Inclusive Professional Education: Training Proposal for IFRN Scholarship Students

ARTICLE

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Abstract
This study aimed to evaluate the pedagogical contributions of a training course for scholarship students linked to institutional programs at the Apodi Campus of the Federal Institute of Rio Grande do Norte (IFRN), to improve the inclusive process for people with Special Educational Needs (SEN). The aforementioned course, described by Lira and Amaral (2023), is inherent to the category of educational product. The methodological approach was configured as qualitative, of an applied nature, adopting pedagogical intervention as a method, based on Damiani et al. (2013). We found that the course contributed to the dissemination of behavioral knowledge by strengthening values that promoted critical reflection about the norms of social relations. We conclude that professional education, in its conception of comprehensive training, fulfills the dual function of preparing individuals with and without SEN for insertion into productive life and for building an inclusive society.

Keywords: Professional Education. Inclusive education. Accessibility. Comprehensive training. Educational Product.

Educação Profissional Inclusiva: Proposta de Formação para Estudantes Bolsistas do Campus Apodi do IFRN

Resumo
Este estudo objetivou avaliar as contribuições pedagógicas de um curso de formação para estudantes bolsistas vinculados a programas institucionais do Campus Apodi do Instituto Federal do Rio Grande do Norte (IFRN), com vistas à melhoria do processo inclusivo de pessoas com Necessidades Educacionais Especiais (NEE). O referido curso, descrito por Lira e Amaral (2023), enquadra-se na categoria de produto educacional. A abordagem metodológica configurou-se como qualitativa, de natureza aplicada, adotando a intervenção pedagógica como método, fundamentado em Damiani et al (2013). Verificamos que o curso contribuiu com a disseminação de conhecimentos atitudinais a partir do fortalecimento de valores que promoveram uma reflexão crítica acerca das normas que regem as relações sociais. Concluímos que a educação profissional,
1 Introduction

This article is an excerpt from the professional master's research developed within the Professional and Technological Education Program (ProfEPT), Mossoró Campus, linked to the Rio Grande do Norte Institute of Education, Science and Technology (IFRN). The study aimed to evaluate the pedagogical contributions of a proposed training course for students receiving grants from institutional programs, to improve the inclusive process for people with Special Educational Needs (SEN), within the context of the IFRN's Apodi Campus.

The campus is located in the municipality of Apodi, in the semi-arid region of western Potiguar, about 340 km from the capital of Rio Grande do Norte. The campus receives students from twelve surrounding municipalities and plays an important role in providing professional and technological education, as well as developing research and extension activities in the region.

This research is the result of training work already started by the Support Center for People with Specific Educational Needs (NAPNE) with the staff of this campus, of which the author is a collaborator. At IFRN, NAPNE is a coordination body responsible for developing actions aimed at inclusion, which aim to effectively comply with the legal instruments relating to the inclusion of people with specific educational needs, namely: people with disabilities, people with specific functional learning disorders and people with high abilities or giftedness.

With a goal of extending these actions to the student community, the course proposal, henceforth referred to as an educational product, was aimed at training students linked to institutional programs. It arose from the need to better prepare these individuals
to become multipliers of the principles of inclusive education in the spaces where they work, thus fostering the formation of sensitivity and the awakening of students’ critical awareness about respect for diversity and contributing to the strengthening of the inclusive process in our institution (Lira; Amaral, 2023).

Among the educational spaces that need to strengthen the inclusive process, we highlight the Tutoring and Laboratory Learning Program (TAL) and the Student Training Support Program (PAFE), which rely on the work of students who assist, respectively, in the pedagogical and administrative work of the Institution.

The TAL Programme consists of a complementary training activity for students enrolled at the IFRN, and is characterized as a didactic-pedagogical alternative aimed at improving the academic performance of students on secondary technical courses and undergraduate courses. Whereas PAFE is a student assistance program that seeks to provide students in situations of vulnerability and/or social risk with financial support to maintain their studies, through educational work (IFRN, 2017a; 2017b).

