INTERNATIONAL SEVEN JOURNAL
OF MULTIDISCIPLINARY
ISSN: 2764-9547

The inclusion of people with disabilities (PCD) in distance learning (EAD) courses

10.56238/isevmjv3n4-014
Receipt of originals: 0/12/2024
Acceptance for publication: 07/02/2024

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ABSTRACT

The inclusion of people with disabilities in distance education (EAD) courses is a topic of increasing relevance in contemporary education, since, with the advancement of Digital Information and Communication Technologies (DICT), distance education has been consolidated as a flexible and accessible alternative, allowing access to higher and vocational education to an increasing number of students, including those with different types of disabilities. Thus, the general objective of this article was to investigate strategies that guarantee the inclusion of people with disabilities (PWD) in distance learning courses, considering the challenges arising from the technological situation. The exploratory research methodology combined with a bibliographic review of academic articles published between 2017 and 2024 was used. Based on the discussion presented, strategies were identified to promote inclusion in a full way, and these are the implementation of accessible Virtual Learning Environments (VLEs), considering the guidelines of digital accessibility, such as the use of technologies compatible with screen readers, options for contrast and amplification of fonts, training of teachers, as well as the insertion of specific assistive technologies for each type of disability.

Keywords: Accessibility, Education, Distance Learning, Inclusion, Person with Disabilities.

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INTRODUCTION

The world is constantly evolving and, with the continuous advancement of technology, the resources of Digital Information and Communication Technologies (DICT) permeate various aspects of human life. In this context, technology has established itself not only as a tool, but mainly as a facilitator of daily tasks, allowing instant connections, quick access to information, and innovative solutions in the palm of your hands, regardless of space.

At the heart of the education situation, technology has revolutionized the way of teaching and learning, as the Distance Education (EAD) modality has emerged as a dynamic and accessible alternative, providing flexibility for students.

Despite all the benefits provided by these advents, the effective inclusion of people with disabilities (PWDs) in the distance education system presents manifest challenges in terms of technological, pedagogical and communicational accessibility, and it is essential that educational institutions implement strategies that not only integrate this student, but also include him, striving for the universal right to education, as well as for digital democracy.

From the context explained, the following research problem arises: what strategies can ensure an effective inclusion of people with disabilities in distance education courses, considering the challenges of technological, pedagogical and communicational accessibility faced by these students?

Thus, the research has as its core to prove the hypothesis that specific strategies for technological adaptation, inclusive pedagogical development and improvement in virtual communication can promote an effective inclusion of people with disabilities in distance learning courses, striving for digital democracy.

Based on the research problem and the hypothesis presented, the general objective of the article is to investigate strategies that can ensure the inclusion of students with disabilities in distance learning courses, considering the challenges arising from the technological situation. Thus, in order to satisfy the general objective, specific objectives were implemented, namely: a) to characterize the distance learning system; b) Distinguish integration from inclusion; c) to present inclusion strategies that have had their proven effectiveness.

The choice of the theme is justified in view of its relevance, since ensuring equal access to education for all students, regardless of their uniqueness, is an ethical and legal imperative. Thus, it is of paramount importance to discuss the theme so that, with this, it can enrich the literature with strategies of full inclusion that have been proven.

This article was developed from an exploratory research that integrated a bibliographic review of academic articles published between 2017 and 2024, in addition to covering the classic literature. Additionally, a documentary and legislative analysis was included to investigate the established hypothesis and achieve the proposed general objective. Finally, the deductive method was used to critically examine the theoretical foundation collected on the subject in question.

CONSIDERATIONS ABOUT DISTANCE EDUCATION (DE) AND THE INCLUSION OF PEOPLE WITH DISABILITIES (PWD)

The progress of information technologies has caused profound transformations in contemporary society, thus, such changes have manifested themselves in all aspects of human life, giving rise to new forms of social organization. In a symbiotic interaction, new relationships emerge from new technologies which, in turn, are shaped by existing social interactions. Thus, technologies have been completely integrated into everyday life, also changing the educational scenario (Santos *et al*., 2020).

According to Silva (2017), the distance learning system has been known since the nineteenth century, however, it was only in recent decades that it began to be recognized and play a significant role in the global educational scenario, considering the need to provide professional training to millions of people who, for various reasons, including physical limitations, could not attend face-to-face educational institutions.

