

CAMINHOS PARA A INOVAÇÃO NO CONTEXTO EDUCATIVO E ESCOLAR: O PAPEL DA MÍDIA-EDUCAÇÃO

CAMINOS PARA LA INNOVACIÓN EN EL CONTEXTO EDUCATIVO Y ESCOLAR: EL PAPEL DE LA EDUCACIÓN DE MEDIOS

PATHS TO INNOVATION IN THE EDUCATIONAL AND SCHOOL CONTEXT: THE ROLE OF MEDIA-EDUCATION

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RESUMO: A escola precisa atender às novas demandas da Era Digital. Para tanto, é necessário repensar e refazer novas relações com o saber, com a cultura, com o currículo escolar e com os alunos. Deve encarar o seu papel de mediar o acesso e a apropriação crítica e criativa dos meios midiáticos pelos estudantes, superando o modelo cartesiano e academicista de ensino e de aprendizagem e ajudando os sujeitos a transformarem o conhecimento em pensamento e sabedoria. É preciso, como postula a BNCC (Base Nacional Comum Curricular), explorar a mídia-educação, fomentando a permanência qualificada na escola para todos. Em suma, esse trabalho bibliográfico pretende investigar alguns caminhos para a inovação pedagógica, para a construção de uma escola com qualidade e relevância social para as novas gerações.

PALAVRAS-CHAVE: Inovação. Ensino-aprendizagem. Tecnologias da informação e comunicação. BNCC. Ensino fundamental.

RESUMEN: *La escuela necesita atender las nuevas demandas de la Era Digital. Para ello, es necesario repensar y rehacer nuevas relaciones con el saber, con la cultura, con el currículo escolar y con los alumnos. Debe encarar su papel de mediar el acceso y la apropiación crítica y creativa de los medios mediáticos por los estudiantes, superando el modelo cartesiano y academicista de enseñanza y aprendizaje y ayudando a los sujetos a transformar el conocimiento en pensamiento y sabiduría. Es necesario, como postula la BNCC, explorar los medios de comunicación, fomentando la permanencia calificada en la escuela para todos. En resumen, ese trabajo bibliográfico pretende investigar algunos caminos para la innovación pedagógica a la construcción de una escuela con calidad y relevancia social para las nuevas generaciones.*

PALABRAS CLAVE: *Innovación en educación. enseñanza y el aprendizaje. tecnologías de la información y la comunicación. BNCC. enseñanza fundamental.*

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ABSTRACT: *The school needs to meet the new demands of the Digital Age. Therefore, it is necessary to rethink and redo new relations with knowledge, with culture, with the school curriculum and with students. It must face its role of mediating access and critical and creative appropriation of the media by students, overcoming the Cartesian and academic model of teaching and learning and helping subjects to transform knowledge into thought and wisdom. It is necessary, as the BNCC (Common National Curricular Base – Portuguese initials) postulates, to explore the media-education, promoting qualified permanence in school for all. In short, this bibliographic work intends to investigate some paths for pedagogical innovation, for the construction of a school with quality and social relevance for the new generations.*

KEYWORDS: *Innovation. Teaching-learning. Communication and information technologies. BNCC. Elementary School.*

Introduction

Education is out of step with the socio-cultural transformations arising from the era of knowledge and information. The speed and volatility of modern life challenge and shake the paradigms on which the societies of the past were based; you need to set the pace, get your spirits up, fix the tempo - you need to innovate. The school needs to overcome the paradigms of the industrial model, steeped in traditionalism and authoritarianism, in order to enter this new millennium in a renewed way, finally recovering itself, in order to live up to its institutional function: educating the new generations with quality and social relevance.

Regarding the Brazilian educational context, some authors postulate that the crisis does not occur only due to the lack of financial resources, but rather, a crisis of meanings in the face of the perplexity and uncertainty that dominate the horizons of contemporary life; the remarkable advance of science and technology is not being followed by advances in the existential and ethical plan (MORIN; CIURANA; MOTTA, 2003). Thus, before the arena of the Planetary Era, ICT's (Information and Communication Technologies) are presented as something positive and necessary to overcome the underdeveloped idea of development, in which the search for progress is put at the expense of human and social well-being.

