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PSICOLOGIA DA APRENDIZAGEM NA VISÃO DE ESTUDANTES DE GRADUAÇÃO DE CIÊNCIAS BIOLÓGICAS DE UMA UNIVERSIDADE PÚBLICA BRASILEIRA

RESUMO

Historicamente, três teorias tem sido as mais relevantes no estudo da aprendizagem, sendo elas as behavioristas, cognitivistas e as humanistas. Este estudo objetivou analisar a percepção de estudantes de Licenciatura em Ciências Biológicas de uma universidade pública brasileira acerca da disciplina Psicologia da Aprendizagem. Este estudo é de caráter qualitativo, do tipo pesquisa de opinião, tendo como público 17 estudantes de um curso de Licenciatura em Ciências Biológicas de uma universidade pública brasileira. Os depoimentos produzidos pelos estudantes a partir de uma atividade avaliativa foram organizados e analisados de forma descritiva, conforme a análise de conteúdo. Os dados mostraram que a interação entre os estudantes e professores em sala de aula é importante para que possam compreender melhor as diferentes perspectivas epistemológicas das teorias da aprendizagem. Além disso, salientam que essas teorias devem fundamentar as práticas pedagógicas, pois entendem que os conteúdos discutidos nessas teorias são importantes e significativos para a formação contínua da aprendizagem e desenvolvimento profissional.

Palavras-chave: Biologia. Formação Docente. Licenciatura. Prática Pedagógica. Psicologia.

LEARNING PSYCHOLOGY IN THE VIEW OF BIOLOGICAL SCIENCES UNDERGRADUATE STUDENTS FROM A PUBLIC BRAZILIAN UNIVERSITY

ABSTRACT

Historically, three theories have been the most relevant in the study of learning, being the behaviorist, cognitivist and humanistic theories. This study aimed to analyze the perception of Biological Sciences undergraduate students from a public Brazilian university about the discipline Psychology of Learning. This is a qualitative study, of the opinion survey type, with 17 students from a Biological Sciences undergraduate course at a public Brazilian university. The statements produced by the students from an evaluative activity were organized and analyzed descriptively. The data showed that the interaction between students and teachers in the classroom is important for them to better understand the different epistemological perspectives of learning theories. Moreover, they emphasize that these theories should underpin pedagogical practices, as they understand that the contents discussed in these theories are important and meaningful for continuous learning formation and professional development.

Key words: Biology. Teacher Training. Graduation. Pedagogical

1. INTRODUCTION

Historically, three theories have been the most relevant in the study of learning, namely the behaviorist, cognitive, and humanistic theories. In the behaviorist theory, learning is related to changes in behavior. In this perspective, learning is understood as a response to stimuli from the external environment, not considering what happens inside the learner's mind during the learning process. In constructivism or cognitivism, the processes of cognition, comprehension, transformation, storage and use of information are taken into account in the understanding of learning. In humanism, in turn, learning is associated with the perspective of the world, with individual and collective experiences (FIGUEIREDO, 2016).

In the undergraduate degree, as a modality of Higher Education focused on teaching, the student must acquire some knowledge that is essential to their training. Among this essential knowledge is the Psychology of Learning, which according to Silva (2017, p. 12), “has its studies and theoretical references based mostly on conceptions that seek to understand how humans constitute their learning processes, resorting to various theories that provide diverse concepts and principles”.

In this sense, the school as a place that presents a huge diversity of people, with thoughts and ideas also diverse, both in religious, political, cultural issues, among others (NETTO; COSTA, 2017), the understanding of learning theories becomes relevant because it allows to assist the teacher in their teaching work, both in planning

aspects, as in their own relationship with students (SILVA, 2017).

Based on these first considerations, this study aimed to analyze the perception of undergraduate students in Biological Sciences from a public Brazilian university about the subject Psychology of Learning.

2. MATERIAL AND METHODS

This is a qualitative study, of the opinion survey type (BOGDAN; BIKLEN, 2010), with 17 students from a Biological Sciences undergraduate course from a public Brazilian university. Regarding qualitative research, Minayo (2001) points out that it is characterized by the understanding of something accompanied by doubt despite theories to prove a particular object of study. Finally, opinion research refers to a methodological tool that aims to know the reality, behaviors and opinions of a social group (WEBER; PÉRSIGO, 2017).

