ACTIVE LEARNING METHODS: A NECESSARY APPLICATION

Ana Paula da Silva, Denilson de Maria Nunes, Edjaneide Silva Freitas, Maria Leane de Lima, Nayara Nunes de Oliveira and Wescley Alysson Gomes Farias.

ABSTRACT

In the classroom, the use of methods appropriate to the situation can imply having advantages or disadvantages to the daily pedagogical work, so if the method is worked correctly, it can provide the teacher with satisfactory results in terms of teaching and learning, as long as he himself is prepared and willing to do it properly. This article aims to analyze and demonstrate the use of the methodological process as a significant tool of the teaching-learning process in education and pedagogical practice, where the teacher develops the work in the classroom in the various areas of knowledge and disciplines, The need for a junction and analysis of these tools, therefore, It is observed that there is a difference in the use of the methods in different areas. Active Methodologies are based on ways of developing the learning process, modeling themselves in simulated or real experiences, providing a greater visualization of problem-solving conditions in social practice in the most diverse contexts. The research was carried out with 12 teachers from various levels of Brazilian public education, from elementary school II, high school and college, from different areas, and from several different municipalities and states; In the possibility that was obtained to interview education professionals from the most diverse levels, we noticed the real needs for greater knowledge, expansion, and deepening of active methods for their professionals, the lack of knowledge is also generated by the lack of interest and information itself, an immediate need for complementary pedagogical training.

Keywords: Active methods, Classroom, Education.

INTRODUCTION

Teaching methods are important pedagogical tools, as well as contents, which are currently constantly being made and remade, therefore, included in the teaching-learning process, becoming a point of intermediation between the subject and the content, a connecting interface that enables a better understanding of the areas of knowledge involved in this process. The importance of this theme has been undergoing permanent transformations, which in turn raises questions in the learning process, where it has important aspects that accompany the change in posture towards traditional methods. The active methodologies of the teaching-learning process analyze, however, they do not affirm a rigidity of this situation, it is not something uniform, both from the point of view of theorists

who talk about methodological uses, as well as its use in the various fields of knowledge, thus, different models, strategies and uses for its operationalization are verified, constituting alternatives for the teaching-learning process. with challenges, at the different levels of education. In the classroom, the use of methods appropriate to the situation can imply having advantages or disadvantages to the daily pedagogical work, so if the method is worked correctly, it can provide the teacher with satisfactory results in terms of teaching and learning, as long as he is prepared and willing to do it properly. The increase in concern with the method awakens in general an opening of possibilities that were not available before, or at least were rigid or configured as cake recipes, formulations that are taken literally in written form without being able to make changes due to the need of the occasion, as well as the emergence of active methodologies, which, in turn, the needs of the student, his reality, his previous knowledge, such as the contents, are made and shown to be more flexible, thus gaining a dialectical character that in turn becomes a constant movement, which becomes for the student a decisive moment in the act of learning, making a closer approximation of the experience and his daily life, influencing the moral formation and values of the individual. As an example of the applicability of this dialectical format, in one of the disciplines of basic education, there are denominations of closed or open methods, thus making the teaching methods always with situations of doubt, adapting to the various pedagogical situations making a closer dialogue with the reality of teaching, providing the student with more criticality and autonomy of his learning, implicitly inserting himself as an effective member in this process, no longer being just a supporting player in the educational scenario. Having a vision in interdisciplinary action about reality allows us to understand the relationship between a whole and the parts that constitute it. Since then, the concept of interdisciplinarity has been and has been discussed in different scientific spheres and more vehemently in education. Undoubtedly, both the philosophical formulations of the concept itself, as well as that of historical and dialectical materialism as well as the pedagogical propositions, hence the need for a deeper construction in a more anthropological and philosophical view of what interdisciplinarity is and its functions in the educational environment, of its diversity of functionality and applicability, where we can also use this tool in pedagogical relations. (THIESEN, 2008; SANARE, 2016).

This article aims to analyze and demonstrate the use of the methodological process as a significant tool of the teaching-learning process in basic education and in pedagogical practice, where the teacher develops the work in the classroom in the various areas of knowledge and disciplines, and to question the differences of these applicabilities of the teaching method according to each area, and to verify the needs of interdisciplinarity

among these active methods. Showing how much the method can help and facilitate students in their knowledge, evolution and learning of the contents that will be proposed to them during the school period. Therefore, more specifically, it is expected to verify whether teachers use active methodological techniques during their work; identify them and discover the importance that teachers do, being able to use interdisciplinarity as an indispensable method for education. The method and the interdisciplinarity of this method itself can become a problem if it is not applied correctly, the method is not just a simple use in learning, but a fundamental resource in the entire educational process, so that it can be applied the educator must and needs to study the active and most effective methods to work with the method and content itself in the classroom, and how to constantly reevaluate your practice, modifying yourself, adapting among other possibilities. The need for a junction and analysis of these tools, therefore, it is observed that there is a difference in the use of methods in different areas, a specific characterization of each area, which in turn this differentiation at times generates confusion to the student, wanting teachers to apply the method of another professional which caused him a better understanding, This article does not apply to the standardization of methods, but to a greater structuring of active methods and their expansion, a greater access by teachers and students.