In both programs, students provide services to the student community, the first being of a pedagogical nature, and the second of an administrative nature. However, there are no actions for this group with the aim of preparing them to serve students with SEN, respecting the specificities of these individuals and contributing to the educational training of all those involved (Lira; Amaral, 2023).

This absence is not restricted to the IFRN alone, but is also corroborated by research carried out over the last eight years, which points to the lack of training of professionals to care for people with SEN as one of the main obstacles to the advancement of school inclusion (Lisboa; Mendes; Lima, 2019). The same research points out that the entire academic community is jointly responsible for the success of the inclusion process and that this must be guaranteed not only in the classroom, but in all the school's experiential and educational spaces.

According to Carvalho (2014), attitudes significantly influence the social perception of an inclusive environment, constituting barriers when they are not conducive to living with diversity, through behaviors that prevent or hinder social participation, equal conditions and
opportunities for people with disabilities or limitations. These barriers are the most complex, as their eradication depends on the perceptual and affective-emotional restructuring of each individual in relation to otherness (Carvalho, 2019).

Sassaki (2010) points out that attitudinal accessibility is a space free from prejudice, stigma, stereotypes and discrimination, making it a basic aspect for the inclusion of people with disabilities, especially in the professional world. However, attitudinal accessibility can only be achieved through programs and practices to raise awareness among workers in general and in coexistence with human diversity.

This act of awareness is conceived by Freire (2001, p.28) as the understanding of social reality, which must be undertaken in the educational process of men, so that they become subjects committed to their transformation and trained to be “announcers and denouncers” of social inequalities and injustices.

These authors’ statements include the ethical and aesthetic values that guide a society’s standards of conduct, thus corresponding to the cultural dimension which, together with the work and science dimensions, make up integral human development, the basic principle of the vocational training offered by the Federal Institutes (Pacheco, 2020).

Therefore, in order to guarantee comprehensive training for students with and without SEN, vocational education needs to be based on a curriculum that considers social practice, which involves political life, social struggle, cultural and scientific life and other activities of life in society (Ramos, 2005; 2014), including social coexistence in the context of diversity and respect for differences.

As such, the entire school community must take part in discussions and take on responsibilities that are compatible with the roles they play, so that the school re-signifies individual differences and re-examines its pedagogical practice.

The need to work on training for inclusion is already provided for in the Brazilian Inclusion Law (LBI), which establishes, in item XIV of Art. 28, as an obligation of the public authorities to ensure the “inclusion in curricular content, in higher education and technical and technological professional education courses, of topics related to people with disabilities in the respective fields of knowledge” (Brasil, 2015).
Therefore, the educational product developed in this research seeks to build alongside the scholarship students conceptual knowledge, skills, attitudes and values that provide a change in attitude and behavior with regard to understanding the relationships and social practices of the reality of which they are a part, as well as expanding their reading of the world, their critical-reflective sense and their active participation in social processes (Lira; Amaral, 2023).

The educational product was entitled "Training Course on Assistance to People with Special Educational Needs". The details of its objectives and curricular organization, as well as other information, can be found in the work by Lira and Amaral (2023). In this article, we will discuss the methodological procedures used, the main results achieved and the considerations we have drawn from the research, based on the implementation of the product.

2 Methodology

The theoretical-methodological framework of this research was based on the definitions and classifications of Gil (2008), Damiani et al (2013), Minayo (2009), presenting a qualitative approach, of an applied nature.

We adopted the research method called pedagogical intervention, defined by Damiani et al (2013) as a purposeful interference in a pedagogical action, carried out by teachers and/or researchers, which aims to contribute to the development of knowledge, based on a theoretical framework.

The methodological path was divided into three stages, known as:

First, diagnostic stage: phase of assessment of the preparation of scholarship students to assist people with SEN. The assessment was carried out by surveying the training needs of the scholarship students and the difficulties experienced by students with SEN in the context of the services provided by the two programs.
Second, stage of application of the educational product: comprises the period of adjustments to the previously defined course plan, based on the results of the first diagnostic stage and the implementation of the course with the scholarship students.

