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Digital Revolution In Education: The Challenge Of Remote Teaching In Times Of Pandemic

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Abstract
Currently, there has been much consideration given to different methodologies that can contribute to the improvement of the teaching-learning process, especially with the emergence of the new coronavirus. Among these new teaching methodologies are active methodologies. This research focuses on the importance of methodologies used in times of a pandemic at the Euzamar Machado Vilar School in Duque Bacelar, Maranhão, Brazil. The interest in this theme arose from the understanding that in times of a pandemic, it is essential for teachers to know how to use methodologies in a way that allows students to continue their studies even if they are not attending classes in person. By using ICTs (Information and Communication Technologies), the educational process can be continued. The general objective of this research is to analyze the methodologies used during the pandemic and the main difficulties encountered. This research was carried out at the Euzamar Machado Vilar School in Duque Bacelar, Maranhão, Brazil, located in the municipality of Duque Bacelar. The school provides all the necessary infrastructure for the comfort and educational development of its students. With different arguments, educators described how they felt about continuing teaching during the COVID-19 pandemic period. According to their statements, they did not feel competent and skilled in using active methodologies and the technological tools connected to the internet.

Key word: *Methodologies. Students. Teaching-learning*

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I. Introduction

Currently, there has been a great deal of thought put into different methodologies that can contribute to improving the teaching and learning process, especially with the emergence of the novel coronavirus. Among these new teaching methodologies are active methodologies, the use of digital media in education, and hybrid learning. Hybrid learning represents a pedagogical advancement that divides activities between in-person and activities conducted through Information and Communication Technologies (ICTs). Hybrid learning has been a major focus for educators seeking to understand its true essence.

This research focuses on the importance of methodologies used during times of a pandemic, specifically at the Euzamar Machado Vilar School in Duque Bacelar, MA. The interest in this topic stems from the understanding that during pandemics, it is crucial for teachers to know how to use methodologies in a way that allows students to continue their studies, even when they are not physically attending classes. Through the use of ICTs, the educational process can continue.

It is considered relevant to understand whether all the learning required for pedagogical practices, such as the use of computers, the internet, and other digital media, through active methodologies and hybrid learning,

is utilized to continue the educational process during the pandemic period and promote the intellectual development of students at the Euzamar Machado Vilar School in Duque Bacelar, MA.

The general objective of this research is to analyze the methodologies used during times of the pandemic and the main difficulties encountered at the Euzamar Machado Vilar School, Duque Bacelar, MA.

To achieve the general objective, the following specific objectives were created: to assess the readiness of educators in using active methodologies, internet-connected technological tools, and hybrid learning; to discuss how the use of active methodologies, internet-connected technological tools, and hybrid learning contributed to the continuity and effectiveness of the teaching-learning process during the pandemic; to reflect on whether learning through active methodologies, ICTs, and hybrid learning for promoting the intellectual development of students during the pandemic is still being used or if there has been a return to traditional teaching methodologies; to identify activities that are being carried out through the use of active methodologies, internet-connected technological tools, and hybrid learning after the pandemic period.

This research is based on the theoretical foundations of both bibliographic research and field research within a qualitative case study approach. It is grounded in authors such as Bacich and Moron (2018), Daros (2018), Moran (2015), and Moron (2017).

For the development of the research, a questionnaire was administered to four educators, including two teachers from Early Childhood Education and two teachers from the 1st to 5th grade of Elementary Education at the Euzamar Machado Vilar School in Duque Bacelar, MA.

It is expected that this work can serve as a research source for professionals from various fields interested in this topic, particularly those in education, because it is considered relevant that all those involved in the educational process are familiar with and know how to use active methodologies, ICTs, and understand how hybrid learning works.

II. Literature Review

The Use of Active Methodologies in the Teaching-Learning Process

According to Oliveira (2013), the use of active methodologies involves interactive activities planned by the teacher with the purpose of finding solutions to problems. In this way, the teacher plays the role of a mediator and guide in the teaching and learning process, stimulating the student to reflect and take their own decisions, becoming a protagonist and responsible for their learning.

Active methodologies have been studied since the 1980s. However, with the emergence of the COVID-19 pandemic, active methodologies, technology tools connected to the internet, and hybrid teaching have become increasingly essential and urgent topics. This is due to the need for a shift from in-person to online teaching since March 2020. As a result of this event, educators have been reflecting more intensely on how to provide a more engaging learning experience for students.

For the successful implementation of this new teaching model, it is crucial for educators to delve deeper into the research of authors who present innovative pedagogical practices and apply them with greater confidence and clarity in the teaching and learning process. For example, educators should explore and reflect upon the following authors: Bacich and Moron (2018): These two authors provide active methodologies for innovative education in a theoretical-practical approach. Camargo and Daros (2018): They demonstrate what an innovative classroom should look like and teach how to adapt pedagogical strategies to promote active learning. Moran (2015): He guides how to transform education using active methodologies through media convergence, harmonizing education and citizenship. Moron (2017): He presents active methodologies and hybrid models in education.

It is asserted that understanding and reflecting on Moron (2017) is essential for the new teaching model because he presents active methodologies and hybrid models in education, expands the horizons of information, provokes new ways of teaching with new digital technologies, and fosters reflections on mediation.

