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EXPERIENCES WITH ACTIVE METHODOLOGIES IN BASIC EDUCATION: SYNTHESIS OF REPORTS IN A CYCLE OF WEBINARS DURING THE COVID-19 PANDEMIC[1]

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Abstract: The objective of this study was to identify and analyze the active methodologies that were presented in a cycle of webinars about experiences developed with these methodologies in basic education. As a data collection instrument, for the production of empirical material, the analysis and observation of researchers related to twelve webinars held in 2021 were used. As a methodological analysis tool, Discursive Textual Analysis (ATD) was used. The results showed a wide range of active methodologies used, the most recurrent being the flipped classroom, problem-based and project-based learning and hybrid teaching.
Keywords: Active Methodologies; Science teaching; Teacher training.

INTRODUCTION

The years 2020 and 2021 were atypical for Brazilian and global education as a result of the pandemic caused by the spread of the covid-19 virus and isolation rules. This fact provoked the use of remote teaching and produced a wide debate about the efficiency of this teaching model. While some educators observe little efficiency in this method, there are reports of teachers who point out that classes in remote mode allowed students who participated little in the classroom to show greater interest in online classes or in digital teaching.

The social isolation caused by the pandemic significantly restricted school activities and produced several changes in the education scenario, such as the use of remote classes and seminars, and this was the strategy used to develop a Cycle of Webinars on active methodologies in the PIBID Project Physics/ Natural Sciences at ``Universidade Federal do Pará`` (UFPA).

The Cycle of Webinars on Active Methodologies, promoted by the interdisciplinary subproject of the degrees in

Physics and Natural Sciences at ICEN/UFPA, linked to PIBID/UFPA/CAPES, was developed fortnightly with twelve lectures in remote mode with the objective of promoting debates that could contribute for the qualification of teachers, with a view to participatory learning that values the protagonism of students. The intention of this cycle of Webinars, which took place from May to December 2021, was to share the experiences of teachers in basic education with the application of a wide range of strategies that aimed to overcome the panorama of current dominant practice.

The cycle of webinars on active learning methodologies aimed to promote the continuing education of teachers and teachers in training through debates and reflections on the new dynamics of mediating learning, which make it possible to transform the teacher into a mediator of knowledge and the student into protagonist in their learning process, through methodologies and strategies that contextualize teaching, thus allowing meaningful learning with the development of autonomy, active participation of students in classroom practices, focusing on the development of skills and abilities and that provide a change of attitude of professors and students.

The event demonstrated that even though they are challenging, active methodologies outperform classic strategies, especially when it comes to developing professional and socio-emotional skills. From the webinars emerged reports of teachers' experiences that pointed to several active teaching and learning methodologies used in their teaching experiences in basic education, in addition to presenting pedagogical digital resources and ways of applying assessment to these teaching strategies.

Societies change over time and create new habits that impose new needs and these demand new skills and strategies. In the area of education, this demands a methodological advance. Brito and Gomes (2007, p. 7) comment that the social and economic transformations observed in the last decades, in Brazil, demand from the teaching of Sciences, a new posture, a new objective, thus, several proposals emerged, within the desired profile, in the attempt to break with the current educational model. The authors state that "proposals in tune with the current trend are still rarely used as teaching-learning strategies, however they have already gained strength in Brazilian educational research".

> In a society increasingly guided by Science and Technology, teacher training is highly complex, especially for those who will become Natural Sciences teachers. In addition to the knowledge related to science teaching, it is necessary to consider that the teacher must enable his student to learn to think and act in the context of scientific thinking, understand that scientific research is the property of society and, in this context, enable the development of communicative skills and critical thinking for the formation of a citizen capable of transforming the society in which he lives (IMBERON et al., 2020, p. 1).

A new educational proposal that is used recurrently by progressive teachers is the active methodology. In this process, the teacher acts as a facilitating agent of learning, with the student being the conductor of his own learning according to his interests, needs and objectives, and the teacher can act as an intervenor if necessary, thus, it can be inferred that the constructivist pedagogical approach is sustained with the contribution of meaningful learning and active methodologies.

Given the above, the objective of this study is to identify and analyze the various types of active methodologies that were presented in this cycle of webinars in experiences developed in basic education.

