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ACTIVE METHODOLOGIES AND ASSISTIVE TECHNOLOGIES IN SPECIAL EDUCATION: CONTRIBUTIONS TO INCLUSION PRACTICES.

Marcos. Maria da Conceição Simba Mavungo [1]
Mendes. Ivanise Nazaré Mendes2

SUMMARY

This academic essay aims to analyze the use of active methodologies and assistive technologies in special education, and the challenges for the practice of inclusion, but particularly in basic education. It is a bibliographic research based on literature, theses and dissertations of national and international authorship. Through the reading of the analyzed collections, it is clear that active methodologies can be used in the pedagogical practice of teachers because, mediated by assistive technologies, they promote the inclusion of students with disabilities; facilitate their participation in the teaching-learning process, awaken the need for didactic planning with active methods and curricular updating, and inhibit traditional pedagogical practices.

Keywords: Active methodologies, digital technologies, inclusive education and pedagogical practices.

1 Introduction

Active methodologies are those that promote the deconstruction of model of traditional and banking education, which considers the student as a bank of deposit of knowledge, which promotes vertical teaching, inhibiting the possibility the student to be the protagonist of his own learning (Freire, 2011). Studied by researchers in the field of education with the aim of reflecting on their teaching practice and the possibility of adopting innovative methodologies that contribute to promotion of an emancipatory and humanized education (FREIRE, 2002; BAZZO, 2022).

[1] Professor at the Department of Humanities, Higher Institute of Educational Sciences.ISCED-Huambo/Angola.
[2] Advisor – PhD in Education. Manager of the Wilson Camargo State Institute of Education

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Life is made of changes, and science is no exception to this rule; because in the view of Freire (2011) it is only possible to talk about change when the subject becomes aware of the his oppressed state, he sets out in search of freedom and makes himself available for acquisition of knowledge that will consequently produce critical awareness, development of their autonomy and cognitive stimulation.

Information and communication technologies can contribute significantly in this context, and it is up to the teacher to know and evaluate the potential of the various media available to you and provide opportunities for conscious use by their students, aiming to involve them and support them in the construction of knowledge. This appropriation requires not only conscious and critical use, "but also a creative and authorial production with and through the media in digital culture" (Lapa & Coelho, 2021, p. 5). Each teacher can find the most appropriate way to integrate various technologies into their teaching practice. But it is also important to expand and learn to master the forms of communication interpersonal/group and audiovisual/telematic communication (Moran, 2000). Since "technologies invade our lives, reaching all spheres of life, social life and transforming the way man thinks, feels and acts" (KENSKI, 2008, APUD DOS SANTOS AND PEREIRA, 2016, p. 99).

In addition to this issue, we believe it is necessary to analyze the use of active methodologies mediated by assistive technologies3 in classrooms with students with special educational needs in basic education, in perspective of inclusion, because, in David's view Buckingham (2022, p.11), "media education is a basic right for everyone us and today it is as important as the air we breathe." As the practice pedagogical takes place in the "classroom" of a given geographic space considered a school, it has a fundamental role in this process of integration and socialization of the subject that occurs within it, representing an allied partner for the inclusion of students with disabilities in the school environment; creating conditions

[3] Assistive Technology - AT is a still new term, used to identify the entire arsenal of resources and services that contribute to providing or expanding functional abilities of people with disabilities and consequently promoting independent living and inclusion. (TONOLLI, 2006 & BERSCH, 2017).

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favorable to accessibility and combating ableist behaviors[4] ,
enabling the construction of a school where human and practical relationships
pedagogical measures are indiscriminate and exclusive, enhancing the
learning of all human beings involved in the school space (LUZIA,
2021).

2 Active Methodologies: What They Are and What They Are For.

Active learning methodologies are considered alternatives
valuable with great potential to meet the demands and challenges of education
contemporary, developing in the student the ability to find answers through
yourself, about your doubts, conflicts during your learning,
enhancing autonomy in their know-how (DAROS 2018, p.12). They are also
considered learning tools, as they are alternative indicators with
great potential to meet the demands and challenges of current education, making
students are autonomous subjects and responsible for their own learning
opposing the unilateral action characteristic of banking and traditional education (DAROS, 2018,
LIBÂNEO et al., 2022, FREIRE, 1996).

