

Digital literacy in the context of PROEJA^I

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Abstract

This study is the result of qualitative and exploratory research conducted at the João Baptista Carneiro State College, a vocational education institution located in the Ipuacu, district of Feira de Santana, Bahia. Given concerns regarding reading and writing practices in the digital environment within the school context among PROEJA students, the following question arose: what strategies contribute to the digital literacy of students in EJA integrated with EPT (PROEJA)? To answer this, we sought a semi-structured interview with eight students from the logistics technical course at the research campus. Content Analysis, as described by Bardin, was used to analyze the data. The results indicate that PROEJA students are part of the cyberculture era, but are not considered digitally literate because several barriers exist to promoting digital literacy, one of which is socioeconomic factors. Furthermore, it was understood that it is important for public policies to strengthen technological restructuring in education and investments in teacher training, so that they can integrate the use of TDICs in teaching and learning proposals.

Keywords: Digital literacy; digital information and communication technologies. PROEJA; Professional and Technological Education.

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Letramento digital no contexto do PROEJA

Resumo

Este estudo é fruto de uma pesquisa de natureza qualitativa e exploratória, realizada no Colégio Estadual João Baptista Carneiro, da educação profissional, situado no distrito de Ipuacu, em Feira de Santana, Bahia. Diante de algumas inquietações, no que tange às práticas de leitura e escrita no ambiente digital no contexto escolar, por parte dos discentes do PROEJA, partiu-se da seguinte questão: quais as estratégias que contribuem para o letramento digital dos estudantes da EJA integrada à EPT (PROEJA). Nesse sentido, fomos buscar a resposta, através da entrevista semiestruturada. A amostra foi composta por 8 estudantes do curso técnico em logística no *campus* da pesquisa. Para embasar a análise dos dados, utilizou-se como instrumento a Análise de Conteúdo, de Bardin. Os resultados encontrados informam que os discentes do PROEJA fazem parte da era da cibercultura, porém não são considerados letrados digitalmente, pois existem algumas barreiras para a promoção do letramento digital, e um deles é o fator socioeconômico. Além disso, compreendeu-se, que é importante que haja um fortalecimento por parte das políticas públicas em prol de reestruturação tecnológica na educação e investimentos na formação docente, para que eles possam integrar o uso das TDICs em propostas de ensino e aprendizagem.

Palavras-chave: Educação Profissional e Tecnológica; letramento digital; PROEJA; tecnologias digitais da informação e comunicação.



Alfabetización digital en el contexto de PROEJA

Resumen

Este estudio es el resultado de una investigación cualitativa y exploratoria realizada en la Facultad Estadual João Baptista Carneiro, una institución de educación vocacional ubicada en el distrito de Ipuacu de Feira de Santana, Bahía. Dadas las preocupaciones con respecto a las prácticas de lectura y escritura en el entorno digital dentro del contexto escolar entre los estudiantes de PROEJA, surgió la siguiente pregunta: ¿qué estrategias contribuyen a la alfabetización digital de los estudiantes en EJA integrado con EPT (PROEJA)? Para responder a esto, buscamos una entrevista semiestructurada con ocho estudiantes del curso técnico en logística en el campus de investigación. El análisis de contenido, según lo descrito por Bardin, se utilizó para analizar los datos. Los resultados indican que los estudiantes de PROEJA son parte de la era de la cibercultura, pero no se consideran alfabetizados digitalmente porque existen varias barreras para promover la alfabetización digital, una de las cuales es factores socioeconómicos. Además, se entendió que es importante que las políticas públicas fortalezcan la reestructuración tecnológica en la educación y las inversiones en la formación docente, para que puedan integrar el uso de las TIC en las propuestas de enseñanza y aprendizaje.

Palabras clave: Alfabetización digital; Educación Profesional y Tecnológica; PROEJA; tecnologías digitales de la información y la comunicación.



Introduction

This article emerged from a case study on the theme of Digital Literacy in the Context of the National Program for the Integration of Professional Education (PROEJA), carried out at João Baptista Carneiro State Rural School, located in the interior of Bahia, with students from the PROEJA technical course in logistics. It presents the results of the following research problem: what strategies contribute to the digital literacy of students in Youth and Adult Education (EJA) integrated with Professional and Technological Education (EPT) (PROEJA)? In view of constant technological changes, there has been an increasing use of digital devices through the internet. Considering that PROEJA is a program aimed at young people and adults who did not have the opportunity to study at the regular age, these students often lack the necessary skills to use technological devices. Therefore, digital literacy is essential so that they may be included in and feel that they belong to digital culture.