The students' answers were collected through an evaluative activity applied at the end of the course Pedagogical Practice online through Google Forms in the year 2021. Since this is an opinion survey, according to Resolution No. 466, of December 12, 2012 (BRASIL, 2012) and Resolution No. 510, of April 7, 2016 (BRASIL, 2016), it was not necessary to submit the project for approval by the Ethics Committee on Research with Human Beings - CEP. In addition, to preserve the anonymity of the students of the subject, they were identified by codes, for example: E1, E2, and so on.

The statements produced by the students from the activity were organized and analyzed descriptively, according to the content analysis, which is generally used to represent the treatment of data from a qualitative research in education, since it describes the contents of the participants' answers, and allow the authors to make inferences about the knowledge obtained in such data generated (BARDIN, 2011). After the content analysis, the analysis of the information obtained from the participants was performed (MORAES, 1999).

3. RESULTS AND DISCUSSION

During the subject Psychology of Learning, taught in a Brazilian higher education institution, the students enrolled in this subject were asked to answer some questions about their perceptions of the main problems and limitations of teaching-learning that occurred in this subject during remote teaching. Among most of the answers, some students, such as student E1, made the following report:

The only point is that it is a short period of time and not presential, I would like much more contact and time with the teacher and subject (E1).

That is, remote teaching highlights the difficulties that students have in relation to class time (usually shorter than the face-to-face class), little interaction with classmates and teacher, among other information. It is known that the interaction between teacher and student is important for the good development of the teaching-learning process, since, from the perspective of the Psychology of Learning, it is possible to identify studies stating that for the

individual to learn and develop, it is necessary for him to have contact with people and the world around him. That is, student E1's speech makes it clear that in face-to-face teaching, he would learn better the contents taught at the university from this greater interaction with classmates and the subject teacher.

According to the students, the Psychology of Learning allowed the development and/or improvement of skills during the course, such as concepts inherent to the subject, which the undergraduate can take with him/her to his/her own life, and also as an aid to the teacher's performance in the classroom, as can be detected in two statements:

I learned concepts that I will take not only to the classroom but for all my life (E1);

Better understanding of the students because it is not always a good day for everyone, it is important to understand this for a good teaching (E2).

The students' statements indicate that the concepts or theories of learning, which according to Netto and Costa (2017, p. 2018) "are theoretical models scientifically developed to explain how the teaching-learning processes occur", learned in the subject Psychology of Learning, are essential in the educational field, as well as for a good teaching practice, professional and personal development.

In other words, by helping students understand human behavior and the different learning processes, learning theories can contribute to a better pedagogical practice developed in the classroom (BARBOSA; SILVA, 2020).

Moreover, understanding these theories can help them understand the particularities and

individuality of each student, as well as consider the social, psychological processes, among others, as important components for the acquisition of learning, i.e., the aspects that directly or indirectly influence this process, and thus be able to achieve better results in learning itself, as is clear in the speech of five students:

In my opinion, it is of utmost importance to know about the psychology of learning, because it is one of the pedagogical disciplines that most impacts the way we get a critical look at how we should be as teachers, seek to understand the specificity of each student, and their own identity as well, respecting the prior knowledge and sociocultural context that the student is inserted, respecting the individuality of each student. It is a subject that brings us much of the reality of a classroom, and as future teachers of science and biology, we need to know about the theories of learning, so that we can achieve efficiency as future teachers, because the challenges to be faced will be many, and many of the challenges faced are due to a vague initial training, but as future teachers we know that we will be eternal students and that education transforms lives, and the teacher has this role of mediator of knowledge and transformer of life (E1);

The importance of the psychology of learning is in the fact that it offers teachers in training and those already trained, the basis for us to build a teaching method that takes into account the particularities of each student, because the psychology of learning brings with it several theories that can help the teacher if he or she delves into the theories (E2);

It is through the discipline of psychology of learning that we can understand how learning happens and know about the various contributions made through the studies of various learning theorists and understand the mechanisms and stages of cognitive development of children, this information can help the teacher to develop techniques for their classes are fruitful and effective, reaching the goal of learning (E3);

Throughout the subject, psychology of learning, I learned that the psychology of learning is a relevant area of study for the field of education and especially for the teaching of science and biology, because it allows the teacher to know his students, diversify teaching methods, get to know scholars who have worked in specific areas for the best development in the field of learning, such as Vygotsky, Piaget, Wallon, Paulo Freire, who have very rich contributions to the educational field. In addition, the psychology of learning teaches to take into account the world that the educated brings, the social, and psychic processes that are important for the acquisition of learning, and that each one learns in a different way, so much so that the teacher has to reinvent himself to reach as many of his students as possible (E4);