ACTIVE METHODOLOGIES AND EDUCATION

There is a great diversity of active teaching-learning methodologies, with reports of teachers' experiences and scientific articles the contribution and efficiency of the use of these methodologies is verified. At the same time, it is known that there is no consensus among those mentioned about the ways of operationalizing these methodologies, where they themselves form a theoretical and critical, but not absolute, database. It is understood that all alternatives of active methodologies place students in front of problems and/or challenges that mobilize their intellectual potential, while studying to understand and/or overcome them7. There are different possibilities for operationalizing active methodologies. The category of active methodologies is understood as a field of application of different teaching-learning processes already well outlined, such as PBL, the Charles de Marguerez Arch, TBL, the culture circle, among others. The teacher can create different strategies to obtain the maximum benefits with active methodologies for the training of their students. The sharing of these strategies is of great interest to health, education, administration professionals, among others, in order to contribute to reflections and visualization of pedagogical potentialities. The methodology called culture circle, defended by Freire, was not made explicit in any of the articles, as well as the TBL.

> In Freinet's (1977) pedagogical proposals, the teacher is responsible for the methodological issue and, according to him, will achieve good results even without special preparation as long as he is intuitive, sensitive, balanced and has mastery and authority. (Steuck, 2013 APUD FREINET 1977).

Freineit in his speech already introduced the ways of how to introduce and conduct active methodologies within the school context, making his pedagogical proposal go through the moment of knowledge transfer, at the moment of learning, and there that this can be used elements of greater facilitation of this learning.

Active Methodologies are based on ways of developing the learning process, modeling themselves in simulated or real experiences, providing a greater visualization of problem-solving conditions in social practice in the most diverse contexts. With the potential to open eyes and activate curiosity, showing a greater motivation for autonomous processes, including greater adequacy and visualization of the student, with a strengthening of their own perception, believing in their real action. It is very important for there to be a greater understanding of the intentionality of this process, the assimilation of the teacher's work, the real need to transmit the content.

PRINCIPLES OF ACTIVE METHODOLOGIES

The principles that form the basis of active methodologies are based on guiding elements which, used in a coordinated way, help the teacher's work. However, it must be noted that it is necessary for the student to be aware that he is the focus of learning. And this focus brings together some important aspects and they are: autonomy, reflection on the challenges posed by the teacher himself, insertion and participation in the problematizations, teamwork and adapting to the needs and implications of the new teaching formats.

> It is up to the teacher to be a mediator of learning in this process. Thus, it should be noted that the last decades have been marked by social changes, which has caused the educational model of teaching to be rethought (JESUS, 2020, p. 49).

Especially with the emergence of new technologies, students have more intimacy with active technological means, they are no longer restricted to the same place, they are always connected and immersed in a significant amount of information that is continuously transformed, where a large part of it is related to the way they are in the world.

Going in the opposite direction of the students themselves, most teachers are reluctant to insert themselves in this technological environment of the students, soon opening a pedagogical vacuum in the learning process. This scenario brought a necessary social change, brought the discussion of the role of the teacher and the student in the

learning process, placing students in the main focus of teaching-learning, inverting the roles of traditional education, of the contents that are presented to them. Thus, the focus of active methodologies is defined, that is, it is intended to stimulate student learning, placing them at the center of the process, as opposed to the position of mere spectator.

In summary, active methodologies for students to assume the role of the main element of learning and the teacher as a facilitator mediator of this process. In which it is necessary for the student to do various mental actions, such as: analysis, reading, comparison, observation, imagination, acquisition and organization of information, elaboration and reelaboration and approval of hypotheses, classification, interpretation, criticism, search for assumptions, construction of syntheses and application of facts and principles to new situations, planning of projects and research, analysis and decision making.

The student's autonomy is very important in this method format, thus contradicting the traditional methods, which in turn, focus only on the content, on just passing on the content at any cost, without much concern for how to facilitate their absolution, denying the construction of their own knowledge. Teachers, on the other hand, are not used to stimulating the autonomy of students, but in the active methodology it becomes necessary to do so.

