



People with disabilities and the context of inclusion in distance learning undergraduate courses

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Abstract

Distance Education had significant advances in recent years in the country. Thus, it is of great importance to investigate the current scenario of students with disabilities in Higher Education in this type of education. In this context, the present study addresses the process of inclusion of people with disabilities in distance learning undergraduate courses in public and private institutions in the metropolitan region of São Luís/MA, specifically, in the municipalities of São Luís, São José de Ribamar, Raposa and Paço do Lumiar. Preliminary findings indicate that these institutions need to have in their actions and services, qualified human resources, accessibility in information and communication, among others, so that people with disabilities can insert themselves, learn and conclude their courses.

Keywords: Distance Education; Disabled Students; Inclusive Education.

1. Introduction

Distance Education (DE) has made significant advances in recent years in Brazil. The expansion of this type of education is due to several factors, among them: the fact that most students are inserted in the labor market. This type of education has also allowed the access of people with disabilities due to the possibility of performing academic activities anywhere with internet access, thus being able to adapt the student's study routine to their physical, motor, neurological, sensory and social condition.

For Silva and Salvago (2016), the development of technologies aimed at the inclusion of people with disabilities in distance learning favors the insertion of these people in Higher Education in a more democratic way by going beyond the physical structure that educational institutions offer in face-to-face education and by the fact of access to the content passed by the teacher through interactive tools, which have been

increasingly used in "DE's" as a way to improve the interaction between student and teacher. Thus, it is assumed that this type of education can provide the inclusion of people who are usually excluded from education due to certain social parameters.

What is noticed, still, are several obstacles that hinder the accessibility of people with disabilities, whether physical, neurological or cognitive disabilities, obstacles that range from the architectural structure of the institution to the teaching methodologies defined in the pedagogical project of each higher education course, such as the use of educational technologies or not to aid in learning. Dechichi, Silva and Gomide (2008, p. 338) state that there is a need to discuss the educational aspects involving the process of academic insertion of people with disabilities so that it is possible to achieve the minimum accessibility and academic permanence of these people.

In this way, the public or private educational institutions that offer distance learning higher education courses in the metropolitan region of São Luís should be aware that they need to have in their actions and services offered to the students, means and tools that ensure the accessibility of people with disabilities and, thus, enable them to perform their professional training in an appropriate and quality way.

Considering the above, the Research Problem asks: how has the process of inclusion of people with disabilities been occurring in distance learning undergraduate courses in public and private Higher Education institutions in the metropolitan region of São Luís/MA?

Thus, glimpsing the changes that have occurred in recent years regarding the insertion of technological resources that favor the inclusion of people with disabilities in Higher Education, especially in recent months due to the pandemic caused by Covid - 19, which brought rapid changes in the way of teaching because of the social distance required to avoid contagion and dissemination of the virus, this study has as its primary objective to analyze the process of inclusion of people with disabilities in distance learning undergraduate courses in public and private institutions of Higher Education in the metropolitan region of São Luís / MA.

2. Distance Education and Inclusive Education

In the Federal Constitution of 1988, in its article 205, education is a "[...] right of all and duty of the State and the family, it will be promoted and encouraged with the collaboration of society, aiming at the full development of the person [...]" (BRASIL, 1988). From this legal premise it is possible to understand that access to education should be available to all, regardless of ethnicity, social condition, physical characteristic, among others.

When we talk about education, this also involves distance learning. Since, with the changes and technological advances, increased access to the internet and the insertion of new inclusive pedagogical practices increasingly adopted in everyday education, discussions have been raised about the extent to which education in Brazil is universal and inclusive, considering the individual and collective needs of each citizen, including in distance learning higher education institutions, whether public or private.

Distance Education (DE), or also called Distance Learning by some authors, has had significant expansion in recent years, especially regarding Higher Education. According to Maia and Mattar (2007, p.05) "the acronym DE is applied to teaching and learning activities in which the student and teacher are physically

separated [...]. In DE there is a geographical and spatial separation between the student and the teacher, and even among the students themselves [...]"