In records by Saraiva (1996), he describes that, in 1833, Sweden already had correspondence teaching, while in England, in 1840, the principles of shorthand were established, which consists of a system of abbreviated writing. However, it was only after the First World War that innovations in the distance education system formally emerged, this in the face of the increase in social demand for education, driven by the advancement of postal services, the improvement of means of transport and technological development in communication and information.

The records of Saraiva (1996) discuss the pioneering use of distance education by the Instituto Rádio Técnico Monitor, in 1939, as well as by the Instituto Universal Brasileiro, in 1941, and the Instituto Padre Réus, in 1974. For Silva (2017), distance education in Brazil can be categorized by three generations. The first took place in the 1960s, which was marked by the Grassroots Education Movement (MEB), led by the Catholic Church and supported by the Federal Government, which used a radio education system to promote education, awareness, politicization and unionism.

In the following decade, now the second generation, in 1970, the Roberto Marinho Foundation began a program of supplementary distance education for elementary and secondary education, stimulating the formation of private foundations and non-governmental organizations that began to offer supplementary courses via satellite complemented by printed material, marking the emergence of the second generation of distance education in Brazil (Saraiva, 1996).

Finally, the third generation was in 1994, when the internet expanded in the university environment and, two years later, the first specific legislation for distance education in higher education was established (Silva, 2017).

9,057, of May 25, 2017, which regulates article 80 of Law No. 9,394, of December 20, 1996, which establishes the guidelines and bases of national education, the distance education system is:

> Art. 1 For the purposes of this Decree, distance education is considered to be the educational modality in which the didactic-pedagogical mediation in the teaching and learning processes occurs with the use of information and communication means and technologies, with qualified personnel, with access policies, with compatible monitoring and evaluation, among others, and develops educational activities by students and education professionals who are in different places and times.

When verifying enrollment numbers in Brazil, the Higher Education Census, conducted by the National Institute of Educational Studies and Research Anísio Teixeira (Inep), identified that while face-to-face teaching suffered a reduction, the distance learning modality grew 17.6% between 2016 and 2017.

Corroborating this data, the Higher Education Map (2020), published that the aforementioned modality, in the private network, had an increase of 91.7% between 2014 and 2018. Thus, considering all enrollments, including public institutions, the growth in the period from 2009 to 2018 was 145%.

DIGITAL DEMOCRACY

With the rise of cyberspace and the popularization of instruments that provide access to it, it has become necessary to broaden the understanding of the full exercise of citizenship, which is now intrinsically linked to the concept of digital democracy, since a comprehensive immersion in the various fields of knowledge is necessary for the integral formation of the citizen (Vieira; Leal, 2020). Thus, public policies are essential not only to promote democratization, but also to ensure definitive and quality universalization (Silva, 2017).

In the meantime, digital democracy can be understood as the way of using devices and tools of digital communication technologies to complement, reinforce or correct aspects of the

political and social practices of the State and citizens, aiming to improve the democratic content of the political community (Gomes; Souza, 2020).

It is certainly that in the face of a society submerged in technology, digital literacy is necessary, because in this way it is possible to achieve the universalization of rights and, as a corollary, the full exercise of citizenship.

INCLUSION OF PEOPLE WITH DISABILITIES IN EDUCATION

The debates on the effective presence of PWD in education gained strength and prominence after the Promulgation of the Salamanca Declaration (1994), which began to consider education as an essential factor for the inclusion process (Brasil, 1994).

In the Brazilian context, according to Mendes and Reis (2021), the debate was only introduced in 1996, the year in which the Law of Guidelines and Bases of National Education (LDB) was enacted, through Law No. 9,394/1996. This legislation highlighted the need to adapt and adapt Brazilian schools, as well as the methodologies and teaching materials used, with the objective of satisfactorily serving all students, without neglect, thus satisfying the constitutional principles of universality and isonomy (Brasil, 1988).

It turns out that it is not uncommon for educational institutions to interpret the concept of inclusion in the wrong way, without the primacy over the structural adaptation necessary to guarantee legitimate assistance to all students, without exceptions (Trevisan, 2019).