According to (Bacich and Moran 2018), Active Methodologies for Innovative Education signals the possibility of changing classes into more present expressive learning experiences for students of digital culture, where expectations in relation to education, learning and their training are differentiated from previous generations, and teachers need to understand and change their own concepts in relation to this relationship with themselves and the adaptation of their profession. Today's students, inserted in formal educational systems, require from their teachers skills, didactic and methodological skills, for certain skills that they have not been and are not being prepared in the correct pedagogical way, with the sudden social changes (pandemic) there is a real need to reinvent themselves. Thus, it is essential that a fair and liberating educational process can offer conditions for full learning in its diversity in diverse contexts even with uncertainties, adapting and developing multiple literacies and languages, questioning information, reinforcing autonomy to solve complex problems, in coexistence with diversity, in work groups, in the sharing of activities in technological networks. Due to the need for teacher training, which must be based on the teaching activity, where it is created, reflected, critical, shared, it coexists with the coexistence with differences, using technological media, such as language and culture, the curriculum, and methodologies in pedagogical relations.

INTERDISCIPLINARITY, AREAS OF KNOWLEDGE AND THE NEED FOR THEIR APPLICATIONS WITH ACTIVE METHODOLOGIES

> We learn from the moment we are born from concrete situations, which little by little we manage to expand and generalize (inductive process), and we also learn from ideas or theories to test them later in the concrete (deductive process), "[...] not only to adapt to reality, but, above all, to transform, to intervene in it, recreating it" (FREIRE, 1996, p. 28).

According to (MORAN 2018), What we analyze is the importance of learning through transmission and communication becomes increasingly common and significantly present nowadays and this experimentation is more relevant for a broader and deeper understanding. Over the last few years, there has been an emphasis on combining active methodologies in hybrid contexts, which unite the advantages of active methodologies with the needs of the various areas. The new (hybrid) models seek to compensate experimentation with deduction, inverting the traditional order: we experiment, understand the theory and return to reality (induction-deduction, with teacher support).

The latest research according to (Moran 2018), from neuroscience proves that the learning process is unique for each human being, so teaching is different, and this difference in different areas, and it is at the time of learning that each person learns what is most relevant and what makes sense to them, which generates cognitive and emotional connections, but they differ in the methods of learning. We learn what catches our attention, what finds intimate resonance, what is close to the contexts of the stages of development in which we find ourselves. Dewey (1950), Freire (1996), Ausubel et al. (1980), Rogers (1973), Vygotsky (1998) and Bruner (1976), among many others and in a different way, have shown how each person (child or adult) actively learns, from the context in which he is inserted, from what is expressive and significant with relevance, and close to the level of skills he has. All these authors also question the school model of uniform transmission and evaluation of information for all students. In a broad sense, all learning is active to some degree, because it requires different forms of internal and external movement from the learner and the teacher.

Experimentation, design and maker learning experiences are current expressions of active, shared, personalized learning. The active word must always be adjunct to learning, for the process to become visible, the skills necessary for each area of knowledge must be governed by the needs of these areas, learning from each specificity, and when they become processes of constant research, questioning, creation, experimentation, reflection and growing sharing, in broader areas of knowledge and at increasingly deeper levels.

> Active methodologies are teaching strategies focused on the effective participation of students in the construction of the learning process, in a flexible, interconnected and hybrid way. Active methodologies, in a connected and digital world, are expressed through hybrid teaching models, with many possible combinations. The combination of active methodologies with flexible and hybrid models brings important contributions to the design of current solutions for today's learners (Moran 2018, p. 40).

Formal school learning is an effective strategy for the variation and experimentation of the most diverse types and elements of the active methodology, it is built in a complex and balanced process, in which each student walks and chooses his path, in which the student expands his learning through different forms of involvement, interaction and sharing of knowledge, skills and activities of individual and collective production and in different situations, at different levels of teacher supervision; which is learned with the guidance, facilitation and mediation of teachers based on various fields of knowledge.

According to (Jesus 2020), The technique of operative groups begins to be performed by Pichon-Rivière, the psychiatrist, who experimented through an experiment in the hospital he worked in Las Mercedes, in Buenos Aires, which at the time was going on strike in the health area, which in turn made it difficult to treat them, so Riviere, proposes a differentiated situation, where the "less committed, more stable" patients helped "the more committed, less stable, there was a good result where both liked and got along with each other, with an exchange of positions and places, resulting in better care for patients with mental illnesses with regard to medication and care in general. Learning is a continuous process, which requires communication and interaction, where these elements are inseparable, as we necessarily learn from each other. The operative group technique focuses on tasks with groups, and can be used in non-educational areas, therefore, the need to promote the learning process for those involved. A meaning of learning through investigation and openness to new work attitudes. Due to this important aspect, the record of innovative actions that the teaching method makes the difference in the learning process of a directed, significant critical analysis and the social protagonism manifested in the propositions seriously grounded by students and graduates.