METHODOLOGY

This study was based on a qualitative research since it sought to understand the context of the situation. As a data collection instrument, for the production of empirical material, the analysis and observation of researchers related to twelve (12) webinars held from May to December 2021 were used.

The Cycle of Webinars on Active Methodologies was promoted by the interdisciplinary subproject of the degrees in Physics and Natural Sciences of the Institute of Natural Sciences of UFPA, linked to PIBID/ UFPA/CAPES. It was developed fortnightly with twelve lectures in remote mode with the objective of sharingteachers' experiences on the use of active methodologies in basic education.

As a methodological analysis tool, Discursive Textual Analysis (DTA) was used, based on Moraes and Galiazi (2013). These authors name the following methodological steps: (a) Dismantling the texts: also called the unitarization process, it involves examining the materials in their details; (b) Establishing relationships: implying building relationships between base units; and (c) Capturing the emerging new: enables an understanding of the empirical material to emerge. In this sense, response categories were established that will be presented in the results section of this article.

THEORETICAL BACKGROUND

Imberon et al. (2020, p. 7) mention that contemporary society greatly values knowledge of a scientific and technological nature, resulting in a rapid transformation process. "Science teaching in Elementary School presupposes the formation of a critical and participative citizen, such knowledge must promote the expansion of their understanding of the world, preparing them to be agents of qualitative changes." The authors also report that in relation to this context, documents such as the National Curricular Parameters (PCN) point to the idea that the teaching of Natural Sciences is characterized as a "privileged space in which different explanations about the world, the phenomena of nature and the transformations produced by man can be exposed and compared."

According to Souza and Santos (2021, p. 480) active teaching methodologies include a wide range of educational practices, dynamic and interactive, which provide effective participation of students in their own learning, particular and specific, transforming the learner, a mere participant, until then, in a protagonist of this process, reflecting in greater responsibilities in the construction of scientific, affective and attitudinal knowledge.

> Among the approaches recognized as active methodologies are: Flipped classroom; Project-based learning;Problem-based learning; Gamification; Peer learning; Maker Culture;Middle studies; Case study; and Storytelling. all these strategies aim to allow the student to recognize a methodology as the most appropriate for their learning in a process known as metacognition, which is the self-knowledge of their cognitive actions and their practical attitudes to achieve objectives, respecting the prior knowledge of the student. educating as an educational resource, focused on the development of skills and abilities (SOUZA; SANTOS, 2021, p. 480).

According to Abreu et al. (2017, p. 3) active methodologies are used in order to promote critical and reflective thinking in students, where their skills and competences will be developed so that the student himself seeks appropriate solutions to the problems experienced in his training. The objective is also to provide the teacher with "a reflection on their practice in the classroom and a reformulation of the methods used to meet the specificities of the students, following the socio-political, financial and technological

changes in modern society."

Active methodologies act as an instrument for the construction of knowledge using analytical and dialogic procedures. It is an activity where professors present themselves as a facilitator, resolving doubts that arise, so that students participate in this learning process. Thus, the teacher must stimulate a critical and reflective way in the student so that he can reframe knowledge with his reality. "The active methodologies propose a student-centered education, in which the student is guided by a teacher who will provide stimulating experiences that will lead him to seek inner resources to interact with the challenging situations of everyday life." (ABREU et al., 2017, p. 6).

Sobral and Campos (2012) state that active methodologies are educational activities that can lead to situations of reflective learning, producing students who are critical and participatory in their own learning, since they can use contexts and concrete problems close to the reality experienced by the student.

Souza and Santos (2021, p. 480) infer that taking into account that remote teaching requires autonomy, discipline, commitment and participation from the learner, active methodologies are adequate in these times of pandemic and social distancing that current society is experiencing, because they are methodologies indicated both for face-to-face teaching and for distance or non-face-to-face teaching, and also for the hybrid model, since the virtual environment favors the essential conditions for the application of these teaching strategies, "which helps to overcome the real physical distance between teachers and students, providing a digital relationship where all actors in this educational system become protagonists of teaching and learning, with the reform of postures in which the teacher is no longer the center of the process."

Nonato, Sales and Sarly (2019, p. 164) understand the active methodology as a set of activities, actions, practices that unite traditional and innovative teaching perspectives, which allow the student to reflect on what he is doing and practicing. That is, "interacting in the practical exercise with the knowledge that is being produced, questioning it, testing it, transforming it, actively appropriating it, being guided at all times by the teacher, who acts as a supervisor of the process of learning." For the authors, "the active methodologies focus on the teaching and learning process, enhancing the active participation of all those involved, in an effective work with contents centered on the reality in which everyone is inserted inside or outside the training context."