According to Tavares *et al*., (2022), the concept of "inclusion" can be confused with "integration", and it is imperative to know the distinction between them. Integration refers to the process of inserting PWD students into the regular school environment without, in fact, making essential adaptations to fully meet their needs. Inclusion, in turn, consists of the material adaptation of the school environment to ensure that all students, regardless of their needs, can participate fully and equitably.

TECHNOLOGIES AND STRATEGIES TO INCREASE ACCESSIBILITY AND INCLUSION

In contemporary times, the distance learning modality uses DICT to promote synchronous and asynchronous classes, with Virtual Learning Environments (VLEs) to promote its core (Pereira *et al*., 2007). Thus, it is clear that VLEs are equipped with resources with the function of mediating the interaction between educators and students during remote meetings, however, it can be extracted that these have limitations in terms of accessibility for all students (Tavares *et al*., 2022).

Within this context, a limitation on the socio-educational condition (SC) is noted, which is impacted by the lack of accessibility resulting from social distancing in education, which can be promoted by the lack of preparation of many teachers in relation to inclusive work (Silva, 2017).

"Accessibility" is understood from Law No. 13,146/2015 (Brazilian Law for the Inclusion of Persons with Disabilities – LBI), being conceptualized as the possibility and condition of reaching, perceiving, understanding and using, safely and autonomously, spaces, furniture, urban equipment, buildings, transport, information and communication, including their systems and technologies, as well as other services and facilities open to the public, both in urban and rural areas, by people with disabilities or reduced mobility (Brasil, 2015).

According to Silva *et al.* (2021), accessibility is, in fact, full when it satisfies six dimensions, namely: communicational, architectural, instrumental, attitudinal, programmatic, and methodological.

It is essential to satisfy such dimensions for teaching to promote an effective inclusive teaching process, being aligned with the precept of article 4 of the LBI, which establishes education as a universal constitutional right, justifying the need for inclusive school actions in all teaching modalities, especially in Specialized Regular Education (ERE), that serve students with their particularities, without exception.

By verifying the concrete case of the deaf, Strobel (2008) discusses the use of the so-called 'Cultural Artifacts' that make up the community, which are divided into three categories. The first concerns the visual experience, and can be characterized as the method by which the public acquires knowledge, development and leisure, in addition to being an essential means to ensure communication.

The second artifact refers to the linguistic aspect, especially Sign Language, which opens access to information and knowledge, being fundamental in the lives of these individuals, allowing them to express desires, questions about life and communicate with other people, overcoming established attitudinal barriers. Finally, the third artifact is deaf literature, which allows the inclusion of listeners in the universe of CS (Strobel, 2008).

In this context, Tavares *et al*. (2022) developed a study on the use of software that promotes the visualization of the Sign Language Translator Interpreter by deaf students in online classes, applying the tool at the Federal Institute of Education, Science and Technology of Paraíba (IFPB) – João Pessoa Campus. As a result, the resource proved to minimize the overload

of visual information, enabling the simultaneous display of Sign Language (TILS) along with the class material presented, effectively achieving the inclusion of the student.

In the case of distance education for blind people, the study by Aguilar and Pasian (2020) had the impetus to carry out a study on the effective strategies of distance education with accessibility. From the research, it was evidenced that Assistive Technologies are the most effective strategies for inclusion, since they consist of devices, equipment, systems and services specially developed to provide greater independence, autonomy and quality of life to people with disabilities.

Thus, such resources as screen readers for people who are blind or have low vision, augmentative and alternative communication systems (such as communication boards) are of paramount importance for the student to fully participate in the activities in the distance learning environment.

FINAL CONSIDERATIONS

Concluding the present study, it is inferred that the proposed objectives were met, since it was proven that, in order to achieve the effectiveness of the distance learning system modality for students with disabilities, it is necessary to implement strategies proven effective in meeting full inclusion.

In the meantime, it was identified as strategies that excel in the digital democracy of the aforementioned public the insertion of accessible Virtual Learning Environments (VLEs), since this allows the adaptation of resources such as screen readers, contrast options and font magnification. In addition, the broad importance of teacher training and the insertion of specific assistive technologies for each type of disability was also raised, providing the full participation of students in online educational activities.

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