In view of this, the school institution faces the challenge of reaching new relationships with knowledge, surpassing the Cartesian and academic model, from the period when it was conceived as a mass educational institution, at the end of the 19th century. Pérez Gómez (2015) points out that the conventional school is too distant from the aspirations arising from pedagogical research and innovation, especially in the field of practices and theories in use; this indicates that school praxis, with few exceptions, remains in a state of inertia and lethargy. It also indicates that, in view of the demands that arise in the new world plan, the changes in the

educational and school scenario are timid and insignificant: “Educational innovation is always a minority, marginal and ephemeral” (p. 12). As the author stresses,

The challenge of the contemporary school lies in the difficulty and the need to transform the disorganized and fragmented flood of information into knowledge, that is, into organized bodies of propositions, models, schemes and mental maps that help to better understand reality, as well as the difficulty to transform this knowledge into thought and wisdom (PÉREZ GÓMEZ, 2015, p. 28).⁴

To meet the new social demands, Bizelli (2009) postulates that the right to connection with cyberspace is as fundamental, today, as the basic rights to health, education, security, social security, etc. It also states that all citizens need access to the network, but that access must be linked to the appropriation of media, so that each subject has the appropriate knowledge for its use. The author argues that this critical, conscious and creative appropriation demands a formation process, provided by formal education or capacitation for work. It is noticed that the role of the school, as an educational institution, does not succumb in this scenario of advances in audiovisual technologies, but is renewed and acquires new contours, postulating the remodeling of pedagogical concepts and practices to meet the new social requirements of this third millennium. Such remodeling must be permeated by new relationships with knowledge, with culture, new relationships with the new students who enter the educational institutions.

Castells (1999) states that education is the fundamental productive investment to remedy social inequality. The researcher points out that we are living tied to informational capitalism, in which productivity and competitiveness involve people, regions, countries, imbued with the task of generating wealth, which is a flexible and dynamic process that works in a network. In view of this process, he argues that a virtuous circle must be created: to correct inequality and to increase productivity. And he stresses that it is essential to retake resources from the process of creating high productivity wealth to redistribute in education, because, according to him, this allows not only to correct inequality, but, in addition, it constitutes a productive force, since the greatest source of productivity in a society is the educational capacity of individuals.

In view of this challenge, and seeking to bring significant quality to the teaching and learning process, the BNCC (Common National Curricular Base) proposal was forged, which postulates and defines the common fundamental learning that basic education students in the country must acquire, which includes the critical and creative appropriation of digital media

⁴ O desafio da escola contemporânea reside na dificuldade e na necessidade de transformar a enxurrada desorganizada e fragmentada de informações em conhecimento, ou seja, em corpos organizados de proposições, modelos, esquemas e mapas mentais que ajudem a entender melhor a realidade, bem como na dificuldade para transformar esse conhecimento em pensamento e sabedoria (PÉREZ GÓMEZ, 2015, p. 28).

available in our society; includes learning about them and through them. In the document's structure, ten general competences for Basic Education are established, representing the students' learning and development rights. It is evident, therefore, that the technological demands, so important in the current social context, emerge even more forcefully, sharpening the investigative look for the need for better preparation for teachers, so that they are able and acquire basic skills to work from a BNCC perspective, critically and creatively.

It can be seen that four of the ten General Competencies defined are related to access to digital culture and the use of technologies; the development of competences and skills that permeates all curricular components, as well as the respective learning rights, is inexorably linked to the use of ICTs (Information and Communication Technologies).

In the same direction, Lemes (2018, s/p) emphasizes that education in the democratic state of law presupposes the qualified permanence in school for all, through equity and justice, with inclusion being its most significant potential. For the author, this requires actions and procedures to be carried out to meet the educational demands in quantity and quality. The author stresses that "an adequate understanding of current technologies, their potential for interconnections and their different roles in the process of schooling with equity is essential". For him, this understanding involves knowledge and epistemological domains related to technology and to the "epistemology of technique", demanding that the discussions about knowledge and the *raison d'être* of educational action be resumed in the educational space.

For Levy (1996), cyberspace emerges as a mediator of humanity's collective intelligence. Men are constituted as beings that perform multiple constructions and interactions, mediated by language - they are essentially cultural beings. In the face of technological and media changes, culture takes on other shapes and cannot fail to be focused on the relationship between school knowledge, curriculum and pedagogical innovation.