The constant changes experienced in the human sector, driven by
digital technologies lead us to implement changes that will certainly
way, have an impact on education, forcing us to innovate teaching practices, as
people are increasingly connected, and their actions are interrelated,
innovates according to the scientific contribution of Daros (2018), who systematizes
reinforces the idea of innovation as a practice that has existed since ancient times, meaning to
make new, to renew, to reverse the old order of an object or thing,
or even the act of applying a known idea in another context;

> And according to (Terre 2007 apud Daros 2018) everyone has the ability to innovate, in any area of their professional activity, as it is a process characterized by “creativity,

[4] Understood as "a bodily and behavioral normativity based on the premise of the individual's total functionality. It aims to reveal discriminatory, abusive, and oppressive behaviors, driven by the conviction that people with disabilities are inferior, as they are not considered capable" (CAMPBELL, 2016).

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> **the production of new ideas that must be implemented and capable of generating new knowledge" (DAROS 2018, p.5; FANTIM; RIVOLTELLA, 2021.)**

In this context, innovation in the educational field must be understood in in a broader way because it seeks to broaden understanding in relation to pedagogical practice as described by Carbonell (2002) apud Daros (2018) emphasizing that the set of actions triggers a change in attitudes, ideas, cultures, paradigms, models and pedagogical practices. Providing a renewed professional, with a new educational vision, with new projects, curricular innovation and teaching-learning strategies, and a close look at process of socialization of knowledge, discontinuing the verticalization of teaching. Regardless of the implementation of a model or strategy innovative, "every practice must have an intentional character and requires planning and systematization" (DAROS, 2018, p.5).

According to Paulo Freire (2002, p. 12) "Teaching is not transferring knowledge, but create the possibilities for its production or construction." Schools are places where new skills must be acquired or recognized and developed; however, it is necessary to know the function of the school that is that of "teaching" Bazzo, (2021), to generate knowledge, with computer literacy being one of these new skills is that a question immediately arises "that of differences in access to information and the need to provide equality of opportunity under penalty of developing yet another factor of social exclusion: information-exclusion" (Alarcão, 2007, p.12). In this regard, the teacher is required, in quality of conductor of the teaching-learning process, continuing education to better conduct and manage knowledge. Santos (2019) points out the need to mobilize knowledge and skills directly related to literacies in cyberculture, taking advantage of the potential of multiple languages, multiliteracies and media to produce, remix, reuse, mediate and manage practices and expressions to citizens.

Include pedagogical practices that refer us to the use of technologies digital implies education with, about and through the Media, (FANTIN; GIRADELLO, 2019, RIVOTELLA, 2017, LAPA; COELHO, 2021).

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The media plays a fundamental role in promoting positive attitudes towards the integration of people with disabilities into society," aiming to overcome of prejudices and misinformation, spreading greater optimism and imagination on the capabilities of people with disabilities" (CAMPBELL, 2016, p130).

3. Reflection on Active Methodologies and Special Education

The term special educational needs "highlights the interaction of individual characteristics of students with the educational and social environment, drawing the attention of regular education to the challenge of addressing differences" (Luzia 2021, p.15).

So, let's look at the most common terms. Carrier: the word "carrier" is "linked to medical-sanitary language, with the meaning of carrying or carry, carry with or in oneself, host and transmit something harmful that may infect" (Marquezan, 2009, p. 131). When associated with the word disability, this is covered with the meaning of carrier, that is, contagious. That is why it is necessary be very cautious when referring to these terms, as they manage a feeling of exclusion and discrimination against people with disabilities (COMBELL, 2016).

Disability brings implications that, associated with the barriers imposed socially and attitudinal barriers, can restrict full and effective participation of the person in this condition, both at school and in other social instances (LUZIA, 2021, VYGOTSKY, 2022).

In the school environment, all actors play a fundamental role in practice of special/inclusive education, since the process of acquiring knowledge is linked to a set of professionals from the administrative team to the teaching staff, both need to be made aware of their role in the educational network; This is how,

> **The crucial task of researchers and professional educators concerned with pedagogical action is, therefore, to constantly investigate the content of the educational act, recognizing as a principle that it is multifaceted, complex, and relational. Thus, we educate simultaneously for subjectivation and socialization, for autonomy and social integration, for**

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> **social needs and individual needs, for the reproduction and active appropriation of knowledge, for the universal and the particular, for insertion into social and cultural norms and for the criticism and production of innovative strategies (SANTOS, 2004, p.5).**

4. Challenges for Integrating Inclusion Pedagogical Practices in the Context School.

It is common to hear constant complaints from educators about to the phenomenon of inclusion of students with special educational needs, in coexistence of "normal" classrooms claiming that they do not have technical training and professional to deal with the same problem. For this context, Compbell (2016) states that inclusive education has made life more complex and challenging. task of educators and it is considered appropriate for the teacher to understand the need continuing education, for better performance in inclusive classrooms.

And for the success of the training it is opportune that "the teacher leaves his solitude, arrogance, false dominance, and have the courage to admit prejudice, difficulties in learning or reviewing pedagogical strategies" (COMPBELL 2016.p.158).

