THE BNCC AND THE USE OF TECHNOLOGICAL RESOURCES IN ELEMENTARY SCHOOL

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ABSTRACT

The objective of this article is to present and discuss the general and specific competencies contained in the National Common Curricular Base (BNCC), referring to the use of technological resources and digital culture in the educational context, intended for the stage of Elementary School I. which today serves as a parameter for public and private education in Brazil. Knowledge of the pedagogical guidelines described in the BNCC helps the teacher's continuous reflection on the teaching-learning process. The study was carried out through a literature review, specifically the texts of the BNCC itself (2018). It was concluded, through this research, that the alignment between the required curriculum, pedagogical practices, adequate teacher training and the physical structure of schools are essential for the fulfillment and development of the proposed educational desires.

Keywords: Competencies. Skills. Regulatory.

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INTRODUCTION

The National Common Curriculum Base (BNCC) is pointed out by Pykocz and Benites (2023) as the main reference in the formulation of curricula in the country, as well as for the elaboration of policies in the area of Education, such as teacher training and evaluation systems of the teaching process. According to Zajac and Cássio (2023), the BNCC is seen as a reduced-budget educational plan, in relation to previous educational plans, such as the National Education Plan (PNE). It structures the teaching of various areas of knowledge in competencies and skills.

In its introductory text, the BNCC (2018) clarifies that, throughout the Basic Education process, the ten general competencies should be recommended, which are defined as a set of knowledge related to concepts and procedures, as well as the attitudes and values necessary for the full exercise of citizenship, preparing students for the world of work. Regarding specific competencies, the BNCC (2018) points out that they have the same purposes as general competencies, but these have a type of horizontal articulation between the areas of knowledge, thus enabling the continuity of students' experiences from Elementary School I to Elementary School II.

In the educational sphere, Machado and Amaral (2021) understand that the BNCC establishes competence in digital culture as one of the sets of skills and knowledge to be mobilized in all disciplines and stages of Elementary School, thus playing a fundamental role in the construction of the learning objectives to be achieved by students.

Throughout the article, some of the main general and specific competencies of each area of knowledge that contemplates the use of technological resources in Elementary School I will be presented. It is essential that the requirements contained in the BNCC are in line with what is offered to teachers, otherwise the expected results for Education after its implementation may not be so satisfactory.

THE BNCC AND THE GENERAL COMPETENCIES RELATED TO TECHNOLOGICAL RESOURCES

The National Common Curriculum Base is the guide and guiding basis of the Brazilian educational system. In its text, the BNCC (2018, p.7) states that:

> The National Common Curriculum Base (BNCC) is a normative document that defines the organic and progressive set of essential learning that all students must develop throughout the stages and modalities of Basic Education, so that they have their learning and development rights ensured, in accordance with the provisions of the National Education Plan (PNE). This normative document applies exclusively to school education, as defined in § 1 of Article 1 of the Law of Guidelines and Bases of National Education (LDB, Law No. 9,394/1996) 1, and is guided by ethical, political and aesthetic principles that aim at integral human formation and the

construction of a just, democratic and inclusive society. as based on the National Curriculum Guidelines for Basic Education (DCN).