Third, stage of evaluation of the educational product: phase of evaluation of the course’s contributions to the comprehensive training of the scholarship students, concerning the development of knowledge, skills and attitudes in these students, in the field of the demands of people with SEN.

Questionnaires were used to collect data, due to the advantages this instrument offers the researcher and the respondents, such as guaranteed anonymity and the respondents not being exposed to the influence of other people’s opinions (Gil, 2008).

Architectural accessibility: no physical environmental barriers in and around offices and factories and in the means of public transport used by companies for their employees. Communication accessibility: no barriers in interpersonal communication (face to face, sign language, body language, sign language, etc.), in written communication (newspaper, magazine, book, letter, handout, etc., including Braille texts, texts with enlarged letters for those with low vision, notebooks and other assistive technologies to communicate) […]. Methodological accessibility: no barriers in working methods and techniques (training and development of human resources, execution of tasks, ergonomics, new concept of flowchart, empowerment, etc.). […]. Attitudinal accessibility: without prejudices, stigmas, stereotypes and discrimination, as a result of awareness-raising programs and practices for workers in general and coexistence in human diversity in the workplace. (Sassaki, 2010, p. 67-68, emphasis added).

The survey was carried out in July and August 2020 and involved 28 students aged between 15 and 25, regularly enrolled in technical courses integrated with high school and undergraduate courses. Ten participants made up the group of students with SEN, presenting various disabilities, such as physical, hearing, visual and Autism Spectrum Disorder; and 18 participants made up the group of scholarship holders, 6 of whom were linked to the TAL program and 12 to PAFE.

We must emphasize that, due to the pandemic period at the time, face-to-face classes were suspended, so all communication between the researcher and the participants, as well as the methodological procedures, were carried out remotely, using communication applications and virtual platforms.
All the procedures adopted regarding the application were submitted to the Research Ethics Committee of the State University of Rio Grande do Norte (UERN) and developed under the recommendations arising from the normative documents on scientific research with human beings, issued by the National Health Council of the Ministry of Health. The research was authorized by opinion 4.141.422 of the UERN Ethics Committee, under the Certificate of Presentation for Ethical Appraisal number 20532219.3.0000.5294.

3 Results and Discussion

Here we will summarize the results and discussions of the two main stages of the research: the diagnostic stage and the assessment of the educational product's contributions, which were organized into two subsections.

3.1 The diagnostic stage

At this stage, we will begin by presenting the results of the investigation into the difficulties faced by students with SEN in using the services provided by the programs' scholarship holders.

The difficulties listed by the respondents in the two programs refer to different types of barriers, such as architectural, attitudinal, technological and communication barriers, as shown in Figure 1.

Figure 1 - Aspects that need to be improved in the TAL and PAFE programs, according to students with SEN
In view of the findings, it can be inferred that the difficulties mentioned may be related to a variety of existing barriers that prevent or hinder communication and physical access by these students to the services provided by the scholarship holders and staff. These difficulties are not only linked to the limitations faced by a certain type of disability but to the individual specificities of each subject since each student who reported facing difficulties in attendance has a different disability from the others.

Carvalho (2019) states that barriers depend on the context in which they are created and perpetuated, stemming from the subject's interaction with the human and material resources socially available to meet their needs, and should not be categorized by type of disability. Therefore, the school community needs to recognize that each individual has specific needs that can lead them to different school trajectories, even though they have the same disability or learning disorder. This highlights the uniqueness of each individual with a particular disability, who must be given individualized attention and have their needs met in order to perform well academically.

