Meaningful learning: teachers' conceptions and practices in Higher Education

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ABSTRACT

This paper is the result of a research that aimed to analyze the conceptions and practices of teachers about significant learning in higher education and their mobilization for this purpose. It also sought to identify teachers' conceptions and practices on significant learning; to verify the strategies used by teachers to mobilize significant learning; and to diagnose teachers' difficulties and deliberations in this process. The research consisted of a qualitative approach, with, as methodological procedures, bibliographic study and semi-structured interviews with higher education teachers. The context of the study was a University Center located in the Central Sertão of Ceará, with professors of the psychology course. The analysis method used was content analysis and was developed through the teachers' perception about the use of active methodologies in higher education, as well as pointing out the difficulties and challenges when working on strategies that value and stimulate the relationship between theory and practice. The research results indicated that the teachers' conceptions ans practices on significant learning refers to the concept attributed by Ausubel (1982) regarding the understanding of significant learning, in which they recognize the importance of the interaction of prior knowledge with the knowledge re-elaborated in the daily life of the classroom. The learning is considered significant when it expresses a reflected practice, capable of modifying the student's perception in relation to the systematized and reconstructed knowledge.

KEYWORDS
Meaningful learning. Teaching. higher education. Learning process.

Aprendizagem significativa: estudo acerca das concepções e práticas dos professores no Ensino Superior

RESUMO

Este trabalho é resultado de uma pesquisa que teve como objetivo analisar as concepções e práticas dos professores sobre a aprendizagem significativa no ensino superior e sua mobilização para este propósito. Buscou-se também, identificar as conceções e práticas dos professores sobre aprendizagem significativa; verificar as estratégias utilizadas pelos docentes para mobilizar a aprendizagem significativa; e diagnosticar as dificuldades e deliberações dos docentes nesse processo. A investigação consistiu em uma abordagem qualitativa, tendo, como procedimentos metodológicos, estudo bibliográfico e realização de entrevistas semiestruturadas com professores da educação superior. O contexto do estudo foi um Centro Universitário situado no Sertão Central do Ceará, com professores do curso de psicologia. O método de análise foi análise de contéudo que se desenvolveu por meio da percepção docente acerca do uso das metodologias ativas na educação superior, bem como apontando as dificuldades e desafios ao trabalhar estratégias que valorizam e estimulam a relação entre teoria e prática. Os resultados da investigação indicaram que as concepções e práticas dos docentes sobre a aprendizagem significativa, refere-se ao conceito atribuída por Ausubel (1982) em relação à compreensão sobre a aprendizagem significativa, em que reconhecem a importância da interação dos conhecimentos prévios com os conhecimentos reelaborados no cotidiano da sala de aula. O aprendizado é considerado significativo quando expressa uma prática refletida, capaz de modificar a percepção do estudante em relação aos saberes sistematizados e reconstruídos.

PALAVRAS-CHAVE

Aprendizagem significativa. Docência. Ensino superior. Ensino-aprendizagem.

Aprendizaje significativo: estudio acerca de las concepciones y prácticas de los profesores en la Enseñanza Superior

RESUMEN

Este trabajo es resultado de una investigación que tuvo como objetivo analizar las concepciones y prácticas de profesores acerca del aprendizaje significativo en la Enseñanza Superior y su movilización hacia esa finalidad. También se ha buscado identificar las concepciones y prácticas de los profesores acerca del aprendizaje significativo; verificar las estrategias utilizadas por los docentes para movilizar el aprendizaje significativo; y diagnosticar las dificultades y deliberaciones de los docentes en ese proceso. La investigación consistió en un abordaje cualitativo, teniendo, como procedimientos metodológicos, el estudio bibliográfico y la realización de entrevistas semiestructuradas con profesores de la educación superior. El contexto del estudio ha sido un Centro Universitario ubicado en la zona rural central de Ceará, con profesores del curso de psicología. El método de análisis fue el análisis de contenido que se desarrolló por medio de la percepción docente acerca del uso de las metodologías activas en la educación superior, así como apuntando las dificultades y el desafío de trabajar con estrategias que valoran y estimulan la relación entre teoría y práctica. Los resultados de la investigación apuntan que las concepciones y prácticas de los docentes acerca del aprendizaje significativo se refiere al concepto atribuido por Ausubel (1982), en relación con la comprensión sobre el aprendizaje significativo, en lo que se reconoce la importancia de la interacción de los conocimientos previos con los conocimientos que son reelaborados en el cotidiano del aula de clase. El aprendizaje es considerado significativo cuando expresa una práctica reflejada, capaz de cambiar la percepción del estudiante en relación con los saberes sistematizados y reconstruidos.

PALABRAS CLAVE

Aprendizaje significativa. Docencia. Enseñanza superior. Proceso de aprendizaje.

Introduction

Human learning occurs in any circumstance, without a determined occasion. It is necessary to recognize that learning, when it is meaningful, produces expressive and intentional changes in the subject's life. "There is no education outside human societies and there is no man in a vacuum." (FREIRE, 2019, p. 43).

By approaching *learning from a significant perspective* as a reference to the mode of critical learning, one seeks to broaden and reconfigure ideas, that is, one also aims to point out that this learning should be composed of so many other knowledge that are not only those specific to each course, but awaken to the diverse knowledge that encompasses the development of the student as a human being in its entirety. The formation extends not only to the professional, where a craft is learned; rather, in order to provoke and form people committed to society, capable of assuming their role as transforming agents and exercising their citizenship. Or even, what is highlighted by Lacerda (2018) when referring to the little approximation of student and teacher: "the type of content, the way of presenting it, and the methodology developed according to its intentionality can favor the formation of a more human and integral student/teacher." (LACERDA, 2018, p. 58).