The BNCC establishes knowledge, skills and abilities that all students are expected to develop throughout Basic Education (Elementary School I and Elementary School II) (Toneis; Paulo, 2023; Cosin, 2024). It also provides guidance on the ethical, political and aesthetic principles outlined by the National Curriculum Guidelines for Basic Education (DCN). The BNCC, in this way, arises in the sense of adding to the existing educational purposes, which direct Education throughout the national territory, towards integral human formation, favoring the construction of a just, democratic, and inclusive society (Ministry of Education, 2023).
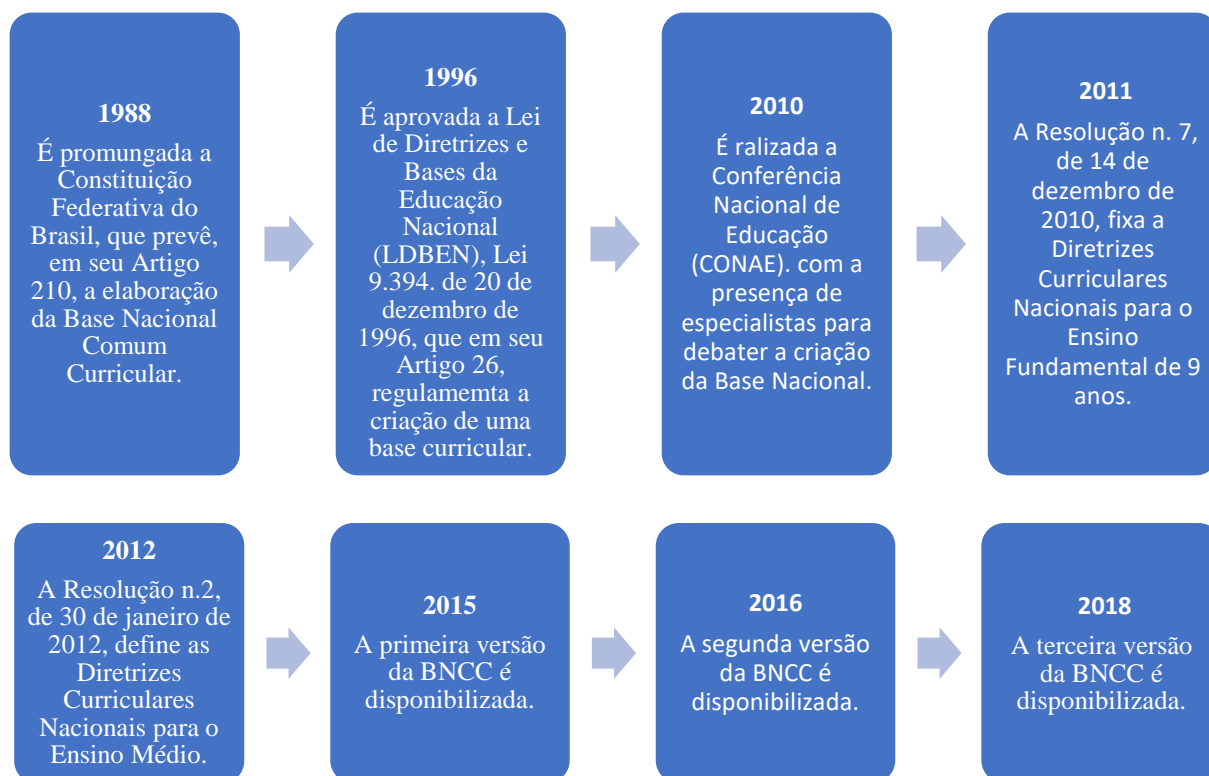
In the Law of Guidelines and Bases of National Education (LDB, Law No. 9394/1996), it was established that the curricula of Basic Education should have a basis that would guide the construction of the curricula of the education systems and networks of the Brazilian States and, additionally, all public and private schools, covering the following segments: Early Childhood Education, Elementary School I, Elementary School II and High School (Ministry of Education, 2023). It should be noted that the BNCC must be complemented by a diversified part of content and according to the regional and local characteristics of the community in which the school is inserted (LDB, Law No. 9394/1996).

Krützmann, Alves, and Silva (2023) explain that discussions about the elaboration of a document that would contemplate Brazilian educational aspirations began many years ago and had as their starting point the promulgation of the Federal Constitution of 1988. For the authors, the Government's objective, in contemplating the need to create the BNCC in the Brazilian Constitution, was to establish and ensure national and regional cultural and artistic values for Basic Education students. In this way, the country's own legislation served as the basis and was fundamental for the implementation of this document.

Since then, as Toneis and Paulo (2024) state, debates about the creation of the BNCC have begun. During the National Conference on Education (CONAE), in 2010, a document was briefly mentioned that addressed the need to develop a single curriculum base for the entire national territory. However, it was only in the second edition of CONAE, in 2014, that there was really mobilization for the construction of this document.