The psychology of learning plays a very important role in the teacher's training and performance, since it allows to know the student in a complete way, because through the various postulated theories it is possible to discern at what stage of development the student is in his intellectual, physical, emotional and social development, where the educator starts to understand that there are several aspects involved in the ability to assimilate and store the content. Through studies of the psychology of learning, the teacher can notice which practices are more effective and when to apply them, in order to make the learning process more meaningful to the student, especially with regard to learning difficulties and motivation. It is of great importance that teachers have contact with psychology of learning during their training, so that they can understand as much as possible the students' aspects, and can articulate teaching practices that stimulate group work, critical training, and take into account the social and emotional aspects, thus achieving greater success in the learning construction process. In short, as the teacher assumes the role of mediator, the psychology of learning acts as a series of strategies, instruments and resources that aim to facilitate and assist the teacher in teaching, because through the acquisition of knowledge about the contributions of learning theories, it is possible to work with an

integrative approach to teaching-learning (E5).

The students' statements are important, as they reveal, among other things, the importance of the contents of the work on the Psychology of Learning for their teaching practice and professional development. In this regard, according to Barbosa and Silva (2020), learning theories are necessary in undergraduate courses, as they help to understand the different conceptions of teaching and learning, also addressing how individuals learn throughout life. However, they emphasize that, regardless of the theory adopted by the teacher, it is important that he/she knows these theories well, so that they can choose which one could provide more effective ways of teaching content related to their subject, which is fundamental to develop better pedagogical practices.

Moreover, the students' mentions of issues internal and external to the classroom, as factors that can influence learning within the classroom itself, meet the conceptualization given for learning, which according to Netto and Costa (2017), can be defined as “[...] a process of acquiring new knowledge through experiences lived and determined by endogenous and exogenous factors that result in the modification of human behavior and that depend on essential conditions, such as: mental, physical, sensory and social to develop” (NETTO; COSTA, 2017, p. 216).

Other studies are in dialogue with the findings of this research, as in the study by Lucion, Frota and Silva (2012), when they stated that interviewed students of Biological Sciences reported that they could identify some theories of learning learned at university, and that these

theories helped to better ground their teaching practices in the classroom. On the other hand, they also noticed that some students revealed the need for a better contextualization of the contents covered in these theories with the realities experienced by them. This is important for both teachers and students to have a more critical look at the development of the teaching and learning process from different social contexts.

Netto and Costa (2017) also mention that Jean Piaget (1896-1980), Vigotski (2009, 2007, 1999) (1896-1934) and Wallon (1879-1962), mentioned in the speech of student E4, have been considered the most representative theorists among those who set out to study learning. It is important to highlight that Piaget, Vygotsky, and Wallon, constructivist theorists, share the idea that the individual develops and learns from his interaction with the environment around him (NETTO; COSTA, 2017).

To forward the conclusions of this research, Paulo Freire, advocate of humanistic pedagogy and also cited in the speech of student E4, makes it clear in his works, that the individual develops his autonomy and capacity for reflection to the extent that he becomes more critical and participatory in society. And this is only possible when they become aware of their reality (FREIRE, 1987). In other words, in the speech of student E4, the Psychology of Learning considered in her training as a student, the knowledge of the world that the teacher must have, important to achieve the process advocated by Freire.

4. FINAL CONSIDERATIONS

The data showed that the interaction between students and teachers in the classroom is

important for them to better understand the different epistemological perspectives of learning theories. In addition, they emphasize that these theories should underpin pedagogical practices, because they understand that the contents discussed in these theories are important and significant for continuous learning formation and professional development.

It was evident from the theoretical matrix analyzed that the pedagogical conceptions of learning theories should be understood, also considering the historical, cultural, and social

perspectives, because it should be taken into account in the teaching and learning process the reality of the student, and not something discrepant from this process.

Therefore, knowing the theoretical and conceptual plurality of learning theories is necessary to help the teacher in the exercise of his/her teaching role. Moreover, it enables the teacher to find answers to the problems faced in the classroom at different times, spaces, times, and from different social, political, and economic perspectives.

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