The issues highlighted here focus on the perspective of analyzing the conception and aspects of teaching practice as methodologies that are developed in higher education in view of a meaningful learning. To this end, it is necessary to start from the understanding of learning as an integral part of human behavior.

The term Meaningful Learning originates from the thought of the American psychologist David Ausubel. Ausubel's theory (1982) consists of an idea that opposes a merely mechanical learning. According to the author, learning is meaningful when the learner relates new content to prior knowledge. The interaction that occurs between the two pieces of knowledge will help the student to have a logical and meaningful learning experience, providing the subject to know why he is learning, a relevant point in any learning process.

This theory consists in reaffirming that all learned content is potentially significant, that is, everything that is learned can be related to the knowledge structure already existing in the subject. Its importance lies in allowing the subject the appropriation of new elements in the cognitive structure to then make the relationship with the other elements, identifying the relevant content and, especially, explain the relevance of this content for learning in the new content received (MOREIRA, MASINI, 2001, p. 22).

Thus, all learning should be succeeded by meaning, and the experiences of the subject should be considered as tools not only for the content discussed exclusively in the classroom. However, one of the necessary points in this context is for the teacher to understand the

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importance of interaction with the student and knowledge for effective learning, questioning what and why of teaching, otherwise there is a tendency for learning to become mechanical and memorized. In this process, the teacher becomes indispensable with his mediation, as well as the use of methodologies associated with his practice, composing necessary devices to the mobilizing process of teaching, and learning in higher education.

For these reasons, the dual function of teaching and learning cannot be dissociated. If, on the one hand, the professional education of the teacher demands knowledge and methodological-technical domains, on the other hand, the student's learning also demands resources to learn with scientificity, criticality, incorporating the theoretical-practical dimension. Thus, Masseto states: "[...] all learning, in order to really happen, needs to be significant for the learner, that is, it needs to involve him as a person, as a whole: ideas, intelligence, feelings, culture, profession and society" (MASETTO, 2012, p. 04).

This article socializes the results of a research that had as general objective to analyze the conceptions and practices of higher education teachers about meaningful learning and their mobilization for this learning; and as specific objectives, identify the conceptions and practices of these teachers about meaningful learning; verify the strategies used by teachers to mobilize meaningful learning and diagnose the difficulties and deliberations of teachers in this process.

To direct it, the text was organized into four sections: the first and second bring the theoretical contributions of the investigation, outlining the theory of learning and significant learning and its implications for higher education; it also addresses a different look with the discussion of critical and reflective significant learning; in the third and fourth sections, we outline the research methodology and the debate about the teachers' narratives. In the conclusions, disturbing evidence of the debate is presented. Finally, the references we used are presented.

Learning theory and meaningful learning and its implications for higher education.

The theories that have developed around learning, as much as they present various points of view and are considered relevant, are not exhausted in themselves, nor does one

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overlap the other, but between them there is a relationship of continuity and complementarity that assists in the understanding of the various stages of learning, said by theoreticians from different sciences, such as education and psychology. In fact, what differentiates one theory/approach from another is the perspective in which its author works, from the identification of the problem and its context. According to Campos (2008), when it comes to the development of theories related to learning, they arise from investigated hypotheses, not from personal or subjective opinions. Their understanding is being modified with the progress of science, and constantly subjected to criticism of new facts and verified relationships. For a learning theory to be adequate, it must have the following criteria: "be realistic; not blind the teacher to reality; view learning situations as a whole; and highlight the conditions of learning" (CAMPOS, 2008, p. 159).

Learning theories seek to systematize and at the same time advocate issues related to human learning. In this way, they help teachers create strategies to act in the classroom and monitor learning with its successes and possible failures.

Despite its great importance for human activity and for education, explaining how the learning process occurs, as well as the factors that influence it, is still quite complex. The first major issue to consider is learning related to human life. Remotely, human history makes us realize that the human being at all times and different times has had to "learn" something in order to survive. He learned to build his own tools, for example, to ensure his own survival, a fact that still occurs in the present, where man is able to develop high and sophisticated techniques to meet his needs.

The most expressive aspect about the dynamism that learning involves is precisely how it happens and how the subjects relate and interact with each other based on what they learn. In this field several theories have been developed with the purpose of discussing and describing how human learning actually takes place.

Among some theories with their epistemological bases, in general, are represented by the classical schools of Behaviorism, Cognitivism, and Humanism. From these psychological scientific areas, other theories were developed, as we know and identify as the main and most widespread theories of learning applied to education, which are: behaviorism, cognitivism, genetic epistemology, constructivism, and sociocultural.

The first one drawn from the Behaviorist school of thought, (behaviorism), is known as operant conditioning, expounded by psychologist B. F. Skinner. For Skinner, the act of learning involves three stages: "First, the stimulus with which the learner is confronted; second, the behavior that it causes in the learner; third, reinforcement that follows the behavior" (FONTANA, 2002, p. 158). In this theory, behavior should be studied in order to modify or adapt it.

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Cognitivism emerges next as a critical response to the behaviorism theory. The term cognition can be understood as: "the process by which we know and attribute meaning to reality, from sensory experiences, representations thoughts and memories" (NUNES, SILVEIRA, 2011, p. 71). "For cognitivists, we learn the relationship between ideas (concepts), and we learn by abstracting from our experience" (BOCK, FURTADO, 2008, p. 133). This understanding becomes important for the development of issues related to thinking, reasoning, language, memory, abstraction, these elements begin in childhood and are associated with learning.

The interactionist constructivism, a psychological approach developed from the genetic epistemology theory, whose author is Jean Piaget. Piaget uses other existing theories such as cognitivism to develop it. In this theory, the subject learns from the interaction between him and the environment in which he lives (physical and social). For the author, intellectual development occurs in different stages, thus providing opportunities for the subject to learn according to his or her stage of life. The teacher in this theory is seen as the mediator (BIAGGIO, 2015).