The more detailed history related to the preparation of the BNCC can be seen in figure 2. According to the information provided by the BNCC website itself and, briefly, presented in the scheme below, it is possible to analyze that its elaboration took place through several stages and discussions.

Figure 2 - Scheme elaborated by the author herself of the main historical milestones related to the elaboration of the Common Curricular Base.

| **1988** É promungada a Constituição Federativa do Brasil, que prevê, em seu Artigo 210, a elaboração da Base Nacional Comum Curricular. | **1996** É aprovada a Lei de Diretrizes e Bases da Educação Nacional (LDBEN), Lei 9.394. de 20 de dezembro de 1996, que em seu Artigo 26, regulamemta a criação de uma base curricular. | **2010** É ralizada a Conferência Nacional de Educação (CONAE). com a presença de especialistas para debater a criação da Base Nacional. | **2011** A Resolução n. 7, de 14 de dezembro de 2010, fixa a Diretrizes Curriculares Nacionais para o Ensino Fundamental de 9 anos. |

| **2012** A Resolução n.2, de 30 de janeiro de 2012, define as Diretrizes Curriculares Nacionais para o Ensino Médio. | **2015** A primeira versão da BNCC é disponibilizada. | **2016** A segunda versão da BNCC é disponibilizada. | **2018** A terceira versão da BNCC é disponibilizada. |

Source: Authorship, based on data available at: http://basenacionalcomum.mec.gov.br/historico

In addition to the BNCC (2018) pedagogical guidelines recommending the use of technology in the teaching process, they also provide for the development of ten general competencies for Education in Elementary School I and, among them, two mention the use of technological resources. They are, general competencies 2 and 5, provided for in the BNCC (2018, p.9):

> 2. Exercise intellectual curiosity and use the approach of the sciences, including research, reflection, critical analysis, imagination and creativity, to investigate causes, elaborate and test hypotheses, formulate and solve problems and create solutions (including technological) based on knowledge from different areas.
>
> 5. Understand, use and create digital information and communication technologies in a critical, meaningful, reflective and ethical way in the various social practices (including school ones) to communicate, access and disseminate information, produce knowledge, solve problems and exercise protagonism and authorship in personal and collective life.

Also in its text, the BNCC (2018) mentions some actions that must be adopted by the school, in order to ensure the learning rights defined for each stage of Elementary School. In this set of measures, there are: "... select, produce, apply and evaluate didactic and technological resources to support the teaching and learning process" (BNCC, 2018, p. 17).

The BNCC (2018) emphasizes that it is up to education networks and schools to integrate, in their curricula and pedagogical proposals, the approach to contemporary

themes in a transversal way, such as "science and technology". In this way, creative and logical thinking is stimulated while exploring the communication potential of the digital universe. According to the BNCC (2018, p. 58):

> The children's experiences in their family, social and cultural context, their memories, their belonging to a group and their interaction with the most diverse information and communication technologies are sources that stimulate their curiosity and the formulation of questions. The stimulation of creative, logical and critical thinking, through the construction and strengthening of the ability to ask questions and evaluate answers, to argue, to interact with various cultural productions, to make use of information and communication technologies, enables students to broaden their understanding of themselves, of the natural and social world, of the relationships of human beings with each other and with nature.

On digital culture, BNCC (2018, p. 61) warns that:

> It should also be considered that digital culture has promoted significant social changes in contemporary societies. As a result of the advancement and multiplication of information and communication technologies and the growing access to them due to the greater availability of computers, cell phones, tablets and the like, students are dynamically inserted in this culture, not only as consumers. Young people have become increasingly engaged as protagonists of digital culture, becoming directly involved in new forms of multimedia and multimodal interaction and networked social action, which are carried out in an increasingly agile way. In turn, this culture also has a strong emotional appeal and induces the immediacy of responses and the ephemerality of information, favoring superficial analyses and the use of more synthetic images and forms of expression, different from the ways of saying and arguing characteristic of school life.