Thus, some questions emerge in the current scenario, destabilizing old convictions and premises: What kind of school do we want? Are educational proposals responding satisfactorily to the demands of new generations? How to meet these requirements? What are the challenges that are presented to the various actors involved in the educational scenario? What skills are needed to capacitate the citizens of the 3rd millennium and their teachers? What is the role of media-education in the search for paths to innovation in the educational and school context?

In view of these and other questions, the present work, of bibliographic nature, within the limits of its scope, aims to discuss about the pressing need for innovations for the current educational and school scenario, reflecting on the role of media-education and on the relationships between school knowledge, culture and curriculum renewal, taking a panoramic

look at the role of media education in the BNCC of elementary education, early years. In addition, it intends to investigate the challenges that are presented to the actors involved in this scenario, challenges that need to be faced with responsibility and commitment, since it is no longer possible to escape them. Finally, it is necessary to mobilize joint and articulated efforts and actions in order to propose, as advocated by Bizelli (2009, p. 172) "the exercise of a new ethics that overcomes the fleeting stance of individual consumption of life", being imperative the need for "ethical creation of human existence, towards a multiplatform world that allows the learning of more just and peaceful coexistences".

The educational and school context out of step with the postmodern world: the search for new relationships with knowledge, with the student, with culture, with the school curriculum

The educational and school context has a series of factors, peculiarities and interwoven conditioning aspects that constitute a range of dynamism, complexity and antagonisms. Faced with this almost chaotic scenario, the main thing is to repair the gap, not only between what the school teaches and what the student learns, but between what and how the school teaches and between what and how the student of the Information Society learns. The changes arising from digital culture and their influences on society are illustrated wisely below:

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 more and more engaged as protagonists of the digital culture, getting directly involved in new forms of multimedia and multimodal interaction and social networking, which take place 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, privileging superficial analyzes and the use of more synthetic images and forms of expression, different from the ways of saying and arguing characteristics of school life (BRASIL, 2017, p. 59).⁵

The picture portrayed above elucidates the great challenge that the school has before it concerning the formation of new generations, something that necessarily requires new

⁵ Em decorrência do avanço e da multiplicação das tecnologias de informação e comunicação e do crescente acesso a elas pela maior disponibilidade de computadores, telefones celulares, tablets e afins, os estudantes estão dinamicamente inseridos nessa cultura, não somente como consumidores. Os jovens têm se engajado cada vez mais como protagonistas da cultura digital, envolvendo-se diretamente em novas formas de interação multimidiática e multimodal e de atuação social em rede, que se realizam de modo cada vez mais ágil. Por sua vez, essa cultura também apresenta forte apelo emocional e induz ao imediatismo de respostas e à efemeridade das informações, privilegiando análises superficiais e o uso de imagens e formas de expressão mais sintéticas, diferentes dos modos de dizer e argumentar característicos da vida escolar (BRASIL, 2017, p. 59).

relationships with knowledge, with culture, with the school curriculum and with students. Levy (1996, s/p) highlights that “a general movement of virtualization today affects not only information and communication, but also bodies, economic functioning, collective frames of sensitivity or the exercise of intelligence”. In other words, the virtualization process transcends the pedagogical limits, reverberating at the school level, the worldview and the paradigms that exist throughout society.

Therefore, it is necessary for the school to reframe its epistemological conceptions, through the reconstruction of new relationships with knowledge. The structuring and organization of teaching and learning depends on this. In times of overwhelming technological innovations, it is known that the volume of information and knowledge doubles every two years. On the other hand, knowledge legitimized by science also undergoes changes or loses its validity as an inviolable and permanent construct. Truth criteria are relativized; and the enormous variety of media and digital offers shows that knowing is something dynamic, flexible. Recognizing this situation implies restructuring the role of the teacher as the holder of knowledge, and the student as the one who absorbs it passively. It demands more vertical relations of knowledge sharing, exchanges and sharing of meanings between both.