All the knowledge based on the aforementioned authors provide competencies and skills for effective teaching, enabling a new teaching-learning process with openness to the development of effective planning built upon the observation of how students behave in the execution of activities guided by active methodologies.

In this sense, Moran (2015) confirms that active teaching and learning methodologies are increasingly present in classrooms, as well as in virtual learning environments, allowing integration between students and expressive learning spaces. In this context, Bacich and Moron (2018, p. 16) state:

Active methodologies for innovative education point to the possibility of transforming lessons into more vibrant and meaningful learning experiences for digital culture students, whose expectations regarding teaching, learning, and their own development and education differ from those expressed by previous generations [...].

In the face of the pandemic context and the need to change the way of teaching because students needed to continue their studies, it is understood that it was necessary to acquire other competencies and skills to perform pedagogical practices and guide them throughout the learning process. The focus on this acquisition is to provide excellence and equity in education, that is, to ensure that they have access to meaningful and quality learning.

Bacich, Tanzi Neto, and Trevisani (2015, p. 36-37) corroborate this by stating:

The role of the teacher is essential in organizing and guiding the process. The objective is for them to gradually plan activities that can meet the real demands of the classroom, identifying the need for the teaching and learning process to occur collaboratively, with a focus on sharing experiences and constructing knowledge through interactions with the group... [...].

It is understood that for interactions aimed at building knowledge, all possible digital technologies should be used, as they are essential for teaching and learning performance, allowing interaction and discussions. These technological tools also enable debate between teachers and students through synchronous and asynchronous classes. For example, teachers should create activities in which students can continue learning through research to answer exercises, create summaries, produce mind maps, and participate in discussion forums organized by the teacher on the content under study. This way, they interact and construct knowledge interactively and collaboratively, which is currently the most enjoyable and satisfactory form of learning.

The use of active methodologies in the development of the teaching-learning process stimulates students' curiosity. It presents new elements and encourages students to engage in problem-solving. As Barbel (2011, p. 29) states, "when faced with a problem, [the student] stops, examines, reflects, relates it to [their] history, and begins to redefine [their] discoveries." This means that students stay engaged in conducting research to find answers to their questions while also reflecting on what they are learning and how much progress they are making while completing the activities proposed by the teacher.

The use of active methodologies through well-designed activities allows the teacher to organize methodological strategies that enable active learning, where students continue to learn independently of their or the teacher's presence in the classroom. The teacher uses methodologies in which the student constructs their learning autonomously.

In the understanding of Barbosa and Moura (2013), with these teaching method practices, the teacher's role is to guide the learning process. Their action is to always be attentive to guide research teams. Teaching is not centered on the teacher; instead, they must contextualize the problem for a targeted learning situation. Interaction among students in seeking solutions to questions actively occurs, and the teacher's role is more of a facilitator.

The use of ICT (Information and Communication Technologies) in education

In current times, the media presents itself as a fundamental factor in society's life, and without it, one falls behind in reality. Watching television, browsing the Internet, talking on the phone, for example, are everyday activities for the majority of the world's population. People who do not have access to these technological tools end up without access to essential information in today's world. For instance, not having a computer, laptop, or even a cell phone connected to the internet means a person cannot perform various tasks like paying utility bills through an app without going to the bank or making a bank transfer.

According to Maron (2015), the use of technology influences society all the time, and as a consequence, education, both informal and formal. The influence of media on society and education has been a much-discussed and questioned topic nowadays. Some references view it as positive, while others see it as a negative experience, but everyone agrees that it is fundamental in the new construction of knowledge. This is especially true for students born in the era of technological and digital tools, as they struggle to feel engaged in the teaching and learning process when it does not involve the use of such tools. For digital natives, school activities without the use of these technological means feel disconnected from their reality.

Supporting this idea, Moran (2015) notes that those involved in the educational process are changing the way they teach and learn. Both schools and teachers are seeking other ways to teach, using active methodologies that involve the use of technology. This way, students learn actively even when the teacher is not physically present. They can solve problems through individual and collective research, committing themselves to the process of constructing their knowledge, with the student being the main protagonist responsible for acquiring their own learning.

Teachers who are changing their teaching methodologies by incorporating digital tools into their pedagogical practices aim to encourage and expand the use of communication and information technologies to make education more appealing to students today. This way, students learn with pleasure and quality, while also being educated to understand the importance of using such tools to be competent and up-to-date in the job market.

The intention is to provide students, in advance, with the skills they will need in the workforce. Therefore, teachers are teaching them to be capable of taking autonomous positions and stimulating their enjoyment of research and the understanding of the relevance of the skill to discover fundamental answers to challenges they will encounter in their educational lives and in the world of work.