And it is within this context that the BNCC has been implemented, bringing, according to Santos *et al.* (2021), an extremely technological language, emphasizing the competencies and skills that are specific to the development of digital culture. Tomazini Neto (2023) adds that digital culture, in turn, can provide productive educational moments, among them are the understanding of complex phenomena and the obtaining of reliable scientific information through studies and simulations.

Santos *et al*. (2021) argue that the use and control of technological resources, mentioned in the BNCC, constitute one of the general skills that students should improve with the help of teachers during Basic Education. According to this perspective, digital culture, in the document, is related to all fields of learning, so its use cannot remain isolated within just one discipline, as in computer classes, for example, but in a contextualized and transversal way.

The combination between the conventional teaching model and the virtual model is seen by Nunes and Malagri (2023) as a new way to expand knowledge, as the fusion of these two educational models has the potential to generate a true transformation in

pedagogical approaches, thus contributing to the emergence of new training and learning processes.

The BNCC brings in its texts several innovative recommendations for the teaching of science in Elementary School, but Krützmann, Alves and Silva (2023) raised some questions. One of them addresses the uncertainty about the adequacy of the infrastructure of public schools in view of the recommendations described by the BNCC, and the other concerns the working conditions made available to teachers, including basic resources and adequate training. Another point raised by the research by authors Nunes and Malagri (2023) questions equal access between different social groups to digital technologies, observed as a major social and educational challenge in Brazil.

It is important to highlight that the quality of access to digital educational technologies in Brazilian public institutions depends on educational policies aimed at this area. In the current Brazilian educational system, the availability of adequate technological resources in schools is still limited (Cosin, 2024), which ends up hindering the work of teachers, who do not have the necessary resources to carry out the appropriate pedagogical actions for the implementation of the BNCC.

Up to this point in the research, it is possible to observe that many pedagogical guidelines established in the BNCC may not be being complied with, due to the scarcity of up-to-date technological resources in schools, in addition to inadequate physical spaces, which do not meet the requirements for compliance with the recommendations for the use of technology in the educational environment. The quality of the resources offered to the teacher and the pedagogical support network are essential for the development of such innovative activities.

THE BNCC AND THE SPECIFIC COMPETENCIES RELATED TO TECHNOLOGICAL RESOURCES

The BNCC includes four areas of knowledge, namely: languages, mathematics, natural sciences and human sciences. All these areas mentioned recommend the development of specific competencies related to the use of technological resources and technologies in school. Let's look at specific competence 6, in the area of language knowledge, recommended by the BNCC (2018, p. 67) for Elementary School I:

> 6. Understand and use digital information and communication technologies in a critical, meaningful, reflective and ethical way in the various social practices (including school ones), to communicate through different languages and media, produce knowledge, solve problems and develop authorial and collective projects).

In the area of mathematics knowledge, the specific competence that deals with the use of technological resources for Elementary School I is: "5. Use mathematical processes and tools, including available digital technologies, to model and solve daily, social and other areas of knowledge problems, validating strategies and results" (BNCC, 2018, p. 267).

Still in the area of mathematics, the BNCC (2018, p. 271) recommends that:

> In Elementary School – Early Years, students are expected to identify and establish reference points for the location and displacement of objects, build representations of known spaces and estimate distances, using, as support, maps (on paper, tablets or smartphones), sketches and other representations. Regarding shapes, students are expected to indicate characteristics of three-dimensional and two-dimensional geometric shapes, associate spatial figures with their plans and vice versa. They are also expected to name and compare polygons, through properties relative to sides, vertices and angles. The study of symmetries should be initiated by manipulating representations of plane geometric figures in grids or in the Cartesian plane, and using dynamic geometry software.