> The need for interdisciplinarity in the production and socialization of knowledge in the educational field has been discussed by several authors, especially by those who research curricular theories and pedagogical epistemologies. In general, the literature on this theme shows that there is at least one consensual position regarding the meaning and purpose of interdisciplinarity: it seeks to respond to the need to overcome the fragmented view in the processes of production and socialization of knowledge. THIESEN, 2008 p. 547.

Interdisciplinarity, in this context, is brought in the need to carry out an exchange of experiences between areas and methods, based on the general principles of active

methods, and with a theoretical-methodological focus to a need verified mainly in the fields of science and education, this interaction of overcoming the limits imposed by traditionalist approaches, as opposed to this, active methods present us with a greater fragmentation and the character of specialization of knowledge. Interdisciplinarity is a contemporary movement that arises from the perspective of the integration of the sciences of dialogue between areas of knowledge and educational trends, whose roots are in empiricism.

METHODOLOGICAL PROCEDURES

The present study is a field research, which was elaborated from a questionnaire that was applied to teachers from various levels of education. Regarding its nature, a qualitative and exploratory research was developed because it allows the presentation of the results of the questionnaire on the applied study.

Field research offers greater contact with the target audience, which are educators, to obtain the results of analysis of knowledge and experiences of active methods, and this type of research is based on the observation of facts as they occur in their reality.

TARGET PUBLIC

The research was carried out with 12 teachers from the various levels of Brazilian public education, in elementary school, high school and college, from different areas, and from several different municipalities and states, the educational establishments of have a work philosophy that is directed to offer quality education, involving the school or academic community, respecting differences and valuing ethics.

The research was directed to teachers due to their daily work with teaching and learning methods.

DATA COLLECTION

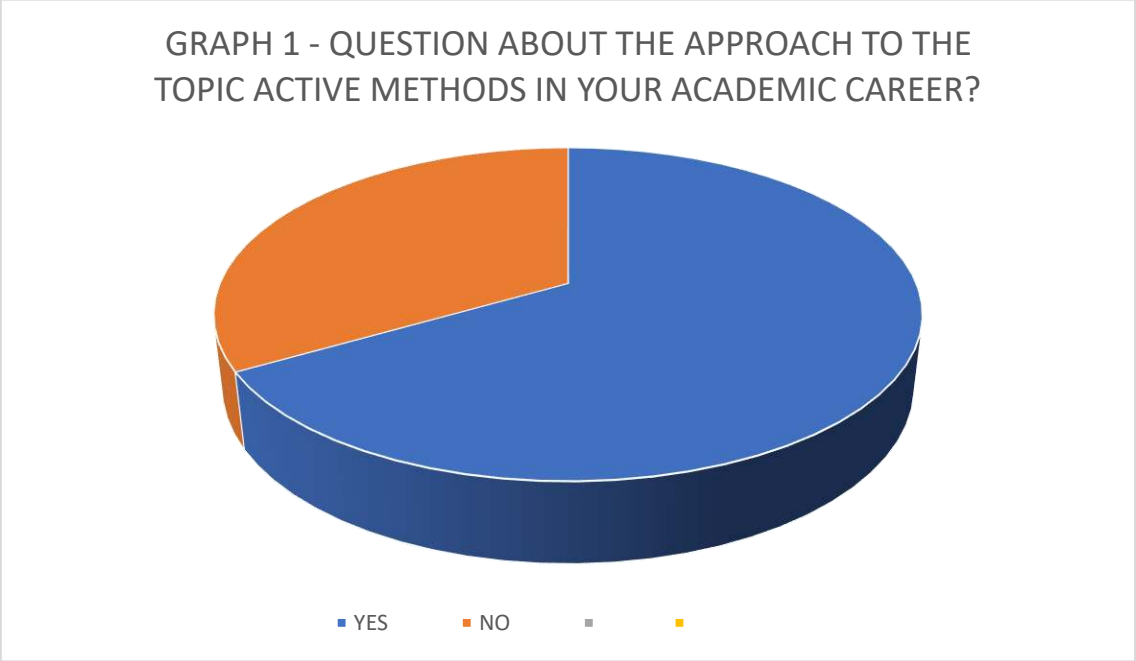
For data collection, a questionnaire was used with 5 (five) open questions and 2 (two) closed questions with the need to justify the closed answer, observing the experiences and use of the learning methods during the pedagogical practice at their level of education and their classroom reality and 3 (three) open questions that portray what would be the contributions of the active methods and the need for interaction between the disciplines and contributions to the development of the teaching work, the volunteers of this research were not identified.