A Sociocultural foi desenvolvida por Lev Vygotsky. Tem base epistemológica no materialismo de Marx, com arcabouço na dimensão histórica e não natural. Esta abordagem prioriza o desenvolvido da linguagem que se torna o principal fator que impulsiona o conhecimento do ser humano, em que a cultura tem um papel relevante na formação de sua consciência. Defende também que a interação que ocorre entre o sujeito e o meio é fundamental para a aprendizagem, ponto que está de acordo com a teoria de Piaget (NUNES, SILVEIRA, 2011).

That being said, we have seen that the assumptions that support learning theories are not limited to one aspect. They start from all the elements that make up the human being at different stages. In other words, learning is observed from the early age of the child to the juxtaposed elements in the school and university dimension. Thus, it is possible to identify that learning occurs not only through a single component, but through all the dimensions, internal and external, that surround the subject.

It was with this in mind that David Ausubel (1968) devised the Meaningful Learning theory, whose main challenge is to stimulate long-lasting, non-mechanical learning, capable of developing interest in acquiring knowledge and transforming it into learning. To explain learning, there are several theories and modalities. The aforementioned theory focuses its central concept on cognitive learning and suggests a theoretical explanation of the learning process.

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This understanding arises, according to Ausubel, when a new concept interacts with an existing concept and is able to generate a third concept, that is, the new information, together

with the pre-existing ones, form another reality of understanding, thus being able to modify and broaden the view with regard to the subject's learning. The theory is explained by Ausubel in this way:

> The essence of the meaningful learning process is that the ideas expressed symbolically are related to the information previously acquired by the learner through a non-arbitrary and substantive (non-literal) relationship. A non-arbitrary and substantive relationship means that the ideas are related to some relevant aspect existing in the learner's cognitive structure, such as an image, symbol, concept, or proposition (AUSUBEL, 1980, p. 34).

In line with Ausubel, learning becomes meaningful because it involves modifying and expanding the concepts that already exist in the subject's cognition. The main context of meaningful learning is that everything that is learned and developed during the subject's life has meaning, and all acquired knowledge will be transformed into learning. Furthermore, no information is ignored, but transformed into learning, while in the learning process, prior knowledge should be given its due value, so that it can build mental structure, which will be effective in a pleasurable and effective learning.

The theory of meaningful learning is based on three categories: the first is that the content to be taught must have a logic that gives it meaning. The second is that the student needs to be willing to relate the material in a conscious and non-arbitrary way, that is, the new content to be learned should be relevant to his cognitive structure. And finally, the third, consists of that the learner must be motivated, consciously to learn significantly (NUNES, SILVEIRA, 2011). These three basic conditions, in which the logical question, the disposition and motivation of the learner stand out, are indispensable assumptions for learning to be hugely significant, it is the force that drives and makes positive results effective.

One point to be observed in the theory of significant learning is that it is not enough for the students to master the content and know how to interact with the existing knowledge. Two elements are fundamental in this teaching-learning process that are directly up to the teacher's own initiatives: the first is the choice and use of teaching material, followed by appropriate methodologies that can enhance and give meaning to the chosen material. This material must necessarily have significant potential for learning, since it will also be through it that the student will create possibilities of interaction with the existing knowledge, and from this relationship learning will result. The other element to consider - perhaps the most important - is that the student needs to be predisposed to want to learn, otherwise all the initiatives of the teacher and the entire educational context will not have the desired result.

In this process, Anastasiou opens a reflection in which the involvement of the subjects as a whole becomes fundamental:

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> [...] it is a teaching action which results in student learning, overcoming the simple saying of the content by the teacher, because it is known that in the traditional class, which ends in a simple exposure of topics, there are only guarantees of that exposure, and nothing can be said about the apprehension of the content by the student. It is in this overcoming of traditional exposure as the only way to explain the content that teaching strategies are inserted (ANASTASIOU, 2015, p. 20).

Significant learning finds space in higher education because it constitutes in this environment an important occasion for the development of theory that happens, firstly, from the understanding of what this new stage in the student's life requires, such as autonomy and precision regarding the acquisition of knowledge. Thus, it is necessary to interact with the new areas of knowledge that will be added to their learning, in order to interact with the content learned in the classroom and that are already directly part of their profession, even if they are still in the training process.

Critical and Reflective Meaningful Learning

The Meaningful Learning Theory is a type of learning that can be implemented in the teaching and development of learning in Basic Education and Higher Education, but it is not an absolute premise. The theory was designed for a certain context in which it could be concluded that meaningful learning occurs, given the various researches conducted in the field, however, the classical theory does not deal with all elements of learning, having the need to insert other factors that at some point of learning need to be enabled. In this way, we speak of the critical theory of significant learning as a re-election and reconstruction of what Ausubel did not deal with, not because he did not see the importance, but because of his training directed to cognition, to which he directed his research. This new elaboration called "critical meaningful learning" is not considered a new theory, it was woven based on Ausubel's theory, adding other elements that go beyond the cognitive dimension of the formative process, such as social, cultural, affective, and political dimensions.

According to Moreira (2011), this is a theoretical assumption that covers anthropological implications, because it contemplates elements of the individual himself and his competence. Thus, the goal of this more reflective perception is that learning directs the subject to a critical view of facts, knowing how to position himself in front of science, politics, and different social issues. This point of view brings value experiences to the subject because learning is not limited to the reproduction of conceptual aspects produced in the school or university environment, but it gives the subject the possibility to position himself critically in front of different types of knowledge. Criticality is an important aspect, the result of the interpretation of reality with its constant transformation, a condition inherent to the human species itself in a complex and changing society.

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When learning is critical it provides the perception of meaning also from people, not only in words. This means stating that: "meaningful learning requires the sharing of meanings, but also implies personal meanings" (MOREIRA, 2011, p. 174), that is, it starts from the individual dimension to the collective dimension and vice versa.