In the area of knowledge of natural sciences for Elementary School, the BNCC encourages scientific investigation through reading and research in virtual environments, involving topics such as the environment and society, natural phenomena and human diversity. In addition, she recommends the use of digital tools to collect data from scientific experiments carried out in the classroom. These recommendations are intended to provide conditions for the development of the following specific competencies listed by the BNCC (2018, p. 323):

> [...]
>
> 2. Understand fundamental concepts and explanatory structures of the Natural Sciences, as well as master processes, practices and procedures of scientific research, in order to feel safe in the debate of scientific, technological, socio-environmental and work issues, continue learning and collaborate for the construction of a just, democratic and inclusive society.
>
> 3. Analyze, understand and explain characteristics, phenomena and processes related to the natural, social and technological world (including the digital world), as well as the relationships that are established between them, exercising curiosity to ask questions, seek answers and create solutions (including technological) based on the knowledge of the Natural Sciences.
>
> 4. Evaluate political, socio-environmental and cultural applications and implications of science and its technologies to propose alternatives to the challenges of the contemporary world, including those related to the world of work.
>
> [...]
>
> 6. Use different languages and digital technologies of information and communication to communicate, access and disseminate information, produce knowledge and solve problems of the Natural Sciences in a critical, meaningful, reflective and ethical way.
>
> 7. Know, appreciate and take care of oneself, one's body and well-being, understanding oneself in human diversity, making oneself respected and respecting the other, using the knowledge of Natural Sciences and its technologies.

It is evident, through the specific competencies mentioned above, that technological resources are fundamental and an integral part of an education system that helps the student to understand this dynamic between technology, environment and society. Still on the area of knowledge of natural sciences, the BNCC (2018, p. 329-330) points out that

> It is impossible to think of a contemporary science education without recognizing the multiple roles of technology in the development of human society. The investigation of materials for technological uses, the application of optical instruments in health and sky observation, the production of synthetic material and its uses, the applications of energy sources and their applications, and even the use of electromagnetic radiation for medical diagnosis and treatment, among other situations, are examples of how science and technology, On the one hand, they make it possible to improve the quality of human life, but on the other hand, they increase social inequalities and environmental degradation. Thus, it is important to highlight the multiple roles played by the science-technology-society relationship in modern life and in the life of planet Earth as central elements in positioning and decision-making in the face of ethical, cultural, political, and socio-environmental challenges.

The BNCC (2018) characterizes the curricular component of the human sciences, providing guidance on its function of contributing to the understanding and contextualization of concepts related to the notions of time and space. It is recommended that the development of this spatio-temporal reasoning be carried out through different types of languages. The specific competencies that recommend the use of technological resources for this curricular component are in the BNCC (2018, p. 357) and they are:

> [...]
>
> 2. Analyze the social, cultural and digital world and the technical-scientific-informational environment based on the knowledge of the Human Sciences, considering their variations of meaning in time and space, to intervene in everyday situations and position themselves in the face of problems of the contemporary world.
>
> [...]
>
> 7. Use cartographic, graphic and iconographic languages and different textual genres and digital information and communication technologies in the development of spatio-temporal reasoning related to location, distance, direction, duration, simultaneity, succession, rhythm and connection.

In this way, Tomazini Neto (2023) states that the BNCC encourages the modernization of pedagogical resources and practices, in addition to guiding the use and development of digital technologies at each stage of Basic Education, with the purpose of integrating digital culture in different areas of knowledge. Considering that digital technologies are widely cited in the BNCC (2018), Boscarioli (2022) reflects that, although there are some distortions of interpretation, in addition to generalist citations with regard to

educational technologies, the National Base is a document in force and with ongoing implementation, and that, therefore, it should be considered in the teacher's practice, according to the social reality experienced by each educator.

The BNCC (2018) recommends the use of different forms of languages and different literacies, including digital, for the development of multiple learnings. Krützmann, Alves and Silva (2023) and Miesse *et al*. (2024) only warn about the importance of evaluation and repercussions of public educational policies implemented in Brazil. The objective of this monitoring is to monitor the impacts caused by the current pedagogical trends, considering that the focus of the development of BNCC competencies and skills is intrinsically linked to the labor market.

TEACHER TRAINING AND THE USE OF TECHNOLOGY IN SCHOOL

As demonstrated through this succinct survey in the BNCC, technological resources are commonly recommended. In this way, it seeks to understand the reasons why many teachers have difficulty using them in their pedagogical practice, because, after all, according to Tomazini Neto (2023), the education phase, experienced in the pandemic, highlighted gaps in teacher training and the use of technological resources.