The questionnaire is a tool that allows greater contact with educators and enables a bond of trust between the people involved, and to know a little about the use of the theme and their work.

RESULTS AND DATA ANALYSIS

The analysis and results of the research obtained the results based on the questionnaires applied to the teachers participating in it.

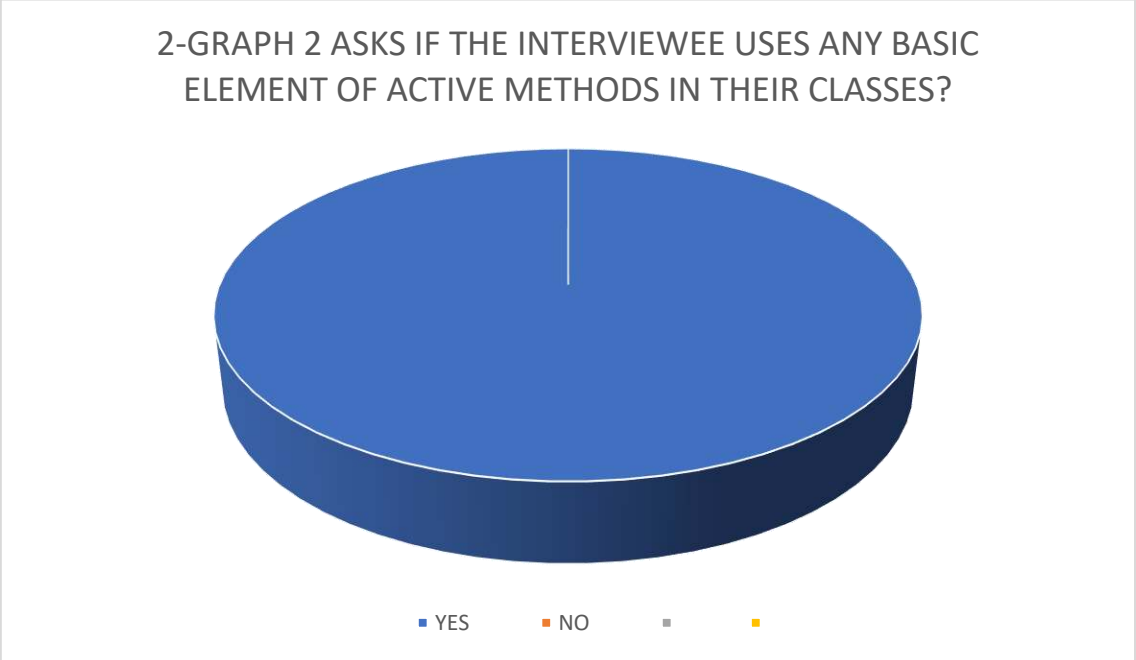
Graph 1 – Research Data



Analyzing graph 1 that portrays the pedagogical contact of active methods, at some point the interviewees about their academic career, it is soon realized that even though both interviewees are career teachers and work at some point in the levels of Brazilian education, 33.33% have not yet had in their undergraduate and graduate courses anything that would prepare them to help face the elaboration of classes, thus becoming a facilitating element of the teaching-learning process, therefore, the 66.66% who obtained some contact in their career, some still reported about "something very superficial" as reported by E1 and as reported by E7 "I just heard something in a lecture about the BNCC", making it clear the need for a greater approach to active methods for the school community in general, whatever the level of Brazilian education, however, making an indication of the great need for this treatment in higher education, for non-formative training in higher education teaching, because among the professors who said "they have no contact with active methods in their academic career, 100% work in higher education, with the lack of active methods and teaching didactics, opening a gap in the areas that do not correspond

to the area of education, however the need for interaction between the areas, and the presentation and applicability and need, for a better quality in teaching in Brazil.