In short, when we talk about meaningful learning in all its composition, we talk about learning that has direct implication in the subject's life in a critical and reflective way. The learning that is directed to everything that is taught and learned, whether at school, college, or in everyday life, where all the elements of their life history are respected, giving the subject in its entirety, valuing all their abilities to perceive and understand the numerous processes that occur inside and outside the classroom. It extols the teaching-learning process based on the representation of meaningful contents, in which the cultural aspects are valued, linked to the effective learning, and acting in the social space.

The theory of meaningful learning entrusts the teacher, as a teaching professional, with a task considered fundamental to the dynamics of teaching and learning, which is the "action of teaching", that is, the immaterial work, or the mediation of knowledge and its mobilization with the learning subjects and their conditions for learning.

Methodology

To conduct this research, the qualitative approach was used, as it considers the subjective parts of the problem, whose focus turns to the subjective character of the analyzed object. This type of investigation sought to understand the behavior, attitudes, and opinions of the subjects studied, observing their individual characteristics and experiences, among other aspects. The research was conducted with a group of seven professors from a HEI in the Sertão Central Ceará, focused on the health area, particularly the Psychology course. The methodological procedure was the realization of semi-structured interviews, through online questionnaires of the Google Meet platform, covering the following items: characterization of the subjects; understanding of the professor about significant learning; importance of this learning in higher education; strategies in the perspective of this learning and its development; how active methodologies can stimulate significant learning; how to make the classroom a space that favors significant learning; the difficulties and challenges in this process, as well as the propositions about practices that favor significant learning.

To choose the research subjects, we considered the criterion of being professors who teach in the Psychology course. The participants are specialists, experts, and doctors, with academic background between ten and twenty-four years, and teaching experience between six

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and twenty years. They are professionals who teach in other courses at the institution, in the disciplines of applied psychology and others compatible with their training. In addition to teaching, they work as professionals in their specific areas according to their training, such as: clinical, education, traffic, health and work institutions, sports, among others.

The data analysis was supported by content analysis, based on Bardin (2016), aiming at the search for meanings or meanings of the data. It is configured as a communication analysis technique, using systematized and objective procedures of the messages, bringing the coding and categorization. It enabled the interpretations and inferences, articulated to the theoretical foundations, valuing the subjectivity and the integration of the messages and information of the participants subjects.

Discussion of the data: what teachers say

The research was not limited to analyzing the teachers' conduct as a practice, i.e., what they do in the classroom regarding significant learning, but their conception of this learning and its relationship with active methodologies. The dialogue with the professors aimed to analyze their understanding of meaningful learning and its mobilization for the development of this learning in higher education. At the beginning of the conversation, the professors[1] expressed their understanding about Meaningful Learning, as announced below.

> [...] I understand it as a theory within the framework of Cognitivism. A theory that relies on the cognitivism of the individual, rather than on outside techniques, to help them understand. As a theory, it is a bit Socratic, that is, it starts from the principle of Socrates: is knowledge? Or is it not? Transmitted from outside to inside, to awaken from inside to outside (basis of maieutic). (TEACHER 01).

> [AS is that which we can do indirectly. That which we cannot do without a theoretical knowledge [...] a learning that takes into consideration both a theoretical contribution and a practical issue. I imagine that it is worked this way. (TEACHER 03).

> [...] the concept refers to the theory of David Ausubel. It is related to cognitive issues involving teaching and learning. What I understand is its preponderance is necessary for any type of teaching, especially in the backlands context as it is ours, where we arrive with imported theories, most of the time we teach Freud, Vygotsky, Jung, North American social psychology, and there is a very great distance from the reality of the students [...]. (TEACHER 04).

We noticed the teachers' knowledge of the AS theory, by referring to the author David Ausubel, recognizing the importance of the theory for learning, with emphasis on the information that is valued in the student's daily life during his life trajectory. We also noticed

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[1] We adopted the following terminology for the identification of the teachers: Teacher 1, Teacher 2, Teacher 3, Teacher 4, Teacher 5, Teacher 6 and Teacher 7.

the presence of the cognitivist approach in the teachers' speeches and the relationship with the Socratic methodology, i.e., both refer to a knowledge that comes from a construction prior to higher education as the influence of new elements already learned with the new ones occurs, suggesting the interaction of prior knowledge with the re-elaborated knowledge. When considering the foundation of the theoretical framework, articulated in everyday school life, they emphasize how necessary it is to relate the theoretical contribution to practical issues, required in the student's academic career.

It is common to link the conception of active methodology with active learning. We are aware that this equation is not linear, that is, when the methodology is active, learning does not necessarily take place. There are several elements that interfere in this process to concretize this practice or to distance it, such as content-based teaching and learning, meeting, for example, the external evaluations, such as the National Student Performance Exam (ENADE); approximation of the student's context as a sine qua non condition for the process; and the valorization of specific situations experienced by the institution. Put another way:

> [...] The very need that higher education imposes on the teacher to have to teach some concepts because then there will be ENADE, and then we stay in the very content-based idea. Over time I was trying to get closer to a meaningful learning [...] the more I can get closer to the reality experienced by students the better the teaching environment in the classroom becomes (TEACHER 04).

We verified a tendency to delegate to methodologies the solution to all pedagogical issues, reaffirming the following assumptions: i) to be a good teacher it is necessary to master diversified techniques so that classes are interesting and motivating; ii) if the class is not working, it is enough to change the technique, so the student will learn; and, iii) the development of good techniques means improvement in the quality of classes and the course. (ANASTASIOU; ALVES, 2015).

In the understanding of teachers, it is necessary that all learning can be meaningful, because each subject is able to give its own meaning in what he or she has learned, including the fact of not liking the content, may have an implicit meaning. It is based on the understanding that teachers, together with students, seek and assign meaning to the content, since meaning is not ready, but needs to be built.