Villarroel, Silva, and Okuyama (2022) cite that the reasons can be the most varied, and highlight the fear of the teacher being replaced by a technological resource, the lack of affinity with the environment, and the lack of adequate training. Regarding the fear that technological resources may replace teachers, Villarroel, Silva and Okuyama (2022, p. 7) argue that:

> Technologies and digital media do not replace the teacher and the practices already used in Education, but serve to add and contribute to the educational work. The process of teaching and educating is an essentially human attribute, so no machine replaces the teacher, but it can facilitate his communication in the environment in which he is inserted. Digitally literate teachers can use digital technologies creatively to innovate their practice and reach their students even more.

According to Pimentel, Nunes and Sales Júnior (p. 6, 2020), "the teacher has the function of encouraging, mobilizing and applying technologies in student learning." However, for such a feat to happen, effective pedagogical training and accessible resources are needed. Many teachers seek this training spontaneously on the internet, however the quality of these courses is very varied, which may result, in some situations, in misinformation or false information (Villarroel; Silva; Okuyama, 2022).

For Pimentel, Nunes and Sales Júnior (2020, p.8), "teacher training must be a permanent process, which leads to a *modus operandi* that is always in rotation with

everyday situations and future investigations." The relevance of continuing education for the improvement of educational quality is evident, since the improvement of the technological domain opens up new research opportunities, essential for expanding the possibilities of pedagogical mediation in the teaching process (Villarroel; Silva; Okuyama, 2022).

Regarding initial teacher training, the BNCC (2018) provides guidance on what is expected of this teacher training, pedagogical practice and the school institution. Teacher training is expected to happen continuously and stimulating the use of technological resources that enable the rethinking of the application of this formative knowledge, in various learning situations. Pedagogical practice, which is more connected with the transformations of the present time and insertions of technological solutions in the educational sphere. From the school, which aligns its pedagogical proposal with the desires of the BNCC (Pimentel; Nunes; Sales Júnior, 2020).

Public policies are important for the teacher training process because they can foster pedagogical knowledge that involves the use of some type of digital technological resource, enabling access to it (Tomazini Neto, 2023). To this end, Pimentel, Nunes and Sales Júnior (2020) consider it necessary to resize teacher training, so that it is focused on the real needs of teachers in the face of technological updating in the educational area.

Regarding teacher training, both initial and continuing education are important, because, as pointed out throughout the text, there is no way to evaluate something that one does not master. For Selpa *et al.* (2023), only qualified teachers will be able to verify, in the classroom, which technological resources are truly, in the context experienced, effective for the construction of knowledge and which are irrelevant or even harmful to the learning process. "As a teacher, it is not possible for me to help the student to overcome his ignorance if I do not permanently overcome mine. I cannot teach what I do not know" (Freire, 1996, p. 37).

Furthermore, Tomazini Neto (2023) advises that, first, it is necessary to overcome concepts related to traditional teaching, which have as their main characteristic the student as a receiver of information. According to the author, this type of pedagogical model does not favor either the criticality or the protagonism of the student in the construction of knowledge, so widespread in today's society.

For Villarroel, Silva and Okuyama (2022, p. 10) "... the use of digital technologies can contribute to a new curricular organization, with new ways of teaching...". Pimentel, Nunes and Sales Júnior (2020) recall the strategies and pedagogical approaches adopted in 2020 with the pandemic. Basically, in that scenario, pedagogical practices focused on the adoption of various technological resources, with the purpose of enabling interaction,

teaching and learning, thus proving that technological resources have the potential to provide and promote other forms of learning.

However, the authors Pimentel, Nunes and Sales Júnior (2020) suggest that, in an educational environment, the technologies used by teachers should also be integrated into their social life. This helps him to have knowledge and mastery of his functions and know how to use them in the best possible way. To this end, Cruz (2023) argues for the need for the teacher to go through a kind of "digital literacy", because, according to the author, in this way digital resources and teaching techniques could be analyzed with greater propriety.