Graph 2 – Research Data

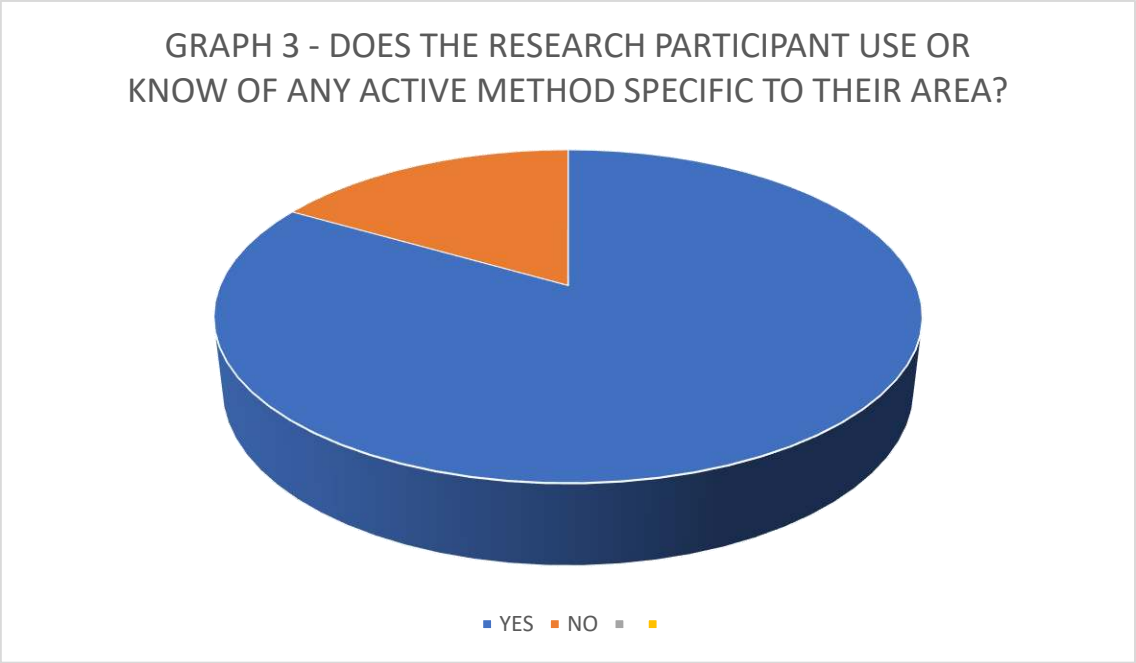


In graph 2, it shows and represents the use of the base and elements of the active methods in their classes, that 100% use some of these elements, therefore, we understand that in turn and even contradictory if we take as a basis the previous graph if 33.33% of the teachers did not have contact with the active teaching methods, it is understood that when filling out the questionnaires for the research they made a brief reading about the principles and the basis of active methods and identified with their pedagogical practices, thus awakening to a greater study and deepening of it, making us reflect on how there would be a better quality in teaching if the basis of active methods were more widespread and more worked on in classes.

As demonstrated by the interviewees E10 "*I may not answer accordingly, due to my meager knowledge on the subject, but I believe that I have already used it, when I expose my students to virtual research on the problems dealt with in the classroom, with the objective that they find a solution, or when I suggest that they develop analyses of case studies, with data and tools available on the internet and in scientific articles*"

Thus requiring further treatment and deepening of it.