The regulation of distance education occurred in 2005 through Decree No. 5622 suffering modifications in its guidelines and regulations in 2017, through Decree No. 9057. In Article 1 of that document,

[Distance education is considered the educational modality in which the didactic and pedagogical mediation in the teaching and learning processes occurs with the use of means and information and communication 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 (BRASIL, 2017).

This teaching modality has gained prominence today mainly due to the pandemic caused by Covid-19 that has been changing the mode of social relations due to the need for distance between people to prevent the spread of the virus in the population. Such changes have directly affected education at all levels, being no different in Higher Education and raising questions about its effectiveness, quality, and accessibility.

However, it is known that the educational process for people with disabilities goes through several barriers, from Basic Education to the higher levels of education. These barriers are usually architectural, human resources (professionals not properly trained) and technological, such as the absence of assistive technologies that hinder the access and permanence of people with disabilities in the educational institutions. In other words, the inclusion process in the education area, when actually put into effect, favors the teaching-learning process, as well as the relationships established between students and teachers, contributing to the attitudinal changes of all those involved (CHAHINI, 2020, p.90).

In this context, Rocha and Miranda reiterate that:

Social inclusion as a fundamental factor for equity and development in Brazilian society today requires educators to be permanently informed about the educational processes and special needs of people with disabilities and the possibilities of Information and Communication Technologies (ICT) (ROCHA, MIRANDA, 2009, p. 27).

Another point worth mentioning corresponds to the use of assistive technologies to expand the inclusion of people with disabilities in Higher Education institutions that offer distance learning courses. Despite having these communication and teaching instruments as the main tool in educational methodologies, information technologies can bring both academic solutions and a new type of exclusion, the digital one (CORDEIRO, 2014).

Thus, there is a need, still latent, to put these types of barriers on the agenda, aiming to ensure access and permanence of people with disabilities in Higher Education, by means of full accessibility, qualified teachers, inclusive pedagogical practices, use of assistive technologies in information and communication, which meet the real specific educational needs of each student who has a disability.

3. Method

An exploratory, descriptive research with a quantitative approach was developed to better clarify the object of study from the description of the characteristics found during data collection. According to Thiollent:

The exploratory phase consists of discovering the field of research, the stakeholders and their expectations, and establishing a first survey (or "diagnosis") of the situation, priority problems, and possible actions. (THIOLLENT, 2011, p. 56)

In the context, the description of the process of inclusion of people with disabilities in Higher Education institutions that have distance learning undergraduate courses in the municipalities of São Luís, São José de Ribamar, Raposa and Paço do Lumiar. The following table shows the sample and the number of institutions participating in the research and which were used for data collection:

Table 1 - Sample of researched institutions

MUNICIPALITY	SAMPLE
SÃO LUÍS	6
SÃO JOSÉ DE RIBAMAR	1
RAPOSA	1
PAÇO DO LUMIAR	1

Source: from the authors

The selection criteria for this sample took into consideration institutions with the highest scores on the ENADE (National Student Performance Exam), as it is an exam that evaluates Higher Education courses in the country.

Thus, to collect the data, a search was made on the web page of the institutions in the metropolitan region of São Luís to verify those that had the highest score on ENADE, as well as to verify the access tools available to people with disabilities with respect to the process of entering the undergraduate courses in the Distance Education modality.

4. Results and Discussions

In this topic, we present the preliminary results of the surveyed institutions of Higher Education, regarding the process of admission of people with disabilities in undergraduate courses in distance learning modality. In the following table, it is possible to verify, by municipality in the metropolitan region of São Luís, which institutions were surveyed in the research:

Table 2 - Number of Institutions per Municipality

MUNICIPALITY	INSTITUTION NAME
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São Luís	STATE UNIVERSITY OF MARANHÃO (UEMA) FEDERAL INSTITUTE OF EDUCATION, SCIENCE AND TECHNOLOGY OF MARANHÃO (IFMA) FEDERAL UNIVERSITY OF MARANHÃO (UFMA) ANHANGUERA UNOPAR UNINASSAU
São José de Ribamar	UNINTER
Raposa	UNIASSELVI
Paço do Lumiar	UNICESUMAR