Although we are immersed in digital culture, in which technology is present in our daily lives, not all individuals have access to Digital Information and Communication Technologies (TDICs). In the context of Youth and Adult Education, specifically in PROEJA at a rural school, restricted access to the use of TDICs remains a present reality.

According to the Ministry of Education (MEC), the National Program for the Integration of Professional Education with Basic Education in the Youth and Adult Education Modality (PROEJA) was created in 2005. Its purpose was to meet the demand for access by young people and adults to professional and technological education, articulated with the expansion of schooling. The program focuses on a population living in conditions of educational marginalization, primarily composed of workers, young people, and adults who left school for various reasons during the regular age range established by the Law of Guidelines and Bases of National Education (LDB) (Brasil, 1996).



The institutionalization of PROEJA involves the recognition that these subjects are workers projected into the world of work without professional knowledge, yet they have the right to receive an education that relates the knowledge they have built through social and cultural practice to forms of knowledge more directly linked to productive activity (Ferreira, 2012, as cited in Rocha, 2019). In the author's understanding, PROEJA continues to seek an education that is not submissive to the laws of the market, but rather a full and human education, since general contents considered professionalizing have become a requirement for professional qualification in the contemporary world of work.

For Tommasini et al. (2019), youth and adult education has come to receive greater attention in Brazilian education, which has helped consolidate it as a teaching modality. According to Tommasini et al. (2019), it is essential to expand its spaces of action and ensure that it fulfills its social role of offering students opportunities for educational advancement associated with professionalization, within the scope of education as a right of all citizens. Following this logic:

[...] Student-workers, more than merely acquiring knowledge, need to constantly recreate it, which requires another relationship with knowledge, one that goes beyond the Cartesian paradigm. Merely instructing is very little, since the knowledge constructed through work goes beyond the information and skills provided by courses and training programs (Godinho et al., 2012, p. 286).

From this perspective, in order for students to receive a comprehensive education, it is necessary to connect theory and practice so that this education becomes truly meaningful. Balzan, Zorzi, and Marques (2010) state that the intended integral education is fundamental for learners to build their autonomy, beyond professional training, in such a way as to conceive a new relationship between human beings and work.

With regard to digital literacy, according to Dudeney, Hockly, and Pegrum (2016, p. 17), it refers to the "individual and social skills needed to interpret, manage, share and create meaning effectively in the growing range of digital



communication channels.” Thus, digital literacy goes beyond merely possessing digital skills; that is, it involves knowing how to interact with digital tools autonomously, critically, and reflectively through the internet, thereby enabling the construction of knowledge.

For Souza (2007), digital literacy is understood as a set of competencies necessary for individuals to understand and use information critically and strategically, in multiple formats, from various sources, and presented through the computer. From this perspective, for an individual to be considered digitally literate, they must master and know how to interpret reading and writing practices, both in physical and digital forms. When speaking of digital literacy in PROEJA, it is understood that:

One of the challenges lies in how to promote digital literacy while meeting current needs, especially those of adult learners, who learned to use ICTs out of necessity rather than affinity with them, and those of younger learners, with their new demands for personalization (Sbrogio, 2020, p. 38).

Especially with regard to female PROEJA students in rural contexts, rural workers, domestic workers, and people who left school at the regular age because they had to work early in life and help support their families, these are subjects marked by highly heterogeneous life trajectories. For this reason, the challenge is even greater, since they do not have daily, more familiar contact with technological resources. Thus, these students need to keep up with technological advances and become inserted into the contemporary digital world through digital literacy.

In most cases, they are young people and adults marked by socioeconomic inequality, whose access to the use of digital technologies occurs late. The greatest contact these students have with the use of TDICs is often through the smartphone, a device to which most of Brazilian society has access.

According to Coscarelli (2016), mastery of reading and writing practices alone does not guarantee that individuals will actively participate through the



use of technological artifacts. It is necessary to know how to use TDICs critically and consciously, which characterizes digital literacy.

For Rojo (2013, p. 7), “the school institution must prepare the population for the functioning of an increasingly digital society and also to seek, in cyberspace, a place to encounter, critically, differences and multiple identities.” In this context, discussing digital literacy within the educational institution, based on listening to these voices, means making visible the knowledge these subjects carry with them; enabling mastery of different technological resources so that they may express their identities and experiences, and recognize themselves as rights-bearing subjects and protagonists of their own histories.

Therefore, this article focuses on reporting how digital literacy practices occur among PROEJA students, based on the results of field research conducted in a school located in the interior of Bahia, within the National Program for the Integration of Professional Education (PROEJA). It discusses this theme in the field of EPT, analyzing skills related to the use of digital technologies, as well as the obstacles faced by students regarding the use of technological tools.