Educational inclusion depends on both inclusive policies and pedagogical practices still today aimed at an ideal student, a standard student. Anyone who does not fit this model is considered incapable of learning. (Luzia 2021).

> **From this epistemological perspective, Vygotsky contributes to the understanding of human development, based on the assumption that the individual constitutes himself as a subject through a permanent process of shared interactions and that his development is conceived in light of interrelations and cultural, social and historical circumstances (VYGOTSKI, 2022, p.10).**

As a contribution, researcher Selma Combell argues that "the A person's disability should not be taken in isolation, as obstacle or impediment that makes it impossible for them to fully develop their capabilities" the human being is capable of performing miracles, overcoming obstacles, previously considered insurmountable and overcome every day. (COMBELL, 2016, p.129).

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> **Considering scientific advances, we know that every human being is born with the potential to learn. Therefore, don't underestimate the capacity that students with intellectual, physical, and sensory disabilities have for learning and social interaction. However, their development will only be properly understood when viewed as a process and not as a fait accompli.**
> **Therefore, consider them in their entirety and never in a fragmented way (COMBELL, 2016, p.26).**

In this regard, the role of the teacher is essential, as he or she interacts directly with students, organizing and conducting pedagogical practices in classroom, acting as a mediator in the learning process (Luísa, 2021, p.6).

For Martín-Barbero,

> **"We are moving from a society with an educational system to a society of knowledge and continuous learning, that is, a society whose educational dimension permeates everything: work and leisure, the office and the home, health and old age." It is necessary for teachers to keep up with changes in education, especially those geared towards the digital age, remembering that training does not end with graduation; it must be continuous (BARBERO, 2014, p. 121).**

Being aware of these differences means that we seek strategies and teaching resources that bring students as close as possible to what we have to offer teach them, as well as different methods of rehabilitation and reintegration social, Neves (2008); embodied with the suggestions and procedures according to the Salamanca declaration (1994), aiming at contributions that modify discriminatory attitudes, to create welcoming communities and to develop a inclusive society (p.27).

The integration of pedagogical practices mediated by technologies assistive devices in the school context constitute a challenge in the present century, allowing that all students achieve knowledge is not an easy task, and when it comes to think about inclusion the challenge is even greater, therefore, the teacher needs to support himself of assistive technologies to allow students with difficulties to find support for meaningful learning.

> **Technologies can be considered assistive in the educational context when they are used by a student with a disability and serve as support for them, facilitating their participation in pedagogical projects, used according to the type**

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> of disability with the aim of breaking down sensory, motor or cognitive barriers that limit or prevent access to information, and aids for daily life and practical life; these are categorized as CAA[5], Environmental control systems[6], architectural projects for accessibility, Orthoses and prostheses, [5]Mobility aids, aids for expanding visual function and resources that translate visual content into audio or tactile information (BERCH, 2017, P.12).

Thus, education is one of the ways to promote development of people with disabilities, considering that higher functions are build, from the social, a network society, which shows affection for people with disabilities, is considered a vector of inclusion (VYGOTSKY, 2011).

FINAL CONSIDERATIONS

This reflection seeks to analyze the use of active methodologies and assistive technologies in special education, and their contribution to promoting inclusion through teachers' pedagogical practices. With the use of active methodologies, the student "assumes a more participatory stance, that is, active methodologies contribute to the organization of a favorable environment to the cultural development of students, made possible by the exploration of instruments and resources that challenge the student to find strategies to achieve a certain objective, in addition to enabling the construction of knowledge through various multimedia.

After a critical reading of the collections that served as a basis for the production of this academic essay, it is concluded that, in order to include the "special" students in basic education, it is necessary that inclusion begins at the act of didactic planning, with the selection of strategic methods that promote the

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5 Augmentative and Alternative Communication, designed to assist people without functional speech or writing, assisting in communication with the objective of writing and/or understanding to express their questions, desires, feelings, understandings (Bersch, 2017) 6 Environmental control systems4 ; assists people with motor limitations in manipulating a remote control that helps to turn on, turn off and adjust electronic devices such as light, sound, televisions, fans, open and close doors and windows, receive and make phone calls, activate security systems, among others, located in their room, living room, office, home and surroundings; (Bersch, 2017) Orthoses and prostheses are artificial parts that replace missing parts of the body. Orthoses are placed next to a body segment, ensuring better positioning, stabilization and/or function. (Bersch, 2017, p. 5)

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reflective teaching, it is appropriate for the teacher to have command of the language of alternative communication, to allow its inclusion the teacher needs to mediate the your pedagogical practice with assistive technologies according to the reality of each student.

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