RESULTS AND DISCUSSION

ANALYSIS OF CATEGORIES

We established response categories in terms of the investigative question: which active methodologies were presented in the webinar cycle in experiences developed in basic education? In this perspective, we propose to carry out an analysis based on the results found.

Table 1 presents the titles of the webinars, the active methodologies presented and the teaching systems where the experiences with active methodologies were applied.

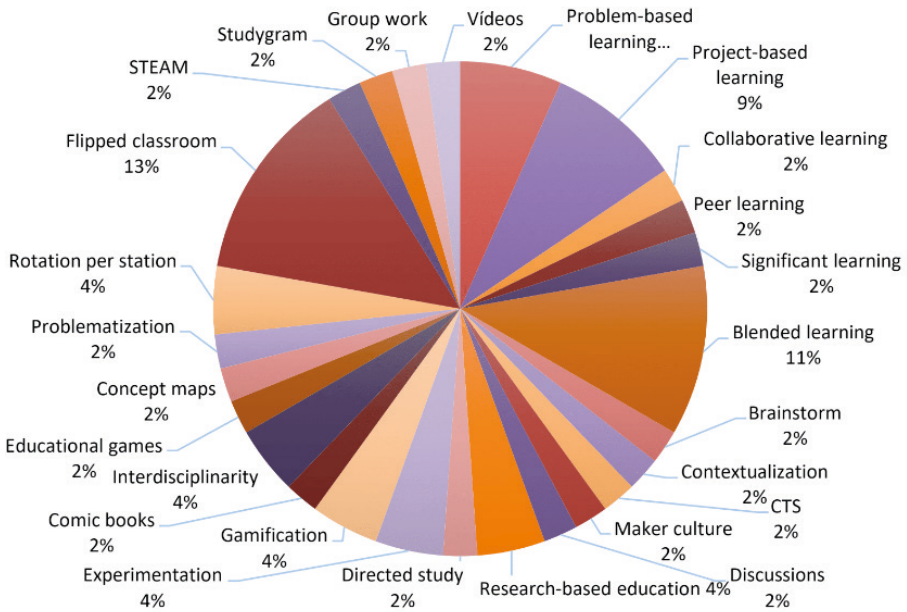
In the study, it was possible to distinguish two groups of categories of active methodologies presented:

1st group (Methodologies that do not require digital technology) - learning based on problems and projects, collaborative and peer learning, meaningful learning, brainstorm, contextualization, STS education, maker culture, debates, teaching by investigation, directed study, experimentation, comics, interdisciplinarity, didactic games, conceptual maps, questioning, station rotation, flipped

Webinar title	Active methodologies presented	Education system
1st - Degree in Natural Sciences: History, obstacles and perspectives	Principles such as Contextualization and Interdisciplinarity	Public school
2 - Flipping learning: an approach to flipped homework	Flipped classroom	Public school
3rd - The flipped classroom in public school	Flipped classroom	Public school
4 - Didactic strategies to encourage active learning in chemistry classes	Directed study, experimentation, videos and debates, concept maps, didactic games, comics, experimentation	Public school
5th -Active tools for remote teaching	Blended learning, flipped classroom, collaborative learning, learning with problems and projects	Private school
6 - Active methodologies of the non-digital medium: what is possible to do without internet	Flipped classroom, peer learning, problematization, station rotation	Public school
7th - I learned on Instagram: social networks in Science/Biology Teaching and Learning	Blended teaching, studygram	Private school
8 - Scientific initiation through active learning methodologies	Blended learning (blendead learning: face-to-face interaction, culture building and group work), station rotation, flipped classroom	Public school
9 - The potential of Active Methodologies for New High School	Gamification, maker culture, Problem-Based Learning (ABP or PBL in English)	Public school Private school
10 - The STS approach and the Problem-Based Learning Methodology: Possibilities for promoting science education in basic education	Brainstorm, Interdisciplinarity, meaningful learning, CTS, contextualization, problem-based and project-based learning.	Public school
11th - Active Methodologies and the 21st Century teacher: a look from the perspective of learning based on investigative practices	Flipped classroom, gamification, inquiry-based learning, project-based learning, blended learning	Public school
12th - From the key competences of the European Union to the BNCC: evolution of competence teaching	Project-based learning, inquiry-based learning, STEAM	Public school

Table 1 - Webinars on active methodologies

Source: Survey data.