Methodological Procedures

A case study was conducted with the aim of understanding the gaps that exist in this process and bringing forward discussions that may help reduce disparities regarding access to digital reading and writing practices, which are often denied in PROEJA educational institutions. The research is qualitative in nature, since, according to Godoy (1995), the phenomenon can be better understood within the context in which it occurs and of which it is a part. It is also an exploratory study.

The locus of the investigation was João Baptista Carneiro State Rural School, located in the district of Governador João Durval Carneiro, popularly known as Ipuacu, in the municipality of Feira de Santana, Bahia. The school offers, in the afternoon period, technical courses integrated with secondary education in administration and, in the evening period, the Technical Course in



Logistics in the PROEJA modality. The research was carried out after approval under substantiated opinion no. 7.423.626, issued by the Research Ethics Committee of Centro Universitário Nobre (UNIFAN).

A semi-structured interview was used as the analytical instrument because, based on the discussions of Brancher, Canterle, and Machado (2019), semi-structured interviews aim to guide the interviewer toward a dialogue that is controlled and naturally directed, so as to generate safety and comfort for the interviewee. Ten students were invited to participate in the research; however, only eight accepted the invitation and agreed to the research procedures by signing the Informed Consent Form (TCLE). It is important to emphasize that all students invited to participate in the research were female. The interviews were conducted in person, on days and at times agreed upon with the participants.

For theoretical production and deepening, Bardin's (1977) Content Analysis was used as the data analysis instrument, with thematic analysis being chosen. Content Analysis (CA) was selected because this technique makes it possible to organize, interpret, and categorize the raw data spontaneously provided by the interviewees, so that they may become qualitative data. The choice of thematic analysis allows for a broader view of the students' perceptions, skills, and difficulties regarding the use of digital tools, through their accounts, enabling the identification of the most relevant aspects related to the construction of digital literacy among PROEJA students.

In Bardin's (1977) understanding, Content Analysis is a method that can be adapted to any carrier of messages and is used to examine and describe what lies behind speech, messages, texts, images, videos, among others. Thus, in order to interpret the statements of the research participants, the three stages proposed by Bardin (1977) were followed: the first stage, pre-analysis; the second stage, exploration of the material; and the third stage, treatment of the results, inference, and interpretation. These stages were essential for carrying out the data analysis. Below is a summary of the stages followed, according to Bardin's (1977) guidance:



- a) First stage: Pre-analysis - this was the stage in which we conducted a floating reading of all the collected material. For our research, interviews and observations were collected;
- b) Second stage: Exploration of the material - in this phase, the interviews were coded and categorized. Tables were used to organize the subcategories and categories identified from the recording units extracted from excerpts of the interviews;
- c) Third stage: Treatment of the results, inference, and interpretation - at this stage, we interpreted the categories created, using the entire theoretical framework.

Results

Participants' Profile

The interviewed students were between 21 and 55 years old, all of them female, and, as can be observed in Chart 1, most were over 32 years old. In addition, it was important to highlight each participant's occupation, since the work they perform also constitutes a significant factor in relation to their skills in using TDICs and, consequently, to the participants' digital literacy. According to Pommer and Bevilaqua (2014), these individuals are young people and adults with varied life experiences, who are already part of the world of work and often have social and family responsibilities.

Table 1 – Students' profile

PARTICIPANTS	OCCUPATION	AGE
EA	General services worker	33
EB	Fisherwoman	33
EC	Housekeeper	42
ED	Rural worker	42
EE	Housekeeper	55
EF	Student	23
EG	Student	26
EH	Service attendant	21

Source: Author (2024).



Based on these initial data, it was observed that only participant EE was older than the other interviewees. Age is a factor that should not be overlooked, since older individuals may be more likely to experience resistance when dealing with the use of DICTs.

Regarding occupation, the table shows that most of the students work in jobs that do not require the continuous use of digital technologies, apart from the use of mobile phones. Moreover, the occupations held by the students are generally low-paid, which may also constitute a barrier to accessing technological resources. Teixeira (2023) emphasizes that not everyone born in the technological era can, in fact, be considered a digital native, since many still lack access to digital culture for socioeconomic reasons.

According to Kenski (2003), the economy, politics, and the social division of labor are influenced by the ways in which the technologies that underpin the production system are used in different historical periods. Freire (1979, as cited in Silva, 2019), from a critical perspective, argues that “the concrete human being must equip themselves with the resources of science and technology in order to better fight for the cause of their humanization and liberation” (Freire, 1979, as cited in Silva, 2019, p. 42). From this perspective, overcoming social inequality involves the use of technologies for the critical and emancipatory appropriation of knowledge by individuals. If they do not interact with different technological devices, conditions of oppression will persist, making it more difficult for young people and adults to become integrated into social life and the world of work. The graph in Figure 2 reinforces the interviewees’ limited use of technological resources.