Source: from the authors

In the context, the selection criteria of these institutions also took into account the General Index of Courses (GCI). Thus, the definition of the sample was in relation to those that had index 4 and 5 in the evaluation of the Ministry of Education (MEC). The indicators are based on indexes ranging from 1 to 5, where 1 and 2 are considered unsatisfactory and 3 to 5 are considered satisfactory results in terms of quality of education offered in distance undergraduate courses (INEP, 2021).

Among the 9 selected institutions, 5 have accessibility programs on the website, aimed at ensuring access to information and enrollment in the selection processes for admission to undergraduate courses, two belonging to the public network and three to the private network (UFMA, IFMA, Anhanguera, UNOPAR and UNIASSELVI). These institutions of Higher Education offer specific resources on the site, such as guidance on the use of the resources offered that meet the needs of people with visual impairment, blindness, hearing impairment, and deafness.

On the UFMA website there is an Accessibility icon on the page with explanations about the standardized shortcuts, according to the e-MAG (Model of Accessibility in Electronic Government), with navigation shortcuts that facilitate access to content on the page, and the Accessible device in Libras, the federal government's V LIBRAS program, which offers deaf users translation of videos, texts, and audios from Portuguese to the Brazilian Sign Language (GOVERNO DIGITAL, 2021), as shown in Figure 1 below:

Figure 1 - Screen shot of UFMA's website*.



*Available at: <https://portais.ufma.br/PortalUfma/paginas/acesibilidade/acesibilidade.xhtml#>. Accessed on: 10 Apr. 2021.

The same process occurs on IFMA's websites as shown in figure 2 below:

Figure 2 - Screen shot of IFMA's website*.



*Available at: <https://portal.ifma.edu.br/inicio/>. Accessed on: 11 Apr. 2021.

There is also a high-contrast feature on both pages. This option serves to assist people with low vision, facilitating textual understanding of the site's content. According to eMAG (2021) the settings should follow the following norms:

Background color: regardless of the color used, it should be changed to black (#000000); **Text color:** regardless of the color used, it should be changed to white (#FFFFFF); **Links:** the normal mode of the link should be underlined (so that it differs from normal text), as should over mode and active mode. The link should be changed to yellow (#FFF333); **Icons:** all icons should be white; **Lines and Outlines:** the lines and outlines of elements should be changed to white (EMAG, 2021).

Another feature identified was the Site Map, which facilitates the identification of internal pages that do not appear on the site's Main Menu. Like this,

The site map should be made available in the form of a hierarchical list and may contain as many levels as needed. Thus, the visually impaired user, having access to the site map, can build a mental image of the site more easily. Each of the items present on the site map should be a link to the corresponding page (EMAG, 2021).

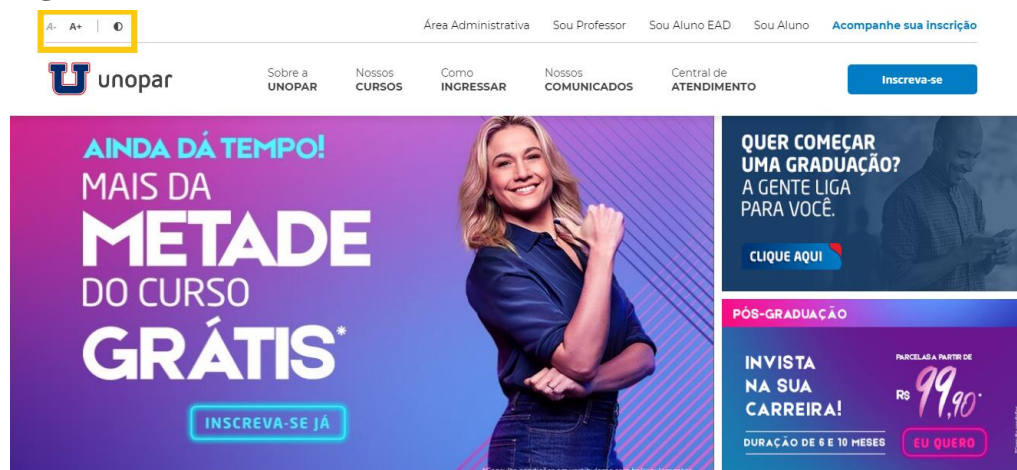
On the page of Anhanguera and UNOPAR, the option to increase or decrease the font and the Auto contrast were identified, as shown in figures 3 and 4:

Figure 3 - Screenshot of Anhanguera's website*.



*Available at: <https://www.anhanguera.com/>. Accessed on: 11 Apr. 2021.

Figure 4 - Screen shot of the UNOPAR* website



*Available at: <https://www.unopar.com.br/>. Accessed on: 11 Apr. 2021.

Whereas, UNINASSAU has only the Accessible in Libras resource, V LIBRAS program of the federal government as shown in figure 5 below:

Figure 5: Screen shot of the UNIASSELVI* website



*Available at: <https://portal.uniasselvi.com.br/>. Accessed on: 11 Apr. 2021.

However, it should be considered that there are several situations experienced by people with disabilities regarding access, full guarantee of autonomy and independence in the content made available on websites of higher education institutions as "[...] limitations related to memory, problem solving, attention, verbal comprehension, reading and language, mathematical comprehension and visual comprehension. A person with dyslexia, for example, may have difficulty reading a page due to inadequate design" (EMAG, 2021).

Hence the importance of websites encompassing the "[...] different levels of education, age group, and little experience in using a computer, as well as being compatible with the various technologies used to access a Web page (IDEM, 2021).

Thus, it will be possible to ensure that different audiences can have access to the information needed to enter the distance learning undergraduate courses offered in the metropolitan region of São Luís/MA. Another factor that deserves to be highlighted is the use of assistive technologies, which exist to help in the performance of the selective processes for the admission of people with disabilities. For Filho (p. 82, 2012), these resources can be divided into the following categories:

Physical adaptations or orthoses: These are all the devices or adaptations fixed and used on the student's body and that facilitate the student's interaction with the computer. - Hardware adaptations: All the devices or adaptations present in the physical components of the computer, in the peripherals, or even when the peripherals themselves, in their conception and construction, are special and adapted. - Special accessibility software: They are the logical components of ICT when built as Assistive Technology. That is, they are the special computer programs which enable or facilitate the interaction of the student with disability with the machine (FILHO, p. 82, 2012).

Having said this, there are devices that can help in the process of inclusion of people with disabilities in Higher Education, in order to allow the admission and permanence of people with disabilities in distance learning undergraduate courses.

Thus, there are still many gaps regarding the admission process for people with disabilities in institutions of Higher Education in the EaD modality, especially in private institutions, in order to promote to students with disabilities adequate access conditions in terms of technological and pedagogical resources so that they can both enter, remain, learn, and successfully finish their undergraduate studies.

5. Final Considerations

Returning to the primary objective of this study, it was possible to verify that approximately 55% of the surveyed institutions have resources that facilitate access to the content of the page to people who have visual impairment, blindness, hearing impairment and deafness, thus facilitating the choice of distance learning undergraduate courses. However, only 3 of these institutions provide vacancies for people with disabilities, as determined by the Brazilian Law of Inclusion of People with Disabilities (Law 13.146/2015).

The other institutions, in their selection process, do not have tests adapted to specific educational needs, inherent to each type of disability, thus hindering the entry of people with disabilities in Higher Education. Thus, it is not enough to have only information accessibility resources on the websites, and not offer adequate means for people to enter and stay in distance learning undergraduate courses.

Thus, the findings of this study indicate that these institutions of Higher Education that offer distance learning courses need to have in their actions and services, trained human resources, accessibility in information and communication, among other means of accessibility, in order to ensure the rights of people with disabilities to Inclusive Education of good quality.

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