Tomazini Neto (p. 31, 2023) defines that "... digital literacy corresponds to the mastery of techniques and skills to access, interact, select, develop and critically evaluate the information made available by digital media", thus allowing, according to Nunes and Malagri (2023), teachers to move through different virtual spaces, making the most of the educational potential that technologies offer.

Villarroel, Silva, and Okuyama (2022) point out that digital literacy is crucial for the connection between the teacher and digital culture, thus encouraging the incorporation of technological tools into their daily lives. However, for there to be this integration between education and technological means, it is essential that the teacher, in addition to being dedicated, also receives stimuli and help from the school.

Digital literacy not only consists of knowing the concepts and types of digital technologies, but especially of understanding and interpreting how these technological resources can be used in the school context, improving the teaching method (Villarroel; Silva; Okuyama, 2022). The inclusion of this new technological language in Education can only occur through learning from the initial and continuing training of teachers, hence the importance of the aforementioned resizing (Villarroel; Silva; Okuyama, 2022).

However, Cruz (2023) points out that much is discussed about the use of technology in school, but little is shown about how this technology is actually used, including the infrastructure offered by the school and the support network made available to the teacher. In fact, the implementation of these resources in Education can facilitate the learning process of students; however, according to Boscarioli (p.2, 2022), "... it also requires that teachers be prepared to use them in a methodological way in their classrooms."

It is crucial that, in addition to having pedagogical skills and scientific knowledge, the teacher also demonstrates coherence in the selection of the technological resources they employ, obtained through digital literacy (Cruz, 2023). For this reason, Selpa *et al.* (2023) argue that thinking about teacher training for digital education goes far beyond the use of

technological resources and it is essential that, in fact, teachers master these resources to avoid their misuse.

In view of this, Tomazini Neto (2023) criticizes the fact that the use of digital technological resources is mentioned in documents that guide public educational policies, but which do not address teacher training in a comprehensive way, providing the necessary support so that the teacher really becomes "fit" to use them. In this perspective, Tomazini Neto (2023, p.21) also adds that "... there is a lack of pedagogical guidelines for the teacher's work."

One of the main concerns of the recommendation for the use of technology in the educational environment, according to Santos *et al.* (2021), is that Education is centered on the influence of digital technologies on the teaching-learning process, considering that students are born in the digital context, while their teachers slowly migrate and adapt to this universe. For Selpa *et al.* (2023), this adequacy in the way of teaching, which is increasingly linked to the use of technologies, has provoked and continues to provoke some resistance from some teachers, especially those with long experience in the educational area.

One of the possible solutions to this type of obstacle, according to Freitas (2018), could be the development of more intuitive applications and digital platforms, which would contribute to this process of creating educational games, facilitating this transition of the teacher to the digital world. However, as the author points out, the lack of financial investment in the development and formulation of this type of platform in particular is notorious, because, unfortunately, the focus of these companies is concentrated on the production and updating of *games* intended for entertainment.

In any case, it is recommended not only that the teacher update himself, but also that he appropriates these resources and uses them for what Klein *et al.* (2020) come to call it "personal growth", considering that, for many Education professionals, the correct handling of these resources will be an achievement. For Boscarioli (2022), each change can bring with it an opportunity for learning and personal growth.

Another relevant point about teacher training, which should be considered, is the initial training of teachers, which takes place at the university during the attainment of the title at Higher Education (Selpa *et al*., 2023; Tomazini Neto, 2023). According to the authors, it is necessary that, at this moment of training, there is a pedagogical curriculum that articulates the social context with pedagogical practices and digital skills.

For Santos *et al.* (2021), this absence of the practical technological approach in initial or continuing education courses hinders pedagogical work, as classes remain theoretical

and monotonous, with little productivity and interaction on the part of students who are known as "digital natives".

For this reason, research related to science teaching and its historical path in Brazil signals, among several demands, that knowledge related to the use of digital technological resources be included in teaching degree and continuing education courses for teachers working in Basic Education (Tomazini Neto, 2023), thus offering the necessary support to teachers who need to have a deep knowledge of educational technologies to, then, feel empowered and safe when using them (Boscarioli, 2022).