Devices used by students

Figure 1 – Devices used by students.



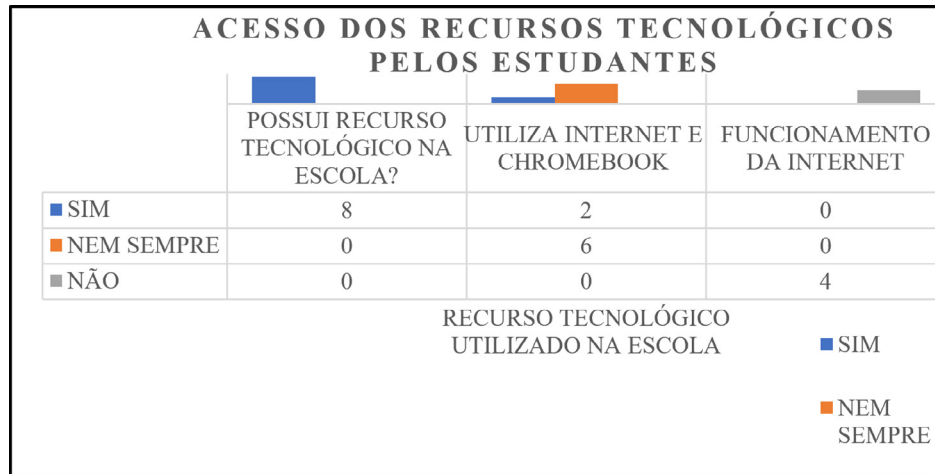
Source: Author (2024).

The data collected show that, of the eight students interviewed, four frequently use only a mobile phone as a technological resource, two use a mobile phone and TV, and the remaining two use a mobile phone and computer. The graph clearly shows the interviewees' restricted access to digital tools, corresponding to approximately 60% of the total. Based on this analysis, and according to São Thiago, São Thiago, and Souza (2024), many individuals use technological resources in a precarious way, in the sense that such use does not necessarily lead to the acquisition of knowledge. It is therefore highly relevant that technological equipment be used in ways that enable students to move beyond passive technical skills and become active agents in the construction of knowledge.



Access to technological resources at school

Figure 2 – Access to technological resources at school.



Source: Author (2024).

As shown in the graph, technological resources are available at the school. The resource identified by the participants as the one most frequently used by the class is the Chromebook, a mobile device donated by the state government. However, most participants reported that it is not always used. When asked why the equipment is not used more frequently, participant EB answered:

EB: *Well, we do use the Chromebook, mostly to do some research on texts or to prepare the final course paper, which we are working on now. We are going to start typing the final paper, but it is quite difficult for us to use the equipment.*

Quanto Regarding internet connectivity, four interviewees addressed this issue. Participant EC stated: “*There is a Chromebook, but we do not use it because the internet is always bad and the computers never work*”. According to Kenski (2003), the internet creates new possibilities, provides access to information, and enables communication between the school and the wider world. Without it, it becomes unfeasible for the school to integrate itself into the digital world and carry out educational activities. In addition to the students’ responses concerning internet connectivity problems, during visits to



the institution, it was also observed that other students complained about the internet signal.

Identified Categories

The categories emerged from the analysis of the interviews, which were coded through recording units, giving rise first to subcategories and, subsequently, to categories, in accordance with Bardin's (1977) methodology. The categories were developed based on the specific objectives and the research question.

Category: *Perceptions of digital literacy*

Based on the analysis of the interviews and discussions with the students about what they understand by digital literacy, it was observed that they have a functional understanding of the term, associating it with the simple use of technological resources, such as mobile phones and computers, for everyday tasks, including sending messages, making payments, accessing social media, watching videos, among others. This is evident in participant EA's statement, in which she defines digital literacy as: *"typing, it helps me a lot to express myself when there are mistakes so I can correct them; typing on the computer and on the mobile phone"*. This perception shows that EA presents a simplified view of the term, since the practice of typing, whether on a computer or a smartphone, does not in itself guarantee critical knowledge of DICTs. On the contrary, the use of the tool may become mechanical due to the constant repetition involved in using these devices. In line with Freire's (2020) ideas, technical-operational knowledge is the result of a banking model of knowledge, without critical reflection, limited to the repetition of practice. Participant ED also follows this same reductionist line of thought when she states that digital literacy means: *"typing on the computer and on the mobile phone; for now, I only make payments"*.