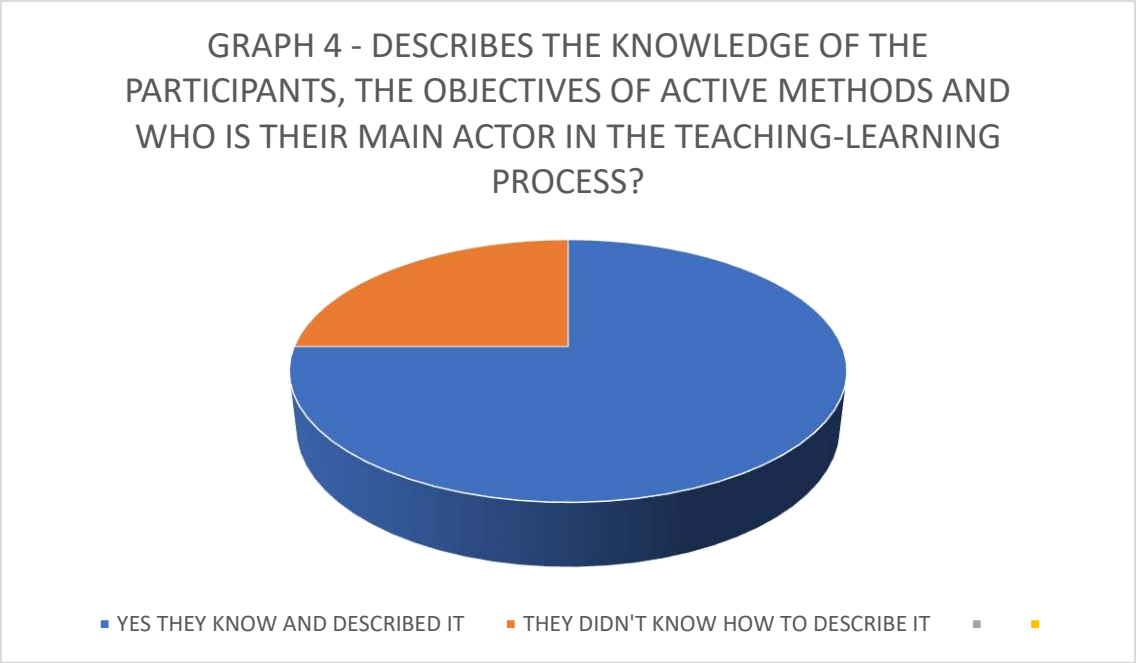
Graph 3 – Research Data



Graph 3 brings us the data regarding the use of the interviewees of the use of some type of active methods in their classes, we soon realize that 83.33% of the interviewees have already used some type of the active methods specific to their area, however, based on the previous graphs it demonstrates whether the search for the methods for their applicability in their specific reality, where they cite some elements of the methods as we see in the E8 statement "*I have worked and apply in my class whenever possible and depending on the openness of the Educational Institution I use it for the evaluation process at times*" , but in this same speech there is an excerpt that makes us reflect, to what extent do institutions limit the methodological action of the teacher ? , Perhaps we can explain the 16.66% of interviewees who did not use the specific methods in their area, even with the answers in graph 2 showing us that all of them have already used them in their classes, it makes us reflect on the real knowledge about the active methods.

The proposal of active methods according to JESUS 2020, there are some elements that we can use in class, so one of them as described earlier is PBL, Problem-Based Learning (PBL), is a method whose characteristic is centered on the use of problems experienced and contextualized to the content to encourage students to develop critical thinking and problem-solving skills and acquire knowledge about the essential concepts of the area in question, however, even without much specific knowledge, the interviewees demonstrate the use of PBL in their speeches.

Graph 4 – Research Data



Graph 4 shows us about the knowledge about the objectives and about the knowledge about the main actor of the process, which in turn Jesus 2020, makes very clear in his speech.

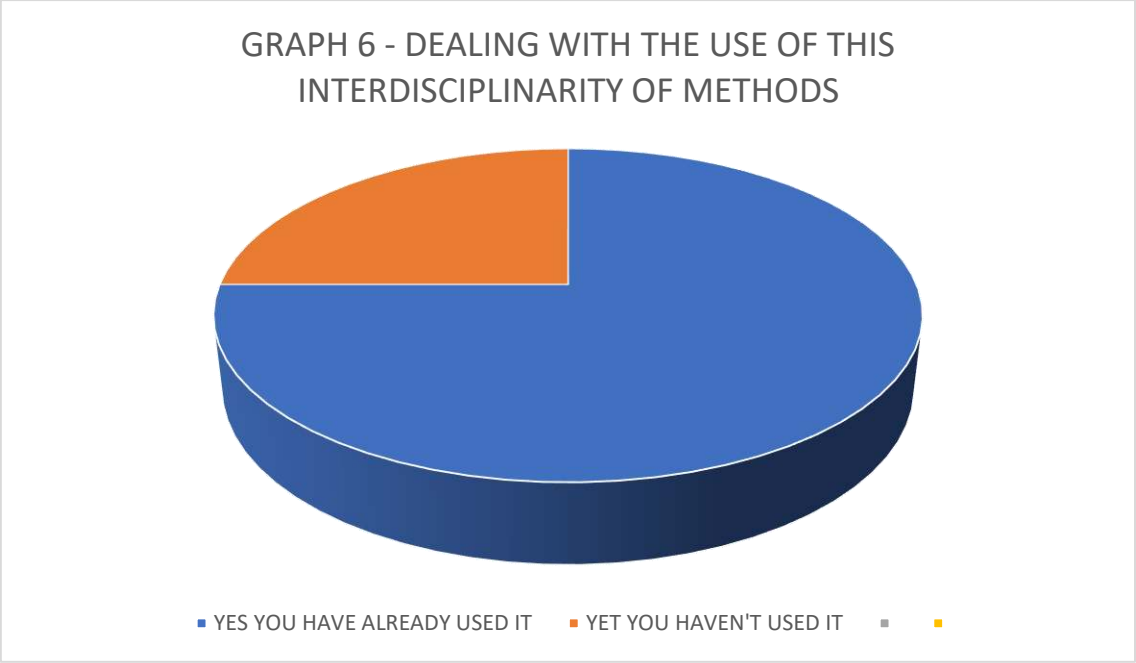
> In short, in active methodologies the student assumes the role of the learning agent and the teacher the mediator of this process. In which it is necessary for the student to carry out various actions and mental constructions, such as: reading, research, comparison, observation, imagination, obtaining and organizing data, elaboration and confirmation of hypotheses, classification, interpretation, criticism, search for assumptions, construction of syntheses and application of facts and principles to new situations, planning of projects and research, analysis and decision-making (JESUS 2020, p.4)

