recognize the process of learning evaluation as a mediator of teaching practice, so that the error is concomitant with the pedagogical act and resized in a process of knowledge construction.

As developments for future studies, this article points to the need to conduct empirical studies that corroborate the rethink of the evaluation processes from the resignification of the error, making it a tool to enhance the students' learning. Thus, nuances that involve the specificities of the various actors involved in the evaluation processes of learning, as well as the social context in which they are immersed, point to different realities, with a specific need, factors that alone point to the need to carry out this type of study to guarantee what is desired through evaluation, overcoming difficulties- learning.

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