A significant number of students, when enrolled in schools today, have already had or currently have contact with some type of technological device, such as tablets, smartphones, and notebooks. Therefore, it is indispensable for teachers today not to plan the teaching process without incorporating the main technological

tools, such as adaptive learning platforms, study apps, material banks, projectors, and digital reading solutions. Hence, it is of fundamental importance for teachers to continue seeking to understand and learn about the use of technological tools so they can use them appropriately throughout the teaching process. In this sense, Jordão states:

Digital technologies are undoubtedly very familiar resources for students. The speed of access to information, the random access format filled with connections, and the countless possibilities of pathways, as seen on the internet, for instance, are much closer to how students think and learn. Therefore, using these technological resources to benefit education becomes the challenge for teachers. They need to appropriate these resources and integrate them into their daily classroom routines (JORDÃO, 2009, p.10).

All those involved in the teaching and learning process understand the importance of stimulating reading for proper education. With the use of technological resources, various texts created by different sources and presenting distinct content are made accessible to students. This allows them to access and interact with their peers, discussing their discoveries and learnings. In addition to texts, supplementary materials such as videos, audios, animations, simulations, and interactive maps are provided, which enhances learning and offers different ways to contextualize the content under study. In this regard, the National Curriculum Parameters (PCNs) from 2000 already clarify that:

The new technologies of communication and information are part of daily life, regardless of physical space, and create needs for life and coexistence that need to be analyzed in the school environment. Television, radio, information technology, among others, have brought people closer through images and sounds to previously unimaginable worlds. Technological systems in contemporary society are part of the productive world and the social practice of all citizens, exerting a power of omnipresence as they create forms of organization and transformation of processes and procedures (PCN's, 2000, p.11-12).

It can be observed that the use of methodologies with the integration of technologies in the teaching-learning process is not a very recent recommendation, as the PCN's (National Curriculum Parameters) in 2000 already recommended and emphasized their importance in contemporary society.

Hybrid learning as a current trend

Hybrid teaching has been in evidence in Brazil since 2014 and is currently one of the major trends in 21st-century education. It provides a combination of in-person and online teaching, thus linking education with technology, which is already present in many aspects of society and education. In this way, in a class, a student can spend the first lesson in a computer lab using online resources to start studying a specific content, where they can interact with both the teacher and their peers.

They will continue to learn in an increasingly autonomous manner, exchanging knowledge with their peers and also building their knowledge through research inside or outside the classroom. All of this is only possible due to an understanding of the trend that students can continue learning without the teacher being present at all times. It is necessary to understand the similarity between the terms "Hybrid" and "Education:

Education is also hybrid because it takes place within the context of an imperfect society, marked by contradictions in its policies and models, discrepancies between stated ideals and actual practices. Many of the socio-emotional skills and values advocated are not consistent with the everyday behavior of some administrators, educators, students, and families. (MORAN in BACHIC, TANZI NETO e TREVISANI. 2015. p. 26).

Therefore, the attempt to define hybrid education in formal education is not so simple. Currently, we can observe educational institutions that typically use various methodologies to develop the educational process. Some prefer to continue using the curriculum model based on disciplines, feeling secure in their familiarity with these methods. Others venture into the use of active methodologies as a way to engage learners more, developing teaching through interdisciplinary projects.

Yet, some institutions take more daring approaches, reworking their projects with new methodologies to awaken new ways of learning in students, according to their individual rhythms.

This change in the way educational institutions carry out the educational process is due to the need for schools to adapt to the rapid changes that constantly occur in all sectors of society. The accelerated advance of technology makes it no longer make sense for schools to continue with an education that is not linked to the use of technological tools in education. Technology is a part of many students' lives, and for it to make sense in the lives of learners, educational processes must be organized with the inclusion of various technological tools.

Furthermore, due to the global pandemic situation, it is no longer acceptable for educators to not focus on the use of methodologies that can be applied in both in-person and remote settings, thus combining face-to-face and online teaching. In this regard, Horn and Staker (2015) state:

Today's students are entering a world where they need an education system centered around them. Student-centered learning is essentially the combination of two related ideas: personalized instruction (some call it individualized instruction) and competency-based learning (also called "mastery learning," "competency-based education," or sometimes "standards-based learning" (HORN; STAKER, 2015, p. 8).

It has been and continues to be of paramount importance that the development of the teaching and learning process be planned in such a way that students are at the center of this process. In other words, teaching needs to be student-centered, and this is where the implementation of hybrid learning comes into play.

The goal is to enable students to continue learning without necessarily needing the physical presence of the teacher. Through the use of various technologies, they can continue learning, constructing their knowledge interactively and independently, utilizing new technologies.

In this regard, students will have the opportunity to share what they have learned on their own with their peers and teachers. In both face-to-face and online settings, they can ask questions, deepen their understanding, and share everything they have been learning. Throughout the teaching and learning process, they will be producing their knowledge, developing concepts, planning and executing projects, discussing content, answering exercises, and making parallels and comparisons between what they knew and what they are learning.

As Almeida (2021) points out, there were many doubts about the resumption of in-person classes. The difficulties experienced by educators and students in the first year of the coronavirus pandemic made it clear that the traditional teaching model should not continue. Therefore, there was a great effort from everyone to learn how to use new technologies connected to the internet.

The return to classes requires planning and restructuring so that both in-person and distance learning can be possibilities that contribute to accommodating the entire educational community. It is necessary to create environments that combine in-person and virtual activities, opening the school to the world of digital technologies (ALMEIDA, 20221, p. 14).