Graph 1 – Active methodologies cited in webinars

Source: Survey data.

classroom, group work, videos.

2nd group (Methodologies that require digital technology) - blended learning, blended learning, gamification, STEAM, studygram, videos, among others.

Some methodologies can be developed without the need fordigital resources, but certainly with the possibility of using these technologies can present a more interesting and adequate result in the learning process.

Although this study has no quantitative concerns, in Chart 1 it can be seen that most experiences with active methodologies took place in public education institutions (about 83%). This preference for developing new methodological teaching strategies in this system can be explained by the greater freedom that teachers have in public schools, whereas in private schools this procedure is more restricted.

Table 1 shows a varied spectrum of active methodologies used by webinar instructors, with the most recurrent being the flipped classroom, problem-based and project-based learning, blended learning, and research-based science teaching. In common, these methodologies have the advantage of enhancing the student's protagonism in their own learning process, as in the perspective of Silberman (1996), described below.

> In this perspective, active methodologies provide expanded possibilities for educational practice in higher education, since they are based on the premise that seeing and listening to content only in an apathetic way would not be enough to apprehend it, since the contents and skills for learning of the same must be discussed and experienced by those involved in the educational process until reaching the point where the student can master the content and talk about it with their peers, use them in other situations and, who knows, even teach them (SILBERMAN, 1996 apud NONATO; SALES, SARLY, 2019, p. 164)

Graph 1 contemplates the percentage of each of the active methodologies presented during the development of the webinar cycle.

To help with visualization, Figure 1 presents a word cloud that represents the frequency of active methodologies mentioned in the webinar cycle.

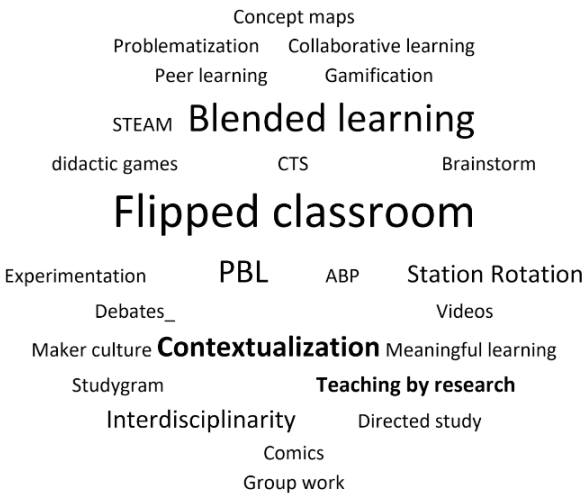


Figure 1 – Word cloud of occurrences of active methodologies in webinars.

Source: Research Data

In Figure 1, where the active methodologies with mgreater evidence appeared more frequently and methodologies with less evidence appeared less frequently, there is a high incidence of methodologies such as flipped classroom, PBL, PBL, Blended Lerning (blended learning), teaching by investigation, gamification, experimentation, contextualization, among others.

These results point to the more frequent use of methodologies that do not necessarily require the use of digital technology and also do not require large infrastructure or high financial costs. In addition, some of these active methodologies have been used for a long time, therefore, being familiar to both teachers and students.

DESCRIPTION OF THE CHARACTERISTICS AND OBJECTIVES OF THE WEBINARS

1st webinar – 06/02/2021 - Theme: Degree in Natural Sciences: History, obstacles and perspectives (Prof. JT).

The objective was to inform and clarify the context of the creation of the Degree in Natural Sciences course in Brazil and at UFPA, in addition to discussing aspects related to the obstacles to the consolidation of the course, the conception of the professors and the expectations of the students when entering the course, in addition to presenting the prospects for graduates of the Degree in Natural Sciences, including the possibility of postgraduate studies.

This webinar highlighted the origins of didactic and epistemological obstacles in Natural Sciences Degree courses, culminating in an approach on the importance of seeking alternative and active methodologies to overcome the aforementioned obstacles.