In the quest to develop meaningful learning in higher education, some elements should be prioritized in the formative intention so as to provide learning that is mobilizing, and that the student can be involved. To this end, as already mentioned, it is necessary to add some resources in this process, such as considering that the center of the educational process is learning through the interaction of the teacher and with the other elements that form and transform the action. In this sense Lacerda (2018) emphasizes:

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> [...] learning becomes meaningful when the teacher is able to interact with the subjects of the process, changing the vision based on teaching for one based on learning. It is not simply having a superficial interaction with the subjects of the learning process, but a change of attitude and conception (LACERDA, 2018, p. 133).

From the idea formulated by the teachers about the concept and conception of significant learning attributed, following the dialog with the teachers, they were asked about the importance of this learning in higher education. The answers turned to the understanding that:

> [...] this kind of learning in higher education makes a total difference. For example, in my classes what I value is that students have a meaningful learning. I work in the area of educational psychology, so for me it makes a lot of sense. (TEACHER 05).

> [I think it is important to use this process of revisiting acquired knowledge to link it to knowledge that will be acquired later (TEACHER 01).

> [...] What significant learning can bring fundamental is the autonomy of the student in the interpretation of the world, of his daily life (TEACHER 04).

The big issue assigned in the teachers' speeches turned to the appreciation of previously acquired knowledge, that from this reality it becomes possible to re-signify the knowledge they bring and, especially, the need for students to transform this new information, otherwise, they become repeaters of a transmission, repeaters only of external knowledge without producing any meaning, in which they are limited to memorize, and do not go through the learning process that is expected in higher education.

Referring to this approach Anastasiou and Alves (2015), add that:

> [...] when this occurs, the syncretic, chaotic, and unelaborated vision that the student initially brought can be recovered and reworked into a qualitatively superior synthesis through analysis via dialectical methodology" (2015, p. 21).

In view of this, it is believed that an appropriation of knowledge can occur as it is re-elaborated from the systematized contents, arising from the life experience of the apprehending subject.

In this same perspective, other professors add the relevance of meaningful learning in higher education as a justification for also training other professionals who will, in the future, assume a profession. For this, the theoretical basis is necessary, and they also highlight that if the students knew how to make good use of the undergraduate period, giving meaning to what they are learning, for a committed professional performance, because they experienced with "rigor" the contents that were learned in the classroom.

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> [...] I imagine that, when we are in higher education, it is a professionalizing education, dependent on the student following an academic or practical, technical vein, it is an education that will give a title, a condition for you to actually go out doing what you learned, then within this conception of a meaning of things, it would be a need for practice, a need to be putting into practice, whatever it is, all the knowledge learned [...]. (TEACHER 03).

> [...] I see Higher Education often guided by a "banking" logic, of pure transmission of knowledge, without considering its significant aspect. I believe that any learning in the strict sense needs to consider the lived world of the subjects, their different experiences, languages, etc. Otherwise, we may be throwing pearls to the wind, without any impact to the subjects and to society (TEACHER 07).

It is, then, starting from the understanding of the meanings of each re-elaborated content that constitutes the need for practice, in which the student will transform the concepts into professional deliberations. Starting from the assumption that higher education is a professionalizing education, according to the teachers, for them, this training must be differentiated in the sense of forming people who have an already reflected capacity for intervention, that is, students who leave common sense, "plastered" visions to then critically perceive the social context, thus exercising their autonomy in the production and development of knowledge, producing their own concepts.

These ideas concretely constitute the teachers' thoughts about the concept and practice of what meaningful learning in higher education really is, as well as its importance. To illustrate and give meaning to meaningful and active learning, Libâneo (2011) adds:

> Exclusively verbalist teaching, the mere transmission of information, learning understood solely as the accumulation of knowledge, no longer subsists. This does not mean abandoning systematized knowledge of the subject or the exposition of a subject. What is affirmed is that the teacher mediates the active relationship of the student with the subject, including the contents of his or her own discipline [...] (LIBÂNEO, 2011, p. 30).

In this sense, in higher education, learning is significant and transformative, because it is able to provide, from the teaching and learning relationship, the autonomy and transformation of the student.

We saw that the teachers' thinking does not follow literally Ausubel's proposal regarding the concept of significant learning, but they do not ignore it. Taking this learning into account from the perspective of higher education, the teachers state that it should be critical, reflective, and active, that is, that students should obtain new knowledge in a meaningful way, however,

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it is necessary to acquire it in order to make sense of it, and this is possible through criticism, which leads to reflection and change of attitude.

In this sense, regarding the strategies that could be worked on by teachers in higher education from a Meaningful Learning perspective, we found that the dynamics are part of the teaching and learning practices and some teachers have shown adeptness and interest in developing them. However, according to the reports, they agree that it is necessary to manage them so that they are developed at the right time and in the right subject; this depends on classroom management and interaction with the class. The teachers mentioned their experiences and those closest to their context:

> The first strategy would be teamwork. Another strategy is to work with case studies, in which the student no longer does that exercise that asks what this is, or that, but works that propose strategies of client case, how would you do it, what method would you use. (TEACHER 03).
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> I use group activities, activities that stimulate writing, synthesis activities, so that in that synthesis I can understand what they are thinking about what I said and what was said in the class also helps me to understand how the student is following and constructing meaning about the classes, the contents.
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> We start by evaluating some strategies, getting them right and discarding others that don't work. When I go to teach the dialectical relationship between activity and consciousness I use, for example, a psychological test developed by Vygotsky, which is a test for concept formation in which the students do the test in the classroom, they manipulate objects and try to find the concept that is implicit in that manipulation and objects and from that I try to show with examples that the activity promotes consciousness [...]. I also try to be quiet for a while and let the students speak, let me manifest myself, with the examples that they bring (TEACHER 04).