Since its conception, in Ancient Greece, until its remodeling as an institution for the masses, in the 19th century, the school was linked to the existence of a “master” with university knowledge who passed it on to his students, who had the duty of listen and reproduce with as much reliability as possible what was conveyed to him, in a passive and uncritical way. The pedagogical dynamics was based on the memoristic-cognitive and mechanical factor, corroborated by the traditional conceptions of teaching and learning over the centuries. Such a model still prevails in some scenarios in the Brazilian context, despite the insurgency of new theories and pedagogical trends that brought new discourses and new views to the field of pedagogy, being, however, less impacting.

With the advent of Escolanovismo in our territory, influencing changes in the educational area since the 1920s, the contributions of educational psychology endorsed the opening of space for a new theoretical and methodological postulate in which the student emerged as the center of the educational process; it should be directed to their interests, motivations, their willingness to learn. Based on these propositions, the so-called active pedagogies or active methodologies are outlined, which include Constructivism and its aspects, Cognitivism, Project Pedagogy, Skills Pedagogy, Learning to Learn, Multicultural Pedagogy, etc., which focus on the student as a knowing person, who actively participates in the process of building his knowledge, demanding an educational process that focuses on problematizing

the didactic process, interrelating with others, developing autonomy and actively and critically seeking knowledge. These pedagogies are the foundation for the search for pedagogical innovation, as they defend the overcoming of the traditional and mechanistic model of teaching, and are also the core of the Common National Curricular Base.

The need for new ways of dealing with knowledge is related to the need for new relationships with the student, who is considered by Prensky (2001) as a “digital native”. The term designates, according to the author, the student of the new generations who is born and lives in a social context in which he is surrounded by resources and technological means, dealing, in an intensive way, with the language of computers, video games and the internet. This undoubtedly affects your way of thinking and processing information. The problem, highlighted by the author, is that most of today's educators were not born in the same historical and social context, they are “digital immigrants”, according to the author, who need to learn how this new student learns and how he interacts with the world, since the current educational system was not designed for this student, who has different characteristics. It should also be stressed that

Digital Natives are used to receiving information very quickly. They like to process more than one thing at a time and perform multiple tasks. They prefer their graphics before the text over the opposite. They prefer random access (such as hypertext). They work best when connected to a network. They are successful with instant bonuses and frequent rewards. They prefer games to work “seriously” (PRENSKY, 2001, s/p).⁶

Therefore, it is necessary to conceive that the student of the Digital Era learns and apprehends information differently than previous generations, something that makes it clear that the teaching methods used in the past no longer work. Bizelli (2009) argues that a new relationship with students should be built, who should be seen, not only as consumers and users of digital content, but as interactors. The author addresses the relationship between digital natives and digital immigrants, emphasizing that it must transcend the notion of risk and threat to teaching:

[...] the actors committed to the pedagogical process that is reflected in the relationship between teaching and learning perceive in ICT's only a threat to the corporate interests that protect their daily activities. Disoriented and apprehensive about the future of their own jobs, they want to be trained in the

⁶ Os Nativos Digitais estão acostumados a receber informações muito rapidamente. Eles gostam de processar mais de uma coisa por vez e realizar múltiplas tarefas. Eles preferem os seus gráficos antes do texto ao invés do oposto. Eles preferem acesso aleatório (como hipertexto). Eles trabalham melhor quando ligados a uma rede de contatos. Eles têm sucesso com gratificações instantâneas e recompensas frequentes. Eles preferem jogos a trabalhar “sério” (PRENSKY, 2001, s/p).

tools of innovation without realizing that, already immersed in the Information Society, they must look for another model of relating to their interacting students - those who replaced the spectator students (BIZELLI, 2009, p. 169).⁷

This requires a reconfiguration of the information transmission model, seeking new models that focus on student participation, autonomy, free will in decision-making, valuing interactivity, connectivity, media creation, including the search for meaningful exercise and growing citizenship, through, for example, cyberactivism (social and political activism through the media), critical and active participation in society as a whole. Thus, minimizing the gap in the relationship between teaching and learning presupposes considering the relationship between technology and education as a vector of new learning for educators and students, as discussed below by Lemes:

Technology is the epistemology of technique in a broader sense, the art of making and implementing. In other words, the machine is dependent on the technique and from it we incorporate knowledge and improve the technique to enhance the actions. For this to work, it is necessary for educators to believe and invest in their formation, qualifying themselves, and also to improve the teaching-learning methodological technique (2018, s / p).⁸