On this same topic addressed in the webinar, Imberon et al. (2020, p. 3) chronicling science education report that the teaching of this discipline in Brazil, the implementation of Degree in Science courses and the consequent training of Science teachers by higher education institutions (HEIs) is still recent and present insufficient results. The authors consider as one of the obstacles "the teacher training model, which oscillates between disciplinary specificity and generality." Villani et al. (2002) apud Imberon et al. (2020, p. 2) infer that in this context,

> the training of Natural Sciences teachers must cope with the demands introduced by the demand for new curriculum contents, more suited to everyday life, more up-to-date in terms of scientific and technological achievements, more refined in terms of cultural implications, deeper in terms of psychological resources, more efficient in terms of methodologies and more inclusive in terms of ethics.

2nd webinar - 09/06/2021 – Theme: Inversion in learning: an approach to inverted homework (Prof. FP).

In the Webinar, the lecturer started from the principle that learning at home is not always an easy task, and the extension of learning right after the end of the class must be an experience full of opportunities for growth and must be something that allows students to engage. The intention of the activity is to make students more autonomous in the act of studying, that is, responsible for their learning. But how to do it?

In this webinar, the relevance of homework was discussed and, as an alternative, the inversion of the pyramid ofBloom's Taxonomy, which proposes that educators must provide students with three main objectives, classified according to the domains: cognitive, affective and psychomotor.

A study coordinated by the American psychologist and pedagogue Benjamin Bloom gave rise to Bloom's Taxonomy in 1956. The Taxonomy contributes to structure the educational system, including activities such as assessments, methodologies and teaching strategies. In 2001, the work underwent a revision, maintaining the classification pyramid in six stages, each one named by verbs (Figure 1).

In this proposal, the meaning of learning in traditional teaching goes from verbs closer to lower-order thinking skills to verbs closer to higher-order skills.

The inversion of the pyramid proposed by the teacher teaching the webinar was in the sense that homework becomes an easier and more accessible task, since the teacher usually solves easy problems in the classroom and applies difficult exercises at home, making this activity an obstacle to teaching. Thus, the proposal is to reverse the order of development of these activities.

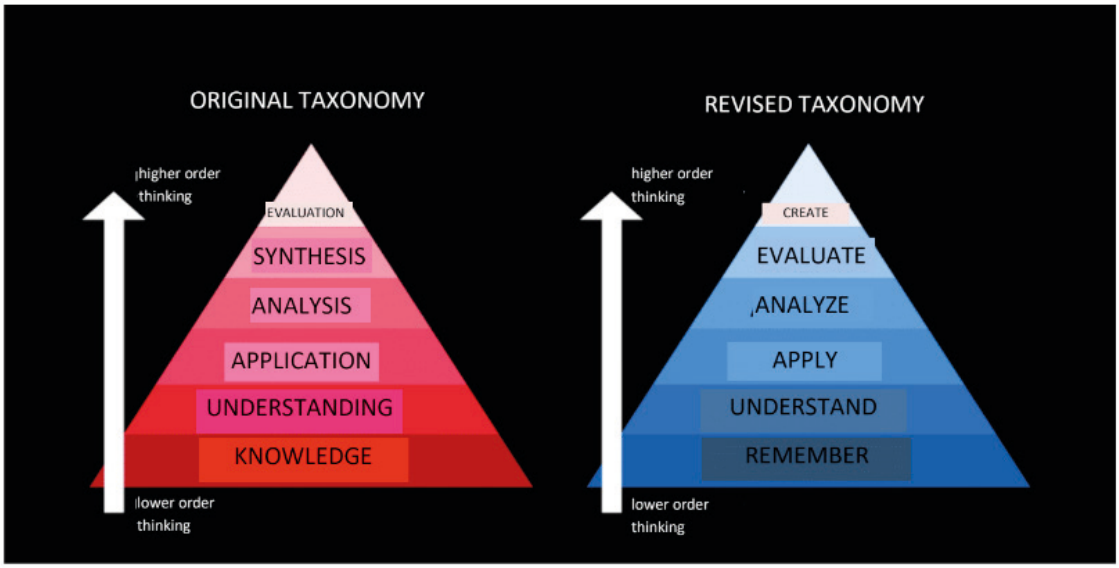


Figure 1 - Bloom's Taxonomy: original X revised

Source: Unina College (2021).

3rd webinar - 06/23/2021 – Theme: The flipped classroom in public schools (Prof. IS).