We also asked students with disabilities how they feel about the fact that the IFRN offers training to scholarship holders on the needs and specificities of people with SEN. The following results were obtained: 70% said it was "important", 20% said it was "essential", and 10% said it was "necessary for some cases of disability", with no student considering the training "unnecessary".
Recognizing the need to provide training for students with SEN reiterates the importance of encouraging the construction of an inclusive culture in the school community which, according to Carvalho (2014), develops self-awareness and the co-responsibility of everyone for the inclusion process. From this perspective, students with SEN show that inclusion is not just restricted to the political dimension, but is also achieved through pedagogical practices and behaviors, involving the entire community.

When it came to diagnosing the training needs of the scholarship holders, out of the 18 participants, 17 said they had never received any kind of training or guidance on how to assist people with SEN.

All the participants were also asked how confident they felt to assist, guide and help a person with SEN in the performance of their duties. The results are shown in Figure 2.

![Figure 2 - Scholars' level of confidence in assisting people with SEN](image)

Source: Elaborated by the author

It is noteworthy that none of the scholarship holders feel completely confident in dealing with different types of disabilities. We speculate that this reflects their lack of training.

In order to detail the scholars' prior knowledge on the subject of inclusion, we asked them to assess their level of knowledge of the following competencies (Figure 3), which were worked on throughout the course and relate to the six dimensions of accessibility, according to Sassaki (2010).

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Figure 3 - Scholars' level of knowledge of the competencies relating to the dimensions of accessibility in the school environment before taking the Course on Assistance to People with Special Educational Needs.

The figure shows that the "unsatisfactory" level is present in all items and predominates in seven (items "D", "E", "F", "H", "I", "J" and "K") of the eleven items listed. This level presupposes a total or partial gap in knowledge about the respective dimension of accessibility. Given this, it can be inferred that all the dimensions show insufficient knowledge, skills and attitudes on the part of the students, which can constitute barriers to inclusion, with a greater incidence in those related to architectural accessibility for people with visual impairments and communicational and attitudinal accessibility for people with visual, hearing, intellectual, ASD and specific functional learning disorders.

The "satisfactory" level was also present in all the items, with a higher incidence in four (items "A", "B", "C" and "G") of the twelve items listed, which relate to general aspects of attitudinal accessibility for all disabilities and also regarding architectural accessibility for people with physical disabilities.
There was no predominance of the "very satisfactory" level in any of the items listed, indicating the need to work on all the training aspects previously programmed.

The scholars' diagnostic assessment corroborates that of students with SEN in relation to architectural accessibility barriers which, although still present in the school space, are not the main factor compromising student attendance. Instead, it is the communicational, methodological, instrumental and attitudinal accessibility barriers that manifest themselves through the actions of the subjects in the environment.

Carvalho (2018) states that although the barriers are different, they are interrelated, especially when it comes to attitudinal barriers which, when associated with others, amplify their exclusionary and segregating effect in the school environment. Therefore, the removal of the various barriers needs to be worked on jointly, in an educational process that promotes the awareness of subjects as to the extent of the meaning of the term inclusion, through the dissemination of conceptual, procedural and attitudinal knowledge that involves, in particular, living with human diversity.

3.2 Evaluation stage of the educational product

At this stage, we asked the scholarship holders to complete a second assessment of their level of knowledge of the skills they had worked on after the intervention, the results of which can be seen in Figure 4.
Figure 4 - Scholars' self-assessment of competencies in the dimensions of accessibility after the Course on Assistance to People with Special Educational Needs

When we compare the results shown in Figures 3 and 4 visually and in percentages, we see that there was a reduction in the "unsatisfactory" level and an increase in the "very satisfactory" level for all the items listed. On the other hand, the variation in the "satisfactory" level alternated up and down according to each item analyzed.

We observed that there was a total reduction in the "unsatisfactory" level in six of the eleven competences, which relate to knowledge about the dimensions of architectural accessibility, concerning physical disability and visual impairment (items "G" and "H") and attitudinal accessibility, concerning the general aspects of all disabilities (items "A", "B" and "C") and learning disorders (item "K"), whose reduction was the most significant.