Participant EE revealed her understanding of digital literacy based on the practices she experiences in her daily life, arguing that digital literacy: EE: *"Has*



to do with the mobile phone, because, since I sell Natura and Avon products, everything is done through the mobile phone, and I write things down on the phone and send the sales”.

Although the importance of practical knowledge in the use of technologies cannot be ignored, it is necessary to understand that digital literacy goes beyond the mere technical ability to operate digital tools. It involves critical and conscious reading and writing skills in relation to the various sources and formats available. As Matos (2019) emphasizes, digital literacy goes beyond the functional dimension of learning how to use a computer or conduct internet searches. In this same sense, Santos (2009, as cited in Silva, 2019) states that digital literacy implies:

- a) knowing how to search for the necessary information in virtual/digital environments;
- b) managing and organizing information for later use;
- c) evaluating, integrating, interpreting, and comparing information from multiple sources;
- d) creating and generating knowledge through the adaptation, application, and recreation of new information;
- e) communicating and transmitting information to different and varied audiences through appropriate means (Santos, 2009, as cited in Silva, 2019, p. 49).

Coscarelli and Ribeiro (2005, p. 9) define digital literacy as the “expansion of the range of possibilities for engaging with writing also in digital environments, both for reading and for writing.” Thus, digital literacy is not characterized as an empty phenomenon or as something merely related to the machine itself, such as the computer, or to the use of data processors. Rather, in a broader sense, it refers to a set of new social practices in which computers, software, and digital networks play a significant role (Garcia; Buzato; Riedo, 2017).

From Teixeira’s (2023) perspective, digital literacy practices do not occur only through computers, since today there are many different digital technologies, especially with the development of mobile telephony and



advances in communication. As a result, learners can develop various strategies for building digital literacy through contact with different digital genres.

In Arcoverde's (2007, p. 19) discussion, digital literacy is understood as the "[...] ability of individuals to respond adequately to social demands involving the use of technological resources and writing in digital media." Within this logic, it is urgent that PROEJA students be able to master reading and writing, interpret sources of information, and question the interests of their producers as well as the ways in which technology represents the world, so that they can broadly understand how technological development is associated with political, social, and economic issues.

Category: barriers and technological infrastructure in a rural school

After entering the space of João Baptista Carneiro State School, located in a rural area in the interior of Bahia, it was possible to observe the need for technological advances that favor inclusion, digital literacy, and the learning of PROEJA students. According to Munarim, Girardello, and Munarim (2015, as cited in Medeiros; Alves; Silva, 2003), limited access to technological infrastructure is one of the starting points for analyzing the difficulties faced. Medeiros, Alves, and Silva (2023) further note that the lack of resources, poor connectivity, and inadequate infrastructure are factors that directly affect the incorporation of DICTs in rural schools. Participant EC's statement reinforces this reality: *"There is a Chromebook, but we do not use it; there is not always internet, and when there is, it is always bad"*. Kenski (2003) emphasizes that:

For the school to be connected to the technological environment of networks, it is first necessary to have adequate infrastructure: a sufficient number of computers, according to the expected demand for their use; modems; and diversified, high-speed forms of connection, whether by telephone, cable, or radio (Kenski, 2003, p. 69).

Na In the statement of another participant, another type of obstacle appears: the occasional use of technological resources by students. Participant



EH reports that there is *“Wi-Fi and a Chromebook. We do not use it, only when necessary”*.

Medeiros, Alves, and Silva (2023) argue that the incorporation of DICTs in rural institutions is not limited to access to technological resources alone, but also points to the need to develop critical thinking about the use of technologies. For these authors, it is important to consider the struggles, achievements, and challenges faced by these communities. Kleiman, Santos-Marques, and Siqueira (2018) reaffirm that the education of working subjects must go beyond technical training and cannot be reduced to forms of empirical knowledge. In other words, it is essential to understand the worker as an unfinished subject, situated within a specific social and historical context, in a continuous process of construction and education, and capable of producing scientific, technological, and cultural knowledge from a critical perspective.

Thus, it is essential to create means that enable individuals not only to access technologies, but also to appropriate digitally literate culture, so that they may acquire not only technical skills, but also become politically aware subjects prepared for the world of work.