From another perspective, the changes in society reiterate the importance of rethinking the concept of culture, since the school is a cultural product, it is a producer and reproducer of cultures. This concept is very broad and multifaceted, with difficult unanimity among scholars on the subject. In a general anthropological sense, culture can be seen as everything that is produced by human beings, in opposition to nature. This premise covers objects, inventions, beliefs, habits and customs, ways of speaking, feeling and thinking about the world, etc. Therefore, it is important to stress the importance of ratifying the school space as a plural, diverse, multicultural environment, where teaching and learning are carried out from the perspective of recognizing and valuing differences, whether ethnic-racial, gender, social class, etc. From that, there is no way for school culture to remain impervious to digital culture, since its students are inserted in it; the school institution needs to incorporate new languages from digital media, building new ways of promoting learning, interacting with students and relating

⁷ [...] os atores comprometidos com o processo pedagógico que se reflete nas relações entre ensino e aprendizagem percebem nas TIC's apenas uma ameaça aos interesses corporativos que protegem os seus fazeres cotidianos. Desorientados e apreensivos sobre o futuro dos seus próprios empregos, querem ser adestrados às ferramentas da inovação sem perceber que, já imersos na Sociedade da Informação, devem procurar outro modelo de se relacionar com seus alunos-interagentes – aqueles que substituíram os alunos espectadores (BIZELLI, 2009, p. 169).

⁸ A tecnologia é a epistemologia da técnica em um sentido mais amplo, arte de fazer e fazer implantar. Em outras palavras, a máquina está na dependência da técnica e a partir dela incorporamos conhecimento e aprimoramos a técnica para potencializar as ações. Para que isto dê certo é necessário que educadores acreditem e invistam na sua formação, qualificando-se, e também aprimorem a técnica metodológica de ensino-aprendizagem (2018, s/p).

to digital culture, considering that technological resources and tools, as other means, must be at the service of clear pedagogical purposes and well outlined technically and politically.

Therefore, it is necessary to resume discussions about the curriculum and its educational role. It is noted that there are a variety of meanings related to the term, highlighting here the curriculum as “[...] all learning planned and guided by the school, whether taught in groups or individually, inside or outside the school” (KELLY, *apud* LEMES, 2013, p. 175). Lemes (2013) discusses the role of the curriculum in the search for ways to democratize the school, arguing that, for there to be access and qualified permanence for all students, the school needs to be remodeled and the curriculum needs to be restructured under guidelines that provide for flexibility and multiculturalism, outlining more inclusive and democratic pedagogical proposals. He also points out that

The difficulties that arise for the curriculum, in a democratized school, have been amplified by obstacles coming from public policies that need to meet the demands of realities as different as they are complex. Such demands are advancing in an increasing continuum both quantitatively and qualitatively (p. 176).⁹

In the author's view, the curriculum should include the student's social and individual experiences, based on a reflection on the school and society, from a political and social perspective. In addition, adequacy, participation and flexibility will be fundamental requirements for the curriculum in a democratized school.

On the other hand, Prensky (2001) points out that school content must be worked on from two perspectives: the “legacy” content and the “future” content. The first concerns the knowledge prescribed in the traditional curriculum and focuses on basic skills such as reading, writing, arithmetic, logical-mathematical reasoning, knowledge and understanding of the content accumulated by men throughout history. For the author, these contents are important for the education of the student, although the importance of some may be diminished over time. The “future” content, on the other hand,

includes software, hardware, robotics, nanotechnology, genome, etc. it also includes ethics, politics, sociology, languages and other things that go with them. This “Future” content is extremely interesting for today's students. But

⁹ As dificuldades que se apresentam para o currículo, em uma escola democratizada, têm sido ampliadas por entraves vindos de políticas públicas que precisam atender demandas de realidades tão diferentes quanto complexas. Tais demandas avançam em um continuum crescente quantitativa e qualitativamente (p. 176).

how many Digital Immigrants are prepared to teach you? (PRENSKY, 2001, s/p, authors' highlights).¹⁰

Throughout the above, it is clear that there is a real gap between the linear process of knowledge transmission and the new ways for students to appropriate knowledge in the Digital Age, a gap that needs to be minimized to make the school an effectively democratic space.