It is believed that all of this contributes to the development of the teaching and learning process in which students become the true protagonists of their learning, as educators are more prepared for the use of digital media in education, active methodologies, and hybrid teaching.

The methodologies used during the COVID-19 pandemic period

A COVID-19 pandemic had impacts on all sectors of society worldwide, and educational institutions were no exception. Due to the necessary social distancing measures to prevent the spread of the virus, schools and universities had to suspend in-person classes. In Brazil, states were responsible for issuing decrees mandating the suspension of classes, in accordance with the recommendations of the World Health Organization (WHO) to mitigate the virus's spread.

In response to the suspension of in-person classes, the Brazilian Ministry of Education (MEC) issued Portaria No. 343, which called for the replacement of in-person classes with remote learning through digital platforms, referred to as remote teaching.

Appenzeller et al. (2020) emphasize that remote teaching emerged unexpectedly, presenting challenges for both teachers and students who needed to adapt to this new mode of education to continue the teaching and learning process. Various challenges emerged, including the need for teacher training to acquire the competencies and skills necessary for using technological tools in the teaching process, student adaptation, addressing the psychological impact on the community, time management for study, and the development of public policies to ensure access to technology and the internet for a significant portion of students. These concerns were shared by the government and all stakeholders in the education process.

In April 2020, the MEC issued a new opinion (CNE/CP No. 5/2020) stipulating that teaching should take place through non-face-to-face activities and that the minimum required hours of instruction should be maintained.

To comply with this determination, a wide range of digital platforms and tools were used to provide access to video lessons, both synchronously and asynchronously. Additionally, social media, websites, and other evaluative activities were employed. This situation prompted a critical examination of students' access to these platforms, as not all had access to electronic devices such as smartphones, tablets, and computers connected to the internet, particularly given the prevalence of poverty among students in the Brazilian public education system.

In this regard, it is important to consider the structural weaknesses and inequalities in Brazilian society that exacerbate the current scenario due to the pandemic in our country, particularly in education. If we observe differences in proficiency, literacy rates, and net enrollment rates related to socioeconomic and ethnic-racial factors, it becomes evident. Also, as part of this structural inequality, it is worth noting the differences in access to the digital world by students and their families (BRASIL, 2020, p. 5).

The lack of access to internet-connected tools left many students excluded from the learning process, leading to school dropout as they couldn't participate in classes or complete activities suggested by teachers. According to Cunha et al. (2020), during the pandemic, this exclusion affected students who were enrolled in school in 2020. These were the same students who, prior to the isolation measures, regularly attended school. Not having the necessary tools to participate in classes caused them to feel excluded and, consequently, demotivated about the teaching and learning situation, leading many to permanently drop out of school.

Furthermore, as Cunha et al. (2020) point out, families who didn't have enough devices for all their children to stay connected also faced difficulties. Many families reported having only one smartphone for 3 or 5

students to attend classes, so they had to take turns. This rotation also discouraged many students because they realized they were missing crucial explanations, which made it challenging for them to complete activities due to a lack of necessary tools. Lima (2022, p. 12) states, "[...] a situation that determines fragility in the condition of being digitally included, constantly at risk of being excluded."

On the other hand, students in private schools may have been less affected during this period because their parents likely had better financial means to acquire equipment and connect to the internet. As a result, these students were able to participate in exams such as the National High School Exam (ENEM) and university entrance exams more easily, giving them an advantage over public school students. However, Alves (2020, p. 351) emphasizes that "there is no guarantee of teaching quality or that private school teachers are more qualified than those in the public system, as the investment in teacher training by private institutions is much lower than the training provided by municipal and state education departments."

Supporting this perspective, Oliveira et al. (2020) warn that even with investments in teacher training, many educators likely didn't have the necessary skills to carry out the teaching and learning process using various applications and/or technological resources. In other words, they didn't know how to handle these new tools, which created numerous challenges for adaptation. Reflecting on these issues helps us understand that many challenges emerged due to the technological mediation of the teacher in the reorganization and performance of their teaching practice. It required a considerable effort to adapt to this new reality.

According to Oliveira et al. (2020), given the situation in which remote teaching became necessary to continue the educational process, teachers needed to quickly learn to use technological tools to ensure the right to learning for all. This was something they weren't fully prepared for, but most teachers believed they could learn to continue ensuring students' learning.

Another important factor was that teachers sought to learn from what colleagues and institutions were doing regarding remote teaching. They exchanged ideas and added to their knowledge during the period of social distancing due to the COVID-19 pandemic, aiming to understand how other states and countries were addressing the new educational scenario. Thus, each teacher performed their educational activities according to their capabilities and learning in handling technological resources.

According to Pereira (2021), given the current reality in which most of our activities require us to be connected through new technologies, it is increasingly challenging to capture students' attention for education that doesn't involve various technological tools, making lessons more interesting and dynamic, contextualized with the reality in which digital natives are immersed. Therefore, it is necessary for the methodologies used during remote periods with the use of technological tools to continue even after this period. Continuous training should be offered to teachers to acquire more skills to incorporate a variety of technological tools into their teaching, making it more dynamic and engaging.