As for the other items, the "unsatisfactory" level was also reduced, except item "F", which deals with communication accessibility for people with hearing impairments and speech articulation difficulties. Even after completing the course, 44% of the scholarship...
holders did not show any improvement in their knowledge of this skill and may still not feel confident interacting with these people. We infer that the low level of knowledge in this skill, after the course, may be due to the lack of activities aimed at teaching the Brazilian Sign Language - Libras.

The students were asked to indicate how much the educational product contributed to improving their activities as scholarship holders and to their overall development. We also sought to analyze the effects of the course on professional training as an IFRN technician or graduate and on personal and citizen development, to encourage students to reflect on the application of the knowledge acquired to their social practice. To do this, the students had to indicate one of four alternatives, arranged in the following order of relevance: "essential", "important", "occasionally necessary", and "unnecessary". The results are shown in absolute numbers in Figure 5.

**Figure 5** - result of the evaluation of the scholars regarding the level of contribution of the educational product to their activities as a scholarship holder and to their overall development

![Figure 5](image.png)

Source: Elaborated by the author

When we compare the percentages for the three areas assessed, we see that the students established a greater relationship between the educational product and their personal and civic development and a lesser relationship with their professional training as a technician or graduate. This is evidenced by the higher and lower percentages of the
essential' level, which represents the maximum relevance.

However, we would like to point out that only indicating the "essential" and "important" levels in the evaluation of the educational product already reveals the relationship that the educational product establishes with the proposals of the programs and with the training profile of the course. The results indicate that the students perceive that the professional training process goes beyond the acquisition of scientific and technological knowledge of the area for work. The usefulness of the knowledge concerning assistance to people with SEN in professional practice shows that the students understand that the world of work is also permeated by human relations. Therefore, they recognize the need to master this knowledge for their training, based on an understanding of the ethical values that regulate social interaction.

This perception is in line with the concept of integral human development advocated by Ramos (2005), which involves work, science and culture. These dimensions make up the world of work and are essential for the formation of a critical individual who is aware of their social responsibility in relation to the reality in which they live.

Although six students indicated that it was "important" rather than "essential" for the course to contribute to their professional training, this result shows us that there is still a need to reinforce pedagogical practices in the educational product that sharpen all students' ability to perceive human diversity in the social relationships that permeate the world of work, so that everyone understands that inclusion transcends all social areas of life for individuals with and without SEN.

4 Conclusions

Throughout this work, we realized that the Course on Attending to People with Special Educational Needs contributed, above all, to the dissemination of attitudinal knowledge based on the strengthening of values such as mutual respect, solidarity, responsibility, equality and equal rights. These values promoted a critical reflection on the rules that govern social relationships, especially those that involve people with SEN, thus
underpinning ethical conduct in the students' actions in the school environment concerning human diversity.

Strengthening these values sought to promote reflective attitudes, the result of a clear awareness of the values that govern them, promoting a change in personal and professional attitudes. Thus, collaborating with the construction of a socio-affective climate in the relationships established in the school community, through cooperation, otherness, tolerance, participation, among other collaborative attitudes.

From attitudinal knowledge, which raises awareness of subjects through their perceptual and affective-emotional restructuring, we can develop procedural knowledge, i.e. the skills to remove barriers, be they attitudinal, architectural, communication, among others existing in the school environment or in any organizational institution.

We believe that the proposed educational product does not yet meet all the training demands presented by the scholarship holders, especially communication with deaf people. It is therefore necessary to develop other educational products that can complement this training. These new products could be proposals for further research.

We also recognize that specific and isolated actions on a single campus are not enough to build an inclusive federal institute if they are not planned and implemented at a systemic level, involving all the institution's actors. The perfect scenario would be to provide spaces within the integrated high school curriculum for these contents to be worked on transversally with all Professional and Technological Education (EPT) students, so that they have the opportunity to enrich the cultural dimension of their education.

Furthermore, the process of validating the course (application and results obtained) enables it to be replicated on other campuses of the federal EPT system, or to be adapted to meet the specific training needs of that local reality, in order to promote an inclusive approach to Professional and Technological Education.

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