In this webinar, the teaching teacher starts from the following question: Have you ever imagined if there was a class in which students already knew the subject and could discuss and share knowledge with colleagues? For the teacher, this is a context called the Flipped Classroom.

During this webinar, the definitions and history of this active methodology were discussed, culminating in the presentation of a case study of the application of this teaching strategy in a public school in the city of Belém (PA).

4th webinar - 07/07/2021 – Theme: Didactic strategies to favor active learning in Chemistry classes (Prof. JPI).

Initially, the teaching professor inferred that research in the educational area has pointed to the importance of making the student the protagonist of the teaching and learning process, and that, therefore, to achieve this objective, it is necessary to adopt teaching methodologies that favor the active participation of students. students, creating more dynamic and interesting classroom environments, through didactic strategies that lead to active participation. In this seminar, some strategies capable of promoting active learning and making classes more dynamic, especially Chemistry classes, were presented.

5th webinar - 06/23/2021 - Theme:Active tools for remote teaching(Prof. KN).

In this lecture, applications of websites and applications were presented, for use in remote teaching, following the good practices of didactics and instrumentation for teaching.

At the beginning of the webinar, the teaching teacher highlighted the fact that remote teaching has become one of the only possibilities for interaction in teaching, in a world immersed in the pandemic of the new coronavirus and that, therefore, the online class routine is no longer new, even that challenges and difficulties are more present than ever, interaction with students being one of them. The teacher verbalized that, in view of this context, in order to maintain students' motivation, the use of active methodologies and tools can help them to remain engaged in their activities.

The pandemic caused by the Covi-19 virus introduced most teachers and students

to a teaching model that already existed, but was little known: hybrid teaching (blended learning) one of the most cited active methodologies during the webinar cycle. Some teachers report greater participation of students in classes in this type of teaching and greater participation of parents of students in meetings in virtual mode. Blended teaching is conceptualized as the use of face-to-face teaching elements and digital resources that allow a better use of the learning process. One of the objectives of blended learning is to make students more autonomous in their own learning process, mainly due to the flexibility of time and place to study.

6th webinar - 04/08/2021 – Theme: active methodologies in the non-digital environment: what is possible to do without internet (Professor ÂA).

The lecturer verbalized that active methodologies are based on student autonomy and consolidation of knowledge that are often associated with strategies that require the digital medium. However, many people do not have access to the internet, and therefore, it is important to develop teaching strategies that are not dependent on this resource (in Brazil about 12 million people do not have access to the internet). In this webinar, active methodologies were presented that do not necessarily need the internet to develop, and that can be adapted to the unplugged reality of the student in the knowledge construction process.

7th webinar – 08/18/2021 – Topic:I learned on Instagram: social networks in Science/ Biology Teaching and Learning(Prof. YCM).

In this lecture, there was a discussion and reflection on the use of Digital Information and Communication Technologies in Science/ Biology Teaching.

The lecturer reported that social networks are considered to be one of those responsible for students' distractions, and there are those who question the use of virtual environments for use in the teaching process. The webinar was developed from the perspective of the following questions: "would it be possible to adapt these media to the pedagogical processes? How can professors use this medium to stimulate and involve their students?"

8th webinar – 09/15/2021 – Theme: Scientific initiation through active learning methodologies (Prof. MA).

In this lecture, there was a discussion of how active methodologies can enhance meaningful learning.

The teaching professor started the webinar by pointing out that Scientific Initiation is a type of educational activity that allows students to learn about the rituals of Science as a mechanism for developing skills and competences to become active, critical, reflective beings with scientific learning. During the lecture, the professor inferred that for this to happen it is necessary that we have an environment that favors the development of investigative practices, with the use of active methodologies being a good strategy to achieve this objective.

9th webinar – 09/22/2021 – Theme:The potential of Active Methodologies for New High School (Prof. GC).

The purpose of this lecture was to offer an understanding of how active methodologies can help the new format of high school.

Initially, the speaker discussed the fact that in a dynamic world, the traditional school model, with a fixed workload and fully expository classes, has been showing itself to be increasingly outdated, which is the motivation for changing the Guidelines and Bases of National Education establishing changes in the structure of Secondary Education, which starts to defend a more flexible organization of contents. The teacher also highlighted that these changes aim to provide more autonomy

for students, increasing their engagement and motivation, and this context values the importance of helping active methodologies in this process.