It is also crucial for teachers to become familiar with active learning methodologies, as these place the student at the center of learning, making them responsible for expanding their knowledge. The use of these methodologies allows teachers to guide the teaching and learning process, where students feel like agents of change in their reality, as they can learn better and with higher quality.

In this context, the contributions of Camargo and Daros (2018) are relevant because they emphasize that teaching and learning methods are undoubtedly the greatest educational challenges in the current scenario. It is necessary to discover, understand, and learn how to make teaching more attractive, with the primary goal of organizing teaching in a way that students understand as they use visual and motor stimuli, making learning fun. These changes in teaching need to consider the new social context, providing an understanding of the true role of the school as an institution in constant change to keep up with contemporary transformations. In this context, teaching will not only be more enjoyable but also of better quality, as students understand their role in their intellectual and social growth.

According to Diesel (2017), educators must oppose "solid" and content-based pedagogical experiences because current social demands require teachers to adopt a new approach to teaching. They must establish a new relationship between teaching and knowledge, as they are responsible for guiding the teaching and learning process.

In this context, it is essential for educators to continuously improve their skills, and ongoing training is an excellent option for acquiring new learning about how to teach effectively in today's context. It's essential to recognize that a bachelor's degree alone is not sufficient for teaching, given the needs and interests of today's students.

Resisting change often contributes to the perception that students have of education as something rigid and unchanging, with the sole purpose of getting them to "pass" and eventually reach higher education. Therefore, the continuous and rapid changes in contemporary society demand a new teaching profile. Hence, there is an urgent need to rethink teacher education, starting from the diversity of essential knowledge for their practice. This shift moves away from a technical, instrumental approach towards one that seeks to reframe education, valuing the knowledge that has already been constructed. This new perspective encourages a reflective, investigative, and

critical attitude (DIESEL, 2017, pág. 269).

Observing the traditional teaching system, it can be noted that a teacher, to perform their profession, only needs to master the content of their area, that is, the subject they are teaching, and that alone is sufficient to be an excellent teacher. However, it can be affirmed that this is not enough; it is essential for them to know how to use technological tools to facilitate the teaching-learning process. They must be aware of what it means to know how to do and how to do it, combining practical and theoretical knowledge. In other words, it's not enough for a teacher to master the content of their field of expertise; they must also master different teaching methods to meet the real needs and interests of their students.

In Brazil, the teaching and learning processes carried out by the majority of teachers are still traditional, where the student is considered a passive recipient, waiting to receive knowledge and information from the teacher. According to Costa and Venture (2021), it is crucial in teacher education to ensure that educators learn about the use of the necessary tools to overcome the barriers created by traditional teaching methods. While traditional teaching methods are of great importance, they should not be the only methodology used by teachers to impart knowledge to their students. The classroom must adapt to the constantly changing globalized world, engaging in the ongoing improvement of new tools that emerge continuously, and teachers should not be left out of this process of transformation.

According to Macedo et al. (2018), Active Learning methodologies are based on a critical and reflective education concept, aiming to stimulate the teaching-learning process, with the positive outcome being the engagement of students in expanding their knowledge. Therefore, the educational path places the student at the center of the educational process, not just the subject matter, with the aim of developing other skills in students, leading them to reflect on this process, providing a fresh and more interesting perspective on education, which now becomes much more free and engaging.

Therefore, in this understanding, active learning methodologies aim to activate students' learning, placing them at the center of the process, in contrast to the role of passive observers (Preira, 2021). It is essential to change the idea that education for students is something meaningless, tiresome, and should be based solely on their ability to memorize concepts and formulas, helping students understand that what they learn in school can and should be used to understand the society in which we live and the nature that surrounds us, ultimately leading to a fairer and more equitable way of life and providing students with a new worldview, making the educational process more meaningful.

Often, teachers complain about their students' lack of interest in their classes and face challenges with the new technologies that constantly invade their classrooms because they are more interesting to students. When teachers learn to use these resources and incorporate them into their teaching, they find that their classes capture students' attention, making them increasingly engaged and present in the educational process.

It is worth noting that, through this perspective, even when using active learning methodologies with a central focus on the student, the goal remains the same, as Lima (2022) points out:

For in both cases, the student's learning is the goal to be achieved, and the use of technology is not presented as a solution but as a teaching tool that, when used effectively, can become highly efficient. Starting from increased student interaction in the process of constructing their own knowledge, which is the main characteristic of an active learning approach, the learner gains more control and active participation in the classroom. This approach demands various cognitive actions from the student, such as reading, research, comparison, observation, imagination, data gathering and organization, hypothesis formulation and confirmation, classification, interpretation, criticism, searching for assumptions, synthesis construction, and application of facts and principles to new situations, project and research planning, analysis, and decision-making (LIMA, 2022, p. 17).

It is understood that making these changes is not easy because every teaching and learning methodology is based on a conception of how the teacher teaches less and the student learns more. Therefore, each one, throughout the process, both the student and the teacher, acts according to the conceptions of education and learning they have. In this context, it is understood that the teacher is primarily responsible for the change, and good initial training is fundamental for them to carry out their role with quality. However, they must understand that it is essential to continuously participate in professional development to stay updated and be able to perform their roles as educators effectively, with a focus on providing meaningful education for their students, which is the main focus of those involved in the educational process.