It is also important to remember that most PROEJA students are adults who live in the world of work, with social and family responsibilities, as well as ethical and moral values shaped by their previous experiences, environment, and cultural reality (Brasil, 2004). Therefore, it is important to build a bridge between the knowledge they already possess and its expansion through technology, in order to provide these citizens with autonomous and meaningful learning. Ferreira (2012, as cited in Rocha, 2019) adds that these subjects are workers projected into the world of work without professional knowledge, and that they have the right to an education that connects the knowledge they have built through social and cultural practice with forms of knowledge more directly linked to productive activity. Thus, the process of expanding digital literacy must be mediated through the contextualized use of technological devices, taking into account students' life trajectories, time, and prior knowledge, in order to



add new possibilities for their insertion into social, cultural, and professional life. In Della Fonte's words (2018, p. 16), what matters is "the critical mastery of the most advanced forms of knowledge, technology, ways of feeling, skills, and so forth."

It is essential to highlight the role of the government, which at times fails to fulfill its obligations regarding improvements in education. EB draws attention to this issue: *"The government should do more to support technology in the school, with equipped classrooms, working computers, and functioning internet"*. Teixeira (2023) points out that public policies aimed at this issue are a demand of contemporary times, since if most people had access to DICTs through the internet, a medium that rapidly disseminates information, we would have a less unequal nation with access to knowledge for all.

In light of this, the factors that weigh most heavily on the integration of technology into the teaching and learning process of PROEJA students concern technological infrastructure, especially internet connectivity. This is reinforced in the dialogue with participant EC, who states that the school needs to *"improve the internet so that we have more structure and can develop computer skills in everyday life, even when searching on the mobile phone and everything."* Therefore, Kenski (2003, p. 70) emphasizes "that public systems, particularly educational institutions, must mobilize in order to achieve a qualitative leap in their educational process by integrating the cybernetic environment into their activities." According to the author, "the democratization of access to knowledge and to the use of new technologies depends on the need for public schools to be able to offer these technological activities and possibilities to their students with quality" (Kenski, 2003, p. 70).

Thus, in order to overcome these barriers related to technological infrastructure, public policies must be firm in promoting students' digital inclusion, not only as access to the use of DICTs, but as a right linked to comprehensive human development.



Category: The importance of digital education for the world of work

To recapitulate, the PROEJA student population is composed of different generations, including young people, adults, and older adults. Specifically with regard to the students at the school where the research was conducted, it was observed that all of them were working adults enrolled in the Technical Course in Logistics, seeking to learn a new profession and enter the world of work with the expectation of changing their lives.

Many of these students, when entering Professional and Technological Education (EPT), do so with the intention of becoming specialized in their chosen field. According to Caldart (2016), the main objective of vocational schools is to qualify students to perform a specific function in the world of work, which is indispensable. However, in educational terms, this should neither replace nor precede polytechnic education. Polytechnic education is understood as:

[...] a concept that allows us to think about the organic link between educational processes for workers and processes of production and work. In Frigotto's terms (2012, p. 275), it refers to the development of the knowledge bases connected to the process of producing and reproducing human life through work. It is also a way of thinking about how to establish the relationship between education and work, between school and production (Frigotto, 2012, as cited in Caldart, 2016, p. 4).

Based on this statement, the purpose of EPT is to bring education and work together so that students may understand knowledge in a broad sense, including scientific foundations, productive processes, technologies, and the historical and ontological social relations of work (Saviani, 2007). This also includes the appropriation of digital technical skills combined with digital literacy, which has become an indispensable requirement for education, entry into, and permanence in the world of work, as participant EB states: *"So, it is very important because most courses today, and jobs too, always require technologies, especially the internet"*.

Given that the logic of the world of work has changed alongside the pace of technological advancement, it can be observed that, through the use



of DICTs, several sectors have been automated, accelerating productivity and transforming labor dynamics. This scenario requires citizens to receive digital education that enables them to understand the use of technology both in its instrumental aspect, operating information and communication systems and interacting in digital environments, and in its cognitive and critical dimension, which involves problem-solving, the conscious use of digital tools, and the construction of knowledge.

Corroborating these ideas, Pinto and Souza (2017) discuss the need to educate qualified subjects capable of acting within the context of the capitalist and technological world, in which digital competencies have become increasingly decisive for entering and remaining in the labor market:

[...] the computerization of the production line, educational methods, and social relations themselves requires specific technological knowledge even from the ordinary individual (*dromo-aptitude*). It also creates the expectation, still not effectively achieved, of an increase in job opportunities in the service sector proportional to the closure of jobs in conventional industry, notably in the development of “tools” designed to serve users of computerized systems (Pinto; Souza, 2017, p. 110).