10th webinar – 09/29/2021 – Theme:The STS approach and the Problem-Based Learning Methodology: Possibilities for promoting science education in basic education (Prof. LF).

This lecture highlighted the potential that STS education makes possible for the development of an educationcritical and citizen based on questioning, using active methodologies.

The lecturer highlighted that the Science, Technology and Society (STS) approach is a critical conception of science teaching and Problem-Based Learning (PBL) is an active teaching strategy generally used in higher education. In the webinar, their approaches and the potential of their articulation were presented to develop basic education students who are critical, participatory, autonomous and reflective, who can socially use scientific knowledge and its multidimensions to solve socio-scientific problems/issues and be engaged sociopolitically.

STS education allows for a broad debate on the issue of scientific and technological development and its consequences for society, including the context of consumerism and sustainability. Fraiha et al. (2018) apudPaulo, Perez and Tabosa (2021, p. 82) informs us that

> social and environmental spheres, the 21st century brought with it an intense debate in the area of education, which sought to tread paths that offered innovative ways of forming citizens and that they were capable of producing new knowledge and technologies based on sustainability, critically reflecting on their impacts and understand the dynamics that originated and sustain the current social structures, building a critical vision and proposing paths in the search for more egalitarian societies.

In the PCN it was already possible to identify assumptions of STS education present in the document, for example: The PCN indicate as fundamental education objectives that students are able to: "Position themselves in a critical, responsible and constructive way in different social situations, using the dialogue as a way of mediating conflicts and making collective decisions" and also "perceiving oneself as a member, dependent and transforming agent of the environment, identifying its elements and the interactions between them, actively contributing to the improvement of the environment" (BRASIL, 1998, p. 7).

One of the main characteristics of the world development system in the second half of the 20th century was accelerated industrialization, without concern for the consequences for society and the environment. In Natural Science teaching, the Science, Technology and Society (STS) educational trend has emerged as an answer to these problems. Discussions on the relationship between education and society were associated with progressive trends, which influenced the teaching of Natural Sciences, emphasizing socially relevant content and processes of collective discussion of themes and problems of real meaning and importance, with an interdisciplinary character (BRASIL, 1998, p. 20). These characteristics of STS education are not obtained in a classic, memoirist education system, with simple acquisition of contents.

11th webinar – 10/20/2021 – Theme:Active Methodologies and the 21st Century Teacher: a look from the perspective of learning based on investigative practices (Prof. DD).

In this lecture, discussions were presented regarding active methodologies from a teaching perspective focused on learning based on investigative practices.

The teacher mentioned that some theorists with discussions based on practical and critical

rationality, already considered traditional in the educational environment, such as Freire, Ausubel, Piaget and Vygotsky, defend that meaningful learning takes place when the individual learns actively. Then the lecturer concluded that to create an environment conducive to this, active methodologies such as investigative practices have great potential.

In the 1998 PCN document, information was already available that since the 1980s "research on the teaching of Natural Sciences has revealed what many teachers had already realized that experimentation, without a broader investigative attitude, does not guarantee the learning of scientific knowledge (BRASIL, 1998, p. 20).

12th webinar – 10/27/2021 – Theme:From the key competences of the European Union to the BNCC: evolution of competence teaching (Prof.ª SP).

Competence refers to the ability of the citizen to perform a certain activity. The webinar was developed in the perspective that since the discussion of the concept of linguistic competence until today, the official governmental guidelines of several countries have been little by little incorporating the paradigm of competent teaching. In this lecture, we sought to understand how this dynamic happened, and how it is reflected in the Brazilian reality, in particular by comparing European and Brazilian documents.

Paulo, Perez and Tabosa (2021, p. 82) report that competent teaching (by competences) is currently proposed as a guide for a new educational paradigm to address the challenges of contemporary society. Machado (2002) apud Paulo, Perez and Tabosa (2021, p. 82) concludes with the statement that "the notion of competence emerges to base and guide the new normative and formative paths in the sense of thinking, elaborating and implementing policies aimed at for work, employment and education", as a consequence of the context of social and environmental transformations and also of the economic and political variations experienced from the 1990s onwards, characterized by conjunctures such as globalization.