The speech of the teacher 04 portrays and points to a constructive reality in which teachers emphasize that they practice some strategies and discard others that do not work and, finally, prioritize those that have greater adherence with the content and the class. Thus, it is possible to see that certain initiatives prove that the choice of strategy contributes to the student's learning and skill development.

The teachers also clearly state in their statements that the use of dynamics is not always compatible with the way the subject is taught. Another point to be highlighted is that not all teachers find it easy to use them, but in their own reports they mention that, in their own way and manner, they make the students learn, get results, and, in fact, this is a strategy they use. Another issue to be mentioned in this relationship is exactly the opposite: the teachers who like to use dynamics say that, many times, due to the students' lack of understanding, they stop using them because they think they are just another joke to "wind up the class". In this context, Sacristán (2013) highlights the following:

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> Every pedagogical experience, every didactic action supposes the purpose of mediation, correction, and stimulation of the experience of encounter between the subject that performs a series of functions on the subject that holds a content, or develops various capabilities, so that they are transformed and enriched such functions and capabilities that, in general, we call learning. For this encounter to be fruitful, the content must be meaningful, relevant, and challenging, characteristics that are more likely to be present if the encounter has also been adequately mediated and if it is

The teaching and learning strategies must mediate the knowledge for its appropriation. Each student learns differently. However, it is necessary and also pedagogical to understand that teaching strategies in view of the development of learning should not be based on games or dynamics to make the class fun or funny, they need to achieve the goal, which is learning.

The pedagogical practices most often mentioned by teachers were: the use of questioning, based on the students' common reality; theoretical exposition, when the subject is more of a technical nature; examples of experiences; group experiences; conversations; dialogues; team work; presentation of seminars; case studies; journalistic themes; activities that promote awareness; use of applications; synthesis activities; work with films, photographs, podcasts, and poems. In this sense, it was noticed that the answers were directed towards the attempt to link learning to the students' reality, with the purpose of reaching the subjects of learning and ensuring meaning to the contents worked on. However, they recognize that the dynamics are still used, even if timidly, or almost not at all. They admit that they do not use them often, admitting that it depends on the moment or on the subject.

In view of the above, it was possible to perceive the teachers' understanding of strategy as synonymous with dynamics. It is curious to note that at no time during the interview was the word dynamics mentioned by the researcher; however, it appears in the text based on what the teachers themselves said.

Dynamics, as a teaching strategy, can be defined as the art of exploring the means and favorable conditions in order to achieve specific goals. Dynamics is related to movement and forces, to the organism in activity (ANASTASIOU; ALVES, 2015). In psychology, they are exercises and methods that when applied make it possible to improve the organization and progress of the group. It is believed that the last definition is the one in which teachers conditioned their answers, because it is a definition more familiar to their training, in psychology.

The teachers also explained how they develop strategies for significant learning, paying attention to creativity and their own initiatives:

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> [...] I take films, and the attempt is to make students produce and create a company, that they can find a social problem and, from that, think of a strategy, selection recruitment, quality, and life. (TEACHER 04).

> [...] through readings, texts, applications, videos, debates in class, discussions, group work, games - separate the class into teams and each one asks a question to the other team. I also ask at the end of the class for them to write a paragraph with a summary, everything that was learned in class, and then I read and analyze that will serve to start the next class. (TEACHER 05).

Most of the teachers mentioned the use of audiovisual resources, always warning about the use of these tools when they are necessary, so as not to seem something mandatory and mechanical, with pedagogical care to work the techniques.

Other strategies that were mentioned are interviews, conversations with professionals in the same area to get to know the experience of other professionals and not just the teacher of the subject. The presentation of seminars was also mentioned, a quite common practice in higher education, in which a team of student's studies and presents the contents pertinent to the discipline and may also be the results of integrative practices.

The study on the presentation of films related to the subject to be worked on was also pointed out, provoking the discussion of social problems, and from that, the elaboration of strategies related to work and to the search for a better quality of life, as expressed by the teachers as follows.

> I have types of classrooms that fit into the presentation of seminars, integrative practices, and supervised internships, so they are still what I experience. (TEACHER 03).

> With the course work I ask them to look for a professional who works in the same area, talk, do interviews that are allied to the theory, and they report that it is interesting, they can bring not only my view, but other professionals, which becomes closer to them, a more experiential content, I have taken practical examples into the classroom. (TEACHER 02).

There are teachers who prefer summaries of the content worked in class, or of past classes, which are then read and discussed. According to the teacher, this resource is used to start the next class, that is, to review what was previously discussed with the purpose of better appropriating the content. Others that design their strategies and develop them according to the syllabus, determined by the menu, after a well-designed plan, following the purposes of each subject, as a way to take advantage of the production of significant learning.

We understand, then, that creating, elaborating, and especially developing teaching and learning strategies in higher education requires initiatives from teachers that often make the process more difficult. Among these obstacles is the traditional pedagogical practice coming from their entire formative trajectory.

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Next, the dialog with the professors narrated their difficulties and challenges encountered in Higher Education, when developing Meaningful Learning. Most of the teachers attributed as the greatest difficulty the discrepancy of a learning model coming from their formative trajectory, which does not prepare the student sufficiently for other stages, thus making the great difficulty and challenge of working in higher education with remnants of this gap.

> The big problem I find with students in higher education is that they come from a model of education that does not help at this stage. Education nowadays has trained specialists and not intellectuals. Universities should form intellectuals and not specialists (TEACHER 01).

The teacher shows his difficulty with this lack of students arriving at the university, because in a certain way, a generation of selective students ends up developing, that is, students who believe that only a predetermined model of information is useful. And according to his way of interpreting it, this usefulness is not the most appropriate, because "education is not a utility in itself, it produces dignity". (DOCENT 01).