It is important to foster knowledge and skills related to the use of technology in EPT, so that students may become autonomous in their learning and explore different technological resources in professional settings. Participant EF highlights the relevance of digital training for the world of work by stating: *“Because if we have the basic key knowledge, we can fit into many things; if a job requires computer skills and we know how to use one, we can already enter the labor market”*.

Participant EC, in turn, compared past and current technologies, emphasizing the importance of using digital tools.

EC: *Because nowadays everything involves computers and the internet, which we use a lot, both the computer and the mobile phone. So, today, those typewriters no longer exist; now everything is done on the computer, and if we do not have these skills, we cannot keep up, right?*



From this perspective, technology must be seen as part of human existence, and it is necessary to acknowledge, from the standpoint of critical theory, that it shapes countless ways of life in society, as Feenberg (2003) argues. Although we are immersed in digital culture, it is worth emphasizing that many PROEJA students have limited skills in using technological equipment, and that their only means of obtaining technological education is through EPT institutions. According to the PROEJA students interviewed, digital tools “*can help us become more skilled at using the computer*” (ED). Participant EG emphasizes that they “*can improve learning and many other things*”.

From this perspective, the education of EPT students must be conceived in a way that prepares citizens for both work and life, integrates science, technology, and culture, and fosters individuals’ critical and reflective understanding.

However, it is important to emphasize that “*the integrated form of secondary education and professional education does not fully coincide with the project of a unitary school [...] because the actual conjuncture does not allow it*” (Ramos, 2017, as cited in Penha; Almeida, 2020, p. 93). Penha and Almeida (2020) recognize that, in the current concrete scenario, in a society marked by class division and socioeconomic inequality, especially in the world of work, there are no historical and political conditions for the full realization of a unitary school. Nevertheless, integrated secondary education represents a possible path toward change, within the limits imposed by the social, economic, and institutional reality in which we live. Thus, we continue to oppose the proposals of neoliberal capitalism, struggling in favor of an education capable of transforming subjects.

Category: Integrating the use of technologies into PROEJA teaching

According to Moraes (2021), digital culture in the context of EJA is present in everyday life in various ways, since technology can act as an integrating element across other curricular components. Through teaching and learning processes, it can enable students to use DICT resources to conduct research



and express their knowledge through different media, such as text, image, audio, and video, among others.

In light of the above, and understanding PROEJA as a complementary part of EJA, connecting students' prior knowledge about the use of technologies can increase their interest in participating in classes, as they may be motivated to discover new horizons, access new opportunities, and improve their lives. Thus, we agree with the position of Santos and Bonfim (2017):

[...] technology integrates individuals into society, making them feel happier and more willing to live and grow in various ways. Students assume the responsibility of attending classes with enthusiasm because they know that, there, lies the hope of improving their lives and building opportunities they did not previously have (Santos; Bonfim, 2017, p. 7).

Student EE argues that classes become more interesting *“when more tablets or computers are used, so that we can develop more and have good discipline”*. Thus, the integration of DICTs into PROEJA teaching is essential for students to feel part of the technological world in which we live. According to Coscarelli and Ribeiro (2005):

Technology cannot be dissociated from education: it is an integral part of the educational process and should not be treated in isolation. Moreover, technology should be present not as an appendix, but as a reality that cannot be ignored or left unknown, insofar as this is humanly possible. Therefore, a project of technological education must have intentionality and theoretical support (Coscarelli; Ribeiro, 2005, p. 91).

In this context, the educational institution needs to conceive a curriculum that is always centered on:

[...] the construction of an educational process grounded in the integration of EJA/EP emerges as a more than urgent necessity if we aim to educate, rather than train, young and adult working subjects. Such education should contribute to ensuring their right to develop all their human dimensions and potentialities (Oliveira; Machado, 2012, p. 162).

It is therefore understood that the integration of disciplines, the contents to be taught, culture, technology, and, above all, the experiences that PROEJA



students bring with them is of utmost importance. In other words, it is essential to provide students with a comprehensive and broad education. Manacorda (2019) emphasizes the need to educate individuals on the basis of a globally and integrally developed personality, through multiple experiences.

In line with Araújo and Frigotto (2015), it is reaffirmed that integrative pedagogical practices should focus on social emancipation, enabling the development of students' autonomy and the expansion of their creative capacity through the resignification of teaching and learning strategies and methodologies.

Another crucial point that cannot be excluded from this integration is the union between theory and practice as inseparable elements, allowing students to connect the contents learned in theory with the use of technological artifacts in practical application and, thus, acquire new knowledge. As Manacorda (2019) points out regarding Gramsci's educational principle, in which:

[...] the student may learn to apply their knowledge and develop their practical abilities, thereby achieving a certain union between theory and practice at the didactic level, in the sense that theory illuminates practice and practice validates theory [...] (Manacorda, 2019, p. 255).