> Competency-based teaching has the potential to expand the use of constructed knowledge as the teaching and learning process takes place within the scope of the real, in problem solving, in the action-reflection-action of the context in which the learner is inserted and the teacher, in sharing meanings (PAUL; PEREZ; TABOSA, 2021, p. 94).

Following a global trend, Brazil is also trying to adapt to implement a teaching system based on competences, although it is not yet a reality in classrooms. According to Zabala and Arnau (2007) apud Paulo, Perez and Tabosa (2021, p. 83)

> Competential teaching assumes a central role in the construction of the new paradigm, becoming a baseline reference for education systems globally. In several countries, curricular proposals have suffered, over the last few decades, a slow and continuous process of overcoming a vision centered on the specific contents of each area of knowledge towards a vision more anchored in the development of the student in relation to themes, objectives and competences.

Paulo, Perez and Tabosa (2021, p. 84) encourage a reflection on the "essence of the proposal of competent teaching, in order to contribute to an in-depth debate on the issue, which provides subsidies for its real implementation in the classroom, understanding and contemplating the dimensions that give the theoretical contribution to the paradigm."

In line with global trends in education and teaching, a set of Brazilian documents, such as the BNCC, DCN and PCN lead to a redirection of teaching and learning processes towards the "development of skills and abilities by

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students, instead of inserting them in learning processes centered on content accumulation." However, in addition to such documents not being enough to change teaching, this implies a long-term change on the part of schools and all bodies and agents that work in education (PAULO; PEREZ; TABOSA, 2021, p. 94)

FINAL CONSIDERATIONS

It was evident in the development of the webinars, and in this study, that active teaching and learning methodologies have become fundamental in the development of skills and competences, including socio-emotional competences, and that allow the student the desired autonomy for solving problems and building of critical thinking. Thus, the apprentice builds significant knowledge for their citizenship training.

The webinar cycle revealed an expanded spectrum of possibilities for the use of active methodologies, the most recurrent of which are: flipped classroom, problem-based and project-based learning, hybrid teaching and science teaching by investigation, which are methodologies that enhance the role of the student in his own learning process. Most of these methodologies do not necessarily require the mandatory use of digital technology and public educational institutions are the space where these strategies are more easily developed.

In the last webinar of the cycle, it was possible to observe that the objective of teaching by skills and abilities is to make the student the protagonist of their learning, mediated by the teachers, in this sense it is necessary to develop, together with the contents, contexts that enable this purpose, so that students can learn to make decisions for their purposes and that contribute positively to society, thus greatly increasing their ability to intervene in reality, with active methodologies in teaching being an adequate instrument, and with potential, for the realization of this proposal.

In the cycle of webinars, the issue of the importance of developing work in groups and the use of technologies in teaching was widely discussed, reaffirmed and clarified. Group work can be used to develop skills that deal with situations associated with self-knowledge and also in relationships with other people, such as: team planning, task delegation, goal setting, self-regulation in individual behavior and collective, exercising empathy and equity, sensitive listening and the ability to promote inclusion. Technology, on the other hand, is essential in the application of active methodologies, with the use of digital platforms that allow for a more participatory teaching of the learner and that allow a more comprehensive and responsible view of the studied content.

In addition to the observation that some active methodologies require the use of technologies and that others can be developed without the use of these technologies, specifically, the webinars allowed observations and inferences regarding active methodologies and how to make the student a protagonist of the their learning, for example: a successful activity of this type of strategy depends on the type of methodology applied by the teacher and the public for which the methodology was applied; the student's infrastructure; the teacher's continuing education process; teaching planning, among others.

The event also provided a better conceptual understanding of what active methodologies are on the part of webinar assistants and PIBIC Project fellows who were responsible for coordinating the cycle of webinars, in addition to expanding the range of types of methodologies with these characteristics, with the presentation of methodologies little publicized in scientific articles and textbooks. On the other hand, the absence of active methodologies for inclusive education was

observed, for example, active methodologies in the Brazilian Sign Language (Libras) and in the Braille System, in addition to little discussion about the evaluation process of these active methodologies and the problematization with regional context.

In summary, it is concluded that the activities to become active depend on the way in which the teacher puts into action his methodological strategy of the profile of the target public, the infrastructure of the student and the school and the teacher's planning, being evident the absence of a greater discussion on the use of active methodologies in the inclusive education process and the need to broaden the debate on how to carry out the evaluations of these active activities.

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