Tomazini Neto (2023) states that the Federal Constitution of 1988 already provided for the scientific and technological literacy of teachers, but, curiously, after decades, our society is still illiterate at scientific and technological levels. This may be related to the scarcity of good training that accurately addresses the shortage of teachers or, as Boscarioli (2022) points out, there may be a question of the teachers' workload involved in the process.

According to Law No. 11,738, of July 16, 2008, the composition of the teacher's working day must comply with some regulations. Among them, it is advisable that a maximum of 2/3 (two thirds) of the teacher's working day be dedicated to the development of interaction activities with students. Thus, the teacher is left with 1/3 of this time for planning, preparation of activities, formulation and correction of evaluations, maintenance of the diary, preparation of reports and continuing education.

Depending on the experience, dynamics, and reality experienced by the teacher, this time may be insufficient, because, as Lopes, Bertini, and Borelli (2023) point out, the pedagogical teacher is responsible for teaching the classes of the curricular components of Portuguese language, mathematics, science, history, geography, and arts. Therefore, the process of continuous training of the teacher of Elementary School I is understood as something broad and complex and, therefore, difficult to be executed in a few hours a week.

Boscarioli (2022) and Lopes, Bertini, and Borelli (2023) advance by addressing another serious obstacle that hinders the process of continuing education of teachers, the non-remuneration of their studies and efforts. It is notorious that there are very few government incentives that motivate teachers for this type of qualification, which requires great availability of time. It is also seen as necessary, according to Krützmann, Alves and Silva (2023), that the impacts caused by the implementation of the BNCC in Brazilian educational systems are constantly evaluated, so that problems such as those mentioned are mitigated.

As you can see, the implementation of technological resources in Brazilian schools is happening slowly and in a problematic way. This is because most educational spaces do not have adequate technologies for the demand, training focused on the theme for the teacher and coherence between what is required of the teacher and what is offered in terms of time and resources.

FINAL CONSIDERATIONS

Technological resources for pedagogical purposes are widely recommended by the BNCC, due to the fact that students who are at this stage of Elementary School I are familiar with digital culture. The fact is that, in fact, the education system needs to adapt to the current social demands, but without losing its humanizing role. The development of general competence 5, Digital Culture, for example, encourages the critical and reflective use of technology, both in school environments and in the personal lives of students.

On the one hand, it is important that we have a guiding guide for education in the country, as well as the BNCC, so that there is a certain standardization of the education system, avoiding educational disparity between Brazilian regions. On the other hand, it is important to point out that the strong tendency of the Government to centralize the issuance of rules and regulations for Education is remarkable.

Educational regulations, as usual, reflect the greatest changes in society, being of a political, economic, social and cultural order. Therefore, with each new government there is a reformist outbreak in Education that affects all stages of education. As the current demands of the labor market revolve around the basic mastery of technological means, educational policies follow the trend, preparing and supporting students so that they can be inserted in this environment.

One of the gaps found between the recommendations for the development of competencies that involve the use of technological resources and their consolidation is the initial and continuing training of teachers, which need to be rethought, as well as the support network and the incentive plan. According to some studies presented in this research, there is a huge discrepancy between what is currently being charged to teachers by the BNCC and their available workload. Both professional improvement and the proper planning of classes involving the use of technologies require a lot of time and dedication for research and its preparation.

However, it is recommended that educational methods that use technological resources should be in line with current education policies, covering a problematizing

curricular and didactic proposal, preparing not only students, but also teachers for the digital age and a globalized society.

The BNCC deals with digital culture and the use of technological resources as being paramount for the development of general and specific skills. It is up to the public educational policies in force in the country to provide greater access to technological resources for both teachers and students, through the improvement of school infrastructure, invest in adequate and targeted training for their teachers, as well as create incentive plans for professionals who are fully dedicated to Education. The teacher is responsible for technological resources, together with their pedagogical strategies, so as not to make the learning process insignificant for the student.

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