Simultaneously to the question indicated by Teacher 01, other teachers exemplify that in the reading of texts a lot of time is spent reading, repeating the concept of what the student should already know and are forced to review again in class, because many do not read at home, for lack of habit, or because they cannot understand and interpret what they read. This difficulty becomes more evident when, during the course, the first evaluation takes place. By college policy, this evaluation must be in the style of the ENADE exams, and generally the students do not do well, because they have difficulties interpreting and reading, or to put it another way,

> [...] the students have a series of difficulties in understanding and interpretation, so they do not read the text that was passed, 20% can read. Most of them work and study and can't. (TEACHER 05).

We perceive fragments of the model that is often presented in the formative trajectory of basic education through the linear exposure of basic and formal concepts that at times were not encouraged to think, reflect, elaborate ideas and rework critical knowledge. In this sense, there is a tendency to "blame" the lack of involvement in learning on the subject itself, as stated by Professor 04:

> First of all, it is the students' negligence. Not caring about what you are studying, not getting into the mood. Second, the product of this negligence is the lack of reading, where one needs to deepen concepts and wastes a lot of time repeating the explanation of a concept that the student could have already studied in the text. Finally, I think that nowadays the size of the class is common. With a large class you can't get closer to the reality of the people. When the class is too big the teacher gets tired, bored, and the class becomes a lecture.

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In addition to the difficulties that come with entering higher education, many neglect the pursuit of knowledge. It was also mentioned without restriction of what would be an outburst "the lack of commitment, carelessness on the part of students". In a way, one sees the concern of some students strictly with grades rather than with their own learning, as expressed below:

> [...] I don't know if it is a vent or a difficulty in itself. I see a lack of commitment from students, even if it is not general, of not being committed to reading, to searching, to proposing. I think the educational system in general does not help in this, I see students more concerned with the grades they are going to get, this for me is secondary because the grade is within the educational system in general because it needs to be, but for me, the most important thing, what should be experienced more was how much I was able to follow that content. (TEACHER 02).

We notice that there is no concern with error as a necessary device for learning, focusing on the insistent request of students to increase their grades. When the professor reports that his greatest difficulty is the "students' lack of commitment", he justifies that, as a counterpoint to this, the institution offers all the favorable support to teach his subjects, that is, access to didactic materials that contribute to the teaching work. He also adds that, according to the research done by the monitors, the students themselves recognize this reality, so there is no apparent reason for such a lack of commitment.

Focusing on the importance of commitment to effective learning, we understand the intrinsic relationship between meaningful learning and active methodologies. In this sense, we also asked the teachers how active methodologies can stimulate meaningful learning. All teachers were emphatic in attributing great importance to active methodologies in the teaching learning process and recognize their value in higher education. It is observed that its relevance consists of a teaching-learning process contextualized with the coherence of learning that is not limited to learning only in a more interactive way, but with possibilities that are created in face of new educational scenarios, as they explain:

> [...] I see active methodologies as the best way, as they encourage participation and break with the "taboos" of "traditional" teaching. The new methods, or active methodologies, democratize knowledge, create new learning possibilities, and definitely break with "banking" teaching. The stimulus comes, above all, from doing and learning together, from a new way of understanding teaching-learning. (TEACHER 07).

> [...] the active methodologies stimulate a lot. I understand that when you apply an active methodology you move more with the triad of knowledge. (TEACHER 06).

> [I assume that I am not very familiar with it, but I also notice that there are students who do not like it. I have heard students commenting that there are teachers who teach in this system and there are students who don't like it. Traditionalism is still in the students' heads. The ideal would be to mix it a little (TEACHER 02)

The teachers recognize that the classes should not be crystallized and that the use of new forms is necessary, but they assume that few classes are able to make use of methodologies, even the best-known ones.

They also report that there are students who do not like it, because they are used to traditionalism, and that there is a suggestion that the methodologies be mixed. They also highlight, as one of the relevant points of the active methodologies, the fact that they positively change the teaching-learning relationship in which the student becomes closer to the teacher in practice, and that this same student will feel part of the educational process, being more participatory. We point out, however, the care not to delegate to active methodologies all the expectations for the good development of pedagogical activities in higher education, being necessary a greater criticality and reflexivity about them.

In the dialog, the teachers highlight the use of active methodologies because it is an excellent resource that can be worked on in the classroom because it favors the use of various means to make students more participatory. They do not learn in a single way, so these methodologies help provide different ways, which are not only the conventional ones, although they recognize that this would be an easier way:

> Many times, the students are not used to it and present a lot of resistance, but in the end, they thank us, saying "that was great", "I learned a lot", "how nice", "at the beginning I was insecure, but the experience was very interesting", so even so, it is still valid.

They also see active methodologies as the best way to break the "taboos" of traditional teaching. They focus on a way to democratize knowledge, creating new learning possibilities, in order to overcome the banking model, with stimuli to learn together and not as a way of teaching and learning structured in the passing of information, so that it is increasingly evident to conceive that: "traditional methods, which privilege the transmission of information by teachers, made sense when access to information was difficult". (MORÁN, 2013, p. 16).

Therefore, teachers recognize the importance of the use of active methodologies in higher education, however, they are unanimous in stressing that the teacher must know how to work the resource at the exact occasion, otherwise, it ends up harming the theme, the subject to be exposed, because there are contents that are essentially argumentative and no other methodology than the expository and theoretical class is convenient. Active methodologies are important within a context, for a given content, however, they are not absolute, that is, they should not be applied in all contexts.

After discussing the importance of active methodologies and how teachers stimulate learning, we asked the teachers how to make the classroom a space that favors meaningful learning. The purpose of this question was to show how the experiences provided in the

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classroom can generate knowledge; however, they are the privileged geographical place for the construction of dialogue and criticism. In this regard, the teachers' point of view follows:

> [...] I understand that the classroom is a meeting space, it is not just an audience, with that anxiety of commitment to content, it is an encounter. (TEACHER 06).