In this context, teaching and learning must be aligned with both theory and practice. However, in addition to acting as a mediator, the teacher needs to view computational resources not merely as work tools, but as instruments capable of strengthening the bond between teacher and student, so that learners feel secure in acquiring new ways of learning and in creating strategies to expand digital literacy. Based on this dialogue, we present some statements from the research participants that reveal a lack of practical classes at the institution involving the use of technological devices, especially computers. Participant EB expresses this same issue by stating that teachers need to:

EB: Contribute more to classes by using computers, because since we are in a technical course, we need to have more practice, and we have more theoretical classes than practical ones. We need someone better prepared, a teacher with an equipped classroom.



Thus, the school needs to move forward alongside technology, and this will only happen if teachers enable access to knowledge through teaching practices planned around the use of DICTs and grounded in the reality of PROEJA students.

Participant EA emphasized that she misses the use of technology by teachers in text writing and argues: *“I think text is an ideal tool, because we learn more; we end up developing more skill in placing commas, and all of this helps”*. According to Sbrogio (2020):

The school of cyberculture can become a space for all voices, all forms of speech, and all texts. The most compelling challenge is that of the teacher, who can finally reinvent themselves as someone who comes to dialogue and create the necessary conditions for all voices to be heard and to grow together (Sbrogio, 2020, p. 23).

However, Santos and Bonfim (2017) state that few educators still receive adequate training to reinvent themselves professionally; only those who seek qualification on their own initiative are able to overcome this gap. Students, in turn, mostly belong to economically vulnerable communities and depend exclusively on public investment. For technology to be used in a way that integrates teachers and students, continuous teacher education is necessary, considering that today's technology will not be the same as tomorrow's. In addition, investments from the public sector are indispensable.

According to Reis (2019), it is necessary to promote teaching that is challenging and, above all, capable of awakening students' interest in participating cooperatively in the construction of knowledge. Students should be encouraged to carry out activities in digital environments, so that they can exchange information and ideas, promoting knowledge in a participatory and collaborative way.

For Santos and Bonfim (2017), educators who confront the bureaucratic issues of the school in order to encourage their students to use technological devices create opportunities to demonstrate that there are effective methods of learning, including the use of computers. Through the reading of articles,



news, and online newspapers, students learn to conduct research and construct knowledge, strengthening critical thinking, reflection, and digital literacy.

Conclusion

This article focused on digital literacy in PROEJA, with an emphasis on rural education. PROEJA is aimed at young people, adults, and workers who, for the most part, remained away from school for different reasons and return with rich life experiences and diverse learning rhythms. These subjects seek, through the Program, life transformation, the fulfillment of dreams, and the development of critical and reflective autonomy.

In the current context, in which technology has become an inseparable part of human existence, it is essential to ensure that these students are included in a digitally literate culture, so that they can fully exercise their roles as citizens in contemporary society. However, it is necessary to question whether this digital inclusion, which takes place especially through digital literacy, is in fact occurring in rural Professional and Technological Education (EPT) institutions, historically marked by a lack of technological infrastructure and the absence of continuing teacher education.

In light of these concerns, we sought to understand how digital literacy practices occur among PROEJA students. We found that students are part of digital culture, but are not yet fully digitally literate, due to both external and internal factors. Among the external factors, socioeconomic conditions stand out: many students live in rural areas, survive from what they produce, and work in low-paid occupations. Among the internal factors, school dropout, problems related to technological infrastructure, and unstable internet connectivity are evident.

It is therefore urgent to strengthen public policies aimed at restructuring education, including continuing teacher education, so that teachers can integrate DICTs into pedagogical practices in a critical and creative way, articulating



practical and theoretical knowledge. In addition, it is necessary to emphasize the greater use of technological resources by the students themselves, since their use remains limited in the school environment.

Thus, in response to the research question, which strategies contribute to the digital literacy of PROEJA students?, we found that the pedagogical use of mobile phones constitutes the main strategy for promoting digital literacy in this context.

The research therefore confirms the initial hypothesis: living in digital culture does not mean being digitally literate. Digital literacy requires, in addition to technical skills with DICTs, the exercise of social practices of reading and writing in digital environments.

It is concluded that digital literacy, understood as an indispensable right, must be guaranteed to all citizens, especially those historically excluded from educational processes, specifically PROEJA students. In this scenario, the central commitment of public schools is to promote digital and social inclusion, reaffirming the school as a formative and welcoming space that can foster integration and critical, reflective access to digital technologies for all individuals.

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Note

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