To achieve their goal when using active methodologies, teachers often realize how dynamic the process is and must guide the students so that they can find solutions to the problems presented, using the suggested tools. The problem is meant to stimulate students through these tools, and as they find the solution to the problem presented during the process, the student will learn in a more satisfying and enjoyable way, becoming increasingly active and committed to their learning.

The teaching and learning process through active methodologies occurs using problems, but theoretical foundations are needed to plan pedagogical action and care must be taken not to excessively use teaching

techniques.

At this point, it becomes evident that the implementation of any methodology presupposes that whoever proposes it is properly prepared for it, both in its theoretical and practical aspects. Only by meeting these requirements can active methodologies effectively fulfill their role, which is to make the student learn more actively. Thus, it is necessary to meet all the requirements related to the use of these methodologies so that the desired objectives are efficiently achieved.

Diesel (2017) emphasizes that in the process of using active methodologies, when the teacher used traditional methodologies, they were at the center assuming the role of the main actor. Their importance is not diminished because they now have an even more fundamental role as the mediator of the process, also acting as a guide for the student on the right path. As a guide, the teacher teaches the student to think, no longer as a transmitter of knowledge to passive students, but as a provocateur and challenger, which also promotes the conditions for construction, reflection, understanding, and transformation, while respecting the autonomy and dignity of the traditional teacher.

Based on Bebel (2011), we can understand that Active Methodologies are based on ways to develop the learning process, using real or simulated experiences to solve knowledge acquisition issues successfully, challenges that come from the main activities of social practice, in various contexts. By stimulating students to solve problems that are part of learning through the daily life in which they live, it leads them to reflect on their own reality but also to acquire a social and critical view of different realities.

III. Methodology

School Context Characterization

This research was conducted at Euzamar Machado Vilar School, Duque Bacelar – MA, located in the municipality of Duque Bacelar – MA. The school provides all the necessary facilities for the comfort and educational development of its students. The school's physical space is divided into ten classrooms, an uncovered courtyard, a reading room, a principal's office, a secretary's office, a cafeteria, two male bathrooms, two female bathrooms, sixteen fans, and six air conditioners.

In terms of personnel, the school consists of a general director, pedagogical supervisors, a secretary, two general service assistants, and twenty-one teachers. The school serves an approximate student population of 200.

This study is a field research with a qualitative approach based on the principles of Marconi and Lakatos (2011). Qualitative research was chosen because it is believed to provide answers to our questions. In this regard, Hancock (2002, p. 2, cited in SANTOS, 2010, p. 42) states that: '[...] qualitative research is related to finding answers to questions that start with: Why? How? In what way?' Therefore, we will obtain answers for the construction of our research.

The research was conducted with 2 (two) teachers from Elementary School II and 2 (two) teachers from the 5th grade of Elementary School I, representing 50% of the total. The teachers have an age range between 30 and 50 years. All of them hold a degree in Pedagogy and have more than 10 years of teaching experience.

A pre-designed questionnaire was used, containing both open and closed questions about the subjects and the topic in question. Gil (1999, p. 128) defines the questionnaire 'as a research technique consisting of a greater or lesser number of questions presented in writing to individuals, aimed at gaining knowledge about opinions, beliefs, feelings, interests, expectations, experiences, etc.'

The aforementioned author (1999, p. 128/129) described the following advantages of the questionnaire over other data collection techniques:

a) It allows reaching a large number of people, even if they are dispersed over a very extensive geographical area, as the questionnaire can be sent by mail.
b) It involves lower personnel costs, as the questionnaire does not require the training of researchers.
c) It ensures the anonymity of responses.
d) It allows people to respond at their convenience.
e) It does not expose researchers to the influence of the interviewee's opinions and personal aspects.

The data analysis was conducted by categorizing the factors obtained in the interview and selecting them in order of similarity with respect to the categories: computer, media, pedagogical practices.

After data collection, tabulation and analysis were performed by classifying the factors obtained in the interview and selecting them in order of similarity to the research theme, ensuring the achievement of the expected results according to the objectives proposed in this work. Thus, the data were grouped and aggregated, allowing for the presentation of the obtained results and a critical and interpretative analysis, ultimately concluding the research.

IV. Result And Discussion

The considerations made in this chapter are based on the responses obtained through the questionnaire applied to collect information on the analyzed theme. To maintain discretion, the participating teachers in the research were identified as D1, D2, D3, and D4. According to the accounts provided by the educators, knowledge of the methodologies used during the pandemic period was obtained at Euzamar Machado Vilar School, Duque Bacelar – MA.

Next, the educators' conceptions regarding the methodologies used during the pandemic period will be discussed. The first question asked was, "To continue teaching during the COVID-19 pandemic period, did you feel prepared with competencies and skills for the use of active methodologies and internet-connected technological tools?" In response to this question, the following testimonies were obtained:

(D1) No, initially, it was very difficult. We had to adapt and learn together, both the family and the school.