And when analyzing the statements of the interviewees, we see that 75% of them in their speeches and correlate with the true objectives of the active methods, demonstrating some knowledge on the subject, and demonstrating that the student is the main actor in this process, but in 25% of the interviewees in their speeches, they were not able to clearly express the student as the center of this pedagogical scenario, in some speeches even showing that the teacher would be the center, also showing some characteristics of traditionalist methods as stated in **E8 "***I understand that it is a methodology that helps the teaching and learning process, it cannot be used solely and exclusively, it must be introduced and to facilitate interaction with learning, fostering pleasure and leaving the educational routine, but provided by the teacher as an important element in the whole process."*

Graph 5 – Research Data



Graph 6 - Research Data



Graph 5 shows us about the view of 100% of the interviewees about the need for the importance and the need that they see about the interdisciplinarity of methods for a better interaction and exchange of educational experiences, which in turn brings a great pedagogical sum to the various forms of dealing in the teaching-learning process, making a positive experimentation for the various areas,

And in graph 6, which is in the same question as in the previous graph, it is a little contradictory due to noting that 100% of educators see this need, but 25% of graph 6 of the interviewees have never done it or even do not even remember that they have done so,

thus demonstrating a certain lack of knowledge on the subject, as reported in **E5 "***yes, we can use different methodologies to teach in a contextualized way, however, I do not remember if I did it in my classes",* and making us reflect on the need for greater reinforcement in the presentation of active methods to education professionals and a greater depth and applicability of it.

FINAL CONSIDERATIONS

Based on the need for research due to several factors that were previously mentioned and explained, but here we mention that the need to better expand knowledge, and better see the pedagogical practice in the face of contemporaneity and the changes that education has been going through, in times of extreme changes that we are going through in our current society, With the reading and deepening of the approach of active methods, every day we are more convinced of its need for the entire education class, be it at any level, because the possibility of better interacting with the student and bringing new possibilities of involvement with the content, with the teacher, making a closer approach to the teaching-learning process.

In the possibility that was obtained to interview education professionals of the most diverse levels, we noticed the real needs for greater knowledge, expansion, and deepening of active methods for their professionals, the lack of knowledge is also generated by the lack of interest and information itself, an immediate need for complementary training which must come from two fronts, one of them personal that goes through the very need for the quality of teaching and the service provided to education and students; The second line involves the public power in creating possibilities for public policies to increase the dissemination of training and themes that enable and awaken in teachers a greater interest in their pedagogical action, and making us reflect on the need for greater reinforcement in the presentation of active methods to education professionals and a greater depth and applicability of the same, and to be able to encourage students to develop critical thinking and problem-solving skills and acquire knowledge about the essential concepts of the area in question.

Hoping to better describe its needs, it is recorded in our article the appeal for education and its need for greater dissemination and information of active methods, with their possibilities of applicability and bases to better insert students in the educational context.

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ATTACHMENTS

THE DISCIPLINES OF BASIC EDUCATION AND THEIR ACTIVE LEARNING METHODS: A QUESTIONABLE DIFFERENCE.

QUESTIONNAIRE

1- Within your academic experiences, has the topic of active learning methods ever been addressed?

- Yes
- No

Justify your answer, describing at what academic moment?

_____
_____
_____
_____

2- Do you use any basic element of active methods in your classes?

- Yes
- No

Justify your answer.

_____
_____
_____

3- Do you use or know any active method specific to your area?
Have you ever done it in acting in your classes?

_____
_____
_____
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4- Do you understand what is the main objective in using active methods? And in your opinion, who is most interested in the learning process?

_____
_____
_____
_____

5- Do you understand that it is possible to use methods from other areas, performing an interdisciplinarity in the specific methods of the areas? Have you ever done so? Can you cite an example?

_____
_____
_____
_____

Note 1: Please reply and send the answers through the same communication channel or send by e-mail: leannelima2009@hotmail.com

Note 2: Attached will be the authorization form and free clarification of the research, please sign and photograph or scan and resend by e-mail or forward the photos by WHATSAPP.