> [...] as a space for joint learning, democratization of knowledge and personal and social growth. (TEACHER 07).

> [I bring Freire's concept a lot: a circle of culture. I like to understand the classroom as a large circle of culture (TEACHER 05).

The teachers see the classroom as a space for joint, democratic learning, where relationships are built with each other for personal and social growth. They are meeting spaces, where people bring their backgrounds, their emotions, their affections. It is an environment of conversation and exchange of knowledge. A great circle of culture, where people learn what they experience in their daily lives, where learning is built on things that are relevant to the future and to the profession. It is, therefore, a meaningful space for the student. While recognizing the classroom as the pleasure of coexistence and the relationships that take place between student and teacher, they mention some factors that contradict this view, referring to the large number of students in the classroom.

> When the class is large, you end up dialoguing with one or the other. People's semantic knowledge is different, that is, each student understands differently. Imagine a classroom with more than eighty students who come from different realities, how are they going to receive those contents that will give meaning to their lives if I, as a teacher, don't know what it means to them? (TEACHER 01).

Teachers cite the large number of students, the large classrooms, as the great villain of learning and communication among them. They explain that this reality becomes difficult, because it initially compromises the relationships in the classroom, making it difficult to manage for a humanized relationship and especially a direct dialogue with the student. The experience of this reality that is quite common, unfortunately, makes it possible to start and end the year without the teacher even knowing who his students are and their names.

Thinking about the physical space of the classroom means recognizing that there is a significant relationship between learning and this space. The classroom is another great organizational challenge; besides the physical issue, it comprises the development of the pedagogical routine, which consists of a better arrangement, from the environment to the most favorable form of content management. In this understanding, Saul and Giovedi (2015) warn,

> [...] the classroom is fundamentally the place where the confrontation of the educators' and students' worldviews takes place. That is where the construction of meaningful knowledge takes place. Creating conditions for this to occur is the task of curriculum concept teachers. (SAUL, GIOVEDI, 2015, p. 141).

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However, if the higher education teachers are willing to do all the suggestions given by them, in order to modify the way, they teach their classes, having new proportional methodologies, reconstructing the significant contents, strengthening the relationship with the class, and positioning themselves as mediators of the pedagogical practice.

Final notes

Based on what was outlined in the text, the data indicated that the understanding of teachers in relation to the understanding of significant learning make reference to the theory of David Ausubel, in which they recognize the importance of the interaction of prior knowledge with the knowledge re-elaborated in the daily life of the classroom in higher education, however, learning is significant when it presents the results of what the student learned relating it to the knowledge of the profession he will assume. Learning is considered significant and critical when it expresses a reflected practice, capable of modifying the student's perception in relation to the systematized and reconstructed knowledge.

In this sense, learning in higher education brings a configuration of appropriation of abilities and technical, human, and political competencies related to the profession the student will exercise. When considering higher education as a "professionalizing" education, the teachers understand that this training must be differentiated in the sense that it forms other people capable of perceiving reality and exercising their autonomy, especially in the production and development of critical knowledge. When judging the use of methodologies that make learning meaningful, they also emphasized that the use of some strategies they consider relevant to teaching and learning is essential, as they recognize that they are fundamental to this context, in which each student has a differentiated, intrinsic way of learning.

For the professors, the way in which meaningful learning is developed in higher education requires attention and highlights the use of strategies as instruments that can give meaning to teaching and learning when worked in articulation with the whole pedagogical process. Although they recognize the importance of these strategies in giving meaning to learning, they also identify limitations to the development of some of these strategies, which range from a lack of skill with them, to the lack of favorability between the reality of the discipline itself and specific strategies.

In view of the above, it was found that the main difficulties pointed out by teachers in higher education to develop meaningful learning come from remnants of the students' formative trajectory, which was largely marked by more passivity and linear exposures, that is, by methodologies that did not provide their intellectual autonomy, reverberating in the

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compromising of the teaching learning process in higher education. Teachers recognize the value of active methodologies for learning, by stimulating a more integrated learning, in which the student becomes closer to the teacher, as he/she feels participatory within the educational process. However, they admit that few classes are able to work with these methodologies, for lack of skills and knowledge, for a given content, taking care that these are not assumed in a "redemptive" way, but experienced in the necessary contexts.

We verified that teachers understand that the geographic space of the classroom also contributes to the pedagogical management of the content when this space enables the mobilization of knowledge. They see the knowledge production space in higher education as a place where learning can be built together, forming relationships with each other for personal and social growth. It is the meeting environment, where people bring their origins, cultures, emotions, and affections, thus forming a great learning circle.

Thus, we can then conclude that the conception and practice of teachers regarding significant learning in higher education refers to the understanding of learning as a result of a complex process of development represented by several agents responsible for the learning subjects. Thus, it is relevant to reflect on how to encourage the student to develop it, since the more the learning is significant, the more the student will appropriate it. Since, for learning to be significant, it requires active participation from the student, which involves mobilizing strategies of knowledge, since it is new information that is transformed into new content learned, resulting in a transformative learning that promotes student autonomy.

The reflections pointed out here made it possible to get to know the daily experiences of higher education teachers in a Psychology course and the challenges that accompany them in order to make learning happen. The teaching profession is characterized by presenting several complexities, perceived from the human condition to the technical competencies, so that it was possible to notice, in synthesis, in the dialog with the teachers, how much this complexity is present in their perceptions and practices, mainly by the objective and subjective conditions for the mobilization of teaching and learning. One of these conceptions comes from the training base of each teacher, that is, the way each one teaches or perceives the teaching-learning process stems from a practice learned in the daily routine of the classroom, because their training was not specific for teaching, and in this context, there are gaps regarding the development of methodologies that could help in the teaching practice of higher education. Thus, we conclude that the research brings a necessary field of debates about learning and teaching in higher education.

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