(D2) No, the COVID-19 pandemic period was challenging because the suspension of in-person school was not foreseen, but it happened.

(D3) No, I believe that the vast majority did not feel prepared, but over time, like other professionals, I managed to adapt to this form of teaching.

(D4) I wasn't prepared; I had to reinvent myself with the "new normal," such as forming WhatsApp groups, conducting Zoom classes, videos, and remote activities.

With different arguments, the educators described how they felt about continuing teaching during the COVID-19 pandemic period. According to their statements, they did not feel competent and skilled in using active methodologies and internet-connected technological tools. However, with considerable effort and the collaboration of both families and schools, it was possible to continue the teaching and learning process. In their arguments, the educators emphasized the importance of unity in acquiring competencies and skills to continue the teaching and learning process during the COVID-19 pandemic.

Supporting the educators' arguments in response to question one, Rêgo et al. (2020, p. 06) state, "For some, it was impossible to imagine technology-mediated teaching, physically distant [...]. However, necessity drove us. [...] Remote teaching has highlighted the leadership of teachers, technicians, administrators, and students, an incalculable gain."

Technological tools and digital resources connected to the internet, especially smartphones and computers, were indispensable during the pandemic period as they enabled the continuation of education during social distancing due to COVID-19. Regarding these tools, Valente (2009) states, "The interaction between students and computers needs to be mediated by a professional who understands the potential of the material to be used through this tool, the computer, both from a computational, pedagogical, and psychological perspective." "[...] Students can use all these social elements as sources of ideas, knowledge, or problems to be solved through the use of the computer.

The second question was, "In your opinion, did the use of active methodologies, internet-connected technological tools, and hybrid teaching contribute satisfactorily to the continuity and effectiveness of the teaching and learning process during the COVID-19 pandemic period?" The teachers responded as follows:

(D1) It was not satisfactory due to the difficulty of explaining lessons through technological tools and also because many students did not have internet access or the necessary devices.

(D2) Yes! There was a significant contribution when innovation and knowledge come together. The pandemic drove disruptive changes that broke long-established patterns in our daily lives.

(D3) Yes, as technological tools were of extreme importance for the teaching and learning process during a pandemic period.

(D4) No, despite being necessary during this period, these tools could not effectively replicate quality education and ended up increasing the school dropout rate due to the lack of technological tools for participation in classes.

In the teachers' responses to the question about the use of active methodologies, internet-connected technological tools, and hybrid teaching, there are both convergences and divergences regarding their contributions to the continuity and effectiveness of the teaching and learning process during the COVID-19 pandemic period. While they acknowledged that technological resources connected to the internet and the use of active methodologies contributed to the continuity of teaching, they reported that the tools were indispensable, which led to the exclusion of students who did not have the socio-economic conditions to acquire them during the period of social distancing. All these resources allowed the continuation of education. This context reflects the globalization in which everyone must be connected and aware of what is happening worldwide. The issue of the internet is highlighted in our study by Ribeiro (2007) when he states:

The internet is a technology that facilitates students' motivation, due to its novelty and endless research possibilities. This motivation increases if the teacher creates an atmosphere of trust, openness, and cordiality with the students. More than the technology itself, what facilitates the teaching-learning process is the teacher's ability to establish authentic communication, build trust with their students through balance, competence, and friendliness in their actions." (RIBEIRO, 2007, p. 61).

In this context, we perceive the internet as a means that can lead us to an increasing homogenization of culture in general and is also a channel for constructing knowledge through the transformation of information by students and teachers. However, as long as projects are not developed and implemented with the aim of providing access to these tools for all students, the issue of exclusion will continue to grow, as we are aware of the relevance of these tools in the educational process.

The third question was as follows: "Has the learning acquired about the use of active methodologies, ICT, and hybrid teaching during the COVID-19 pandemic period to promote the intellectual development of students continued to be used, or have you reverted to traditional teaching methodologies?" The following results were obtained:

(D1) No, the technologies used during the pandemic do not replace the context of in-person classes but should complement the schoolwork in a transformative perspective of teaching.
(D2) It continues to be used for personal and family meetings, contributing to students' development.
(D3) I continue to use some tools like WhatsApp groups and data shows, as well as traditional methods.
(D4) After the pandemic period, the use of traditional methods returned, but some teachers adopted certain technological tools in teaching, such as Classroom or online forms, to facilitate the submission of assignments.

Based on the teachers' testimonies, there are convergences and divergences regarding the use of the knowledge acquired about active methodologies, ICT, and hybrid teaching during the COVID-19 pandemic period to promote students' intellectual development. The interaction between students and technological tools needs to be mediated by a professional who understands the potential of the resources to be used, both computationally and pedagogically and psychologically.

Teachers need to be aware of this need because it is necessary to learn how to handle the tools safely and satisfactorily to increase their integration into the teaching and learning process, encourage participation, and enable the advancement of knowledge. Regarding this question about technological resources, hybrid teaching, and active methodologies, "[...] Students can use all these social elements as sources of ideas, knowledge, or problems to be solved through the use of the computer." (VALENTE, 2009, p.41).

The fourth open-ended question directed to educators was, "To continue the teaching and learning process, what activities were carried out through the use of active methodologies, internet-connected technological tools, and hybrid teaching during the COVID-19 pandemic period?" The following responses were obtained:

(D1) We used apps, video lessons, remote activities, and one of the significant advances was the popularization of digital communication apps like Zoom, connecting people of all kinds for various purposes.
(D2) Playful activities were performed with the aim of making students enjoy online classes and thus absorb the content significantly.
(D3) Platforms like Google Meet and Zoom were used, and parents also picked up tasks at school.
(D4) Dialogical expository lessons and projects were used, allowing students to explore problems and seek solutions, as well as inverted lessons, where students accessed online content while taking the opportunity to ask questions and interact with peers.

There is consensus in the educators' statements as they described using various activities to continue the teaching and learning process through the use of active methodologies, internet-connected technological tools, and hybrid teaching during the COVID-19 pandemic period. It is evident that they found the way they conducted teaching during the pandemic period to be very interesting, aiming to develop activities that would help students appropriate knowledge and become autonomous.

In this context, reference is made to authors who describe activities using the mentioned resources and techniques:

1. Activities should involve a significant amount of questioning, problem-solving, and other active learning activities, compelling students to retrieve, apply, and expand upon the material learned online.
2. Students should receive immediate feedback after completing in-person activities.
3. Students should be encouraged to participate in both online and in-person activities, as they are counted in the formal evaluation of students, meaning they carry a grade.
4. Both online materials and in-class learning environments should be highly structured and well-planned (BACHIC; MORAN, 2020, p. 84).

Bachic and Moran (2020) argue that with the use of internet-connected resources, teachers can post activities for students to complete in a virtual learning environment. Later, the teacher can access this material and identify difficulties, actual needs, and student interests. Based on this information, the teacher can propose additional activities that will contribute to better learning and/or a deeper understanding of the content being studied.

The fifth question directed at educators was, "What activities are being carried out through the use of active methodologies, internet-connected technological tools, and hybrid teaching after the COVID-19 pandemic period?" The following responses were obtained:

(E1) Research, video lessons, and information are conveyed through technology.
(E2) Using games to stimulate healthy and participative competition among students, as well as video lessons, live streams, and lectures during classes to promote debates and conversations with students, encouraging creative thinking.
(E3) After the COVID-19 pandemic period, new technologies are present in teachers' and students' daily lives through films, activities with documentaries, and video execution.
(E4) Activities using data projectors, videos, and WhatsApp.

There is agreement in the educators' statements and differences in some activities regarding their application after the pandemic. What can be observed is that the learning during the pandemic period served to understand the importance of using active methodologies, internet-connected technological tools, and hybrid teaching. These educators assert that they continue to apply the skills acquired during the pandemic period in the current teaching and learning process. "First, we realize that the teacher needs to be open to learning about other tools beyond those they already use - often, students themselves have references that have the potential for learning..." (BACHIC; MORAN, 2020, p. 126).

V. Conclusion

Based on the analysis of the methodologies used during the pandemic at Euzamar Machado Vilar School, Duque Bacelar – MA, which led to the construction of this work through bibliographic and field research, it is evident that the use of computers, cell phones, and other digital media, in general, can bring great relevance to society and, more specifically, to the educational context. These are useful and necessary pedagogical tools for teachers to develop activities and enable students to go through a vast process of knowledge construction.

It was observed that access to digital technologies has been rapidly growing in the educational scenario, especially during the period of social distancing due to the COVID-19 pandemic. The use of these tools can provide the continuity of education and different advancements in the teaching-learning process, including the interaction between teachers and students. It is also an easily accessible means of accessing information and other teaching techniques. Therefore, teachers need to be attentive to two conditions: staying updated with changes and not relying on them as the sole means of work, being careful to observe how students use them as well.

The use of these tools, coupled with active methodologies and hybrid teaching, has facilitated the intellectual development of students during the pandemic period, and these resources continue to be used even after this period. The preparedness of educators in using these tools, active methodologies, technology tools connected to the internet, and hybrid teaching, along with the efforts and deepening of studies by teachers, has contributed to the continuity and effectiveness of the teaching-learning process during the pandemic, thus promoting the intellectual development of students. It is worth noting that the use of competencies and skills has been evidenced even after the pandemic.

In conclusion, technological tools alone are not enough to revolutionize education or to meet all the real needs and interests of students that arise in the daily practice of the classroom. It is essential for educators to be aware of their role as guides throughout the teaching-learning process without losing sight of the fact that students will only be able to construct their knowledge with proper guidance and supervision from the teacher, who should be attentive to these issues in order to provide quality learning for all.

This research has highlighted the importance of computers, cell phones connected to the internet, and other media for society and, especially, for education. Through bibliographic research and field research with teachers, we sought to point out the pros and cons of these pedagogical contribution tools, which are decisive. Above all, this work signals reflection on pedagogical practices, something that must be constant because the handling of knowledge is alive, in a state of constant movement and change. Educators, especially pedagogues, need to be immersed in this context of openness to expanding and updating their knowledge for the performance of conscious and successful pedagogical practice.

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