Education through the media at the National Common Curricular Base

It is notorious that the latent challenge of democratizing the school, fulfilling the latent challenge of extending access to school institutions, but democratizing knowledge, according to the constitutional prerogatives (articles 205 and 206), which provide for that there is a guarantee that the children and young people who enter the school gates in fact remain and in fact learn what is planned for each year/grade, according to the appropriate time for that.

In view of this, the Brazilian State, through the legal guidelines that guide it (Federal Constitution, 1988; Law of Guidelines and Bases of National Education, Law 9,394/96; National Education Plan, Law 13,005; National Curriculum Guidelines for Basic Education) seeks to develop strategies for regulating its educational system through public policies aimed at the area. These policies, translated into programs, actions or laws, need to encompass and meet the demands arising from the plurality existing in our territory, raising the standards of quality in education. In view of this, the National Common Curricular Base (BNCC) emerges as a set of legal provisions that are guided by ethical, political and aesthetic principles, based on the current legal framework. More specifically,

The National Common Curricular 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 rights ensured and development, in accordance with the provisions of the National Education Plan (PNE) (BRASIL, 2017, p. 7, emphasis added).¹¹

It is not the objective of this work to point out criticisms of the Base's ideological character, nor to point out possible mistakes or gaps (obviously they exist), but to consider that,

¹⁰ inclui software, hardware, robótica, nanotecnologia, genoma, etc. também inclui ética, política, sociologia, línguas e outras coisas que os acompanham. Este conteúdo “Futuro” é extremamente interessante aos alunos de hoje. Mas quantos Imigrantes Digitais estão preparados para ensiná-lo? (PRENSKY, 2001, s/p, grifos do autor).

¹¹ A Base Nacional Comum Curricular (BNCC) é um documento de caráter normativo que define o conjunto orgânico e progressivo de aprendizagens essenciais que todos os alunos devem desenvolver ao longo das etapas e modalidades da Educação Básica, de modo a que tenham assegurados seus direitos de aprendizagem e desenvolvimento, em conformidade com o que preceitua o Plano Nacional de Educação (PNE) (BRASIL, 2017, p. 7, grifo dos autores).

in the case of a normative document, with legal rigor, the curricula of national school systems and networks they must be built or reformulated with this reference, as well as educational institutions must restructure their pedagogical proposals. It is worth mentioning that, more than just administrative and bureaucratic changes, this presupposes a change in perspective, a rethinking of education and the know-how of all the professionals involved with it, a systemic, articulated and collaborative effort by all the actors that constitute. As an integral part of the National Policy for Basic Education, the BNCC is an initial and incisive landmark in the search for an education with greater social equity for all Brazilians, and should converge towards the alignment of other policies and actions that support its implementation. This whole process, which will certainly be gradual and arduous, demands mobilization of investments, improvement of the collaborative actions of the three spheres of the government, continuous capacitation of the subjects, permanent monitoring and evaluation of the actions foreseen in the BNCC and resulting from it. Its core is the search for comprehensive student education that ensures “a common level of learning to all students” and contributes to “the construction of a just, democratic and inclusive society” (BRASIL, 2017, p. 7).

In order to elucidate the importance of media-education in the document in question, it should be noted that, among the ten General Competencies for Basic Education (early childhood education, elementary school and high school), four relate to the use of digital media/technologies for the development of students, competences 1, 2, 4 and 5 (BRASIL, 2017, p. 9):

1. To value and use the knowledge historically constructed on the physical, social, cultural and digital world to understand and explain reality, continue to learn and collaborate to build a fair, democratic and inclusive society.
2. Exercise intellectual curiosity and resort to the sciences' own approach, including research, reflection, critical analysis, imagination and creativity, to investigate causes, elaborate and test hypotheses, formulate and solve problems and create solutions (including technological ones) based on knowledge from different areas.
[...]
4. Use different languages - verbal (oral or visual-motor, like Libras, and written), body, visual, sound and digital - as well as knowledge of artistic, mathematical and scientific languages, to express and share information, experiences, ideas and feelings in different contexts and produce meanings that lead to mutual understanding.
5. Understand, use and create digital information and communication technologies in a critical, meaningful, reflective and ethical manner 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.¹²

As noted, these competencies must be interrelated, articulated and translated in the form of didactic-methodological treatment in the context of all curriculum components. In the 1st competency, which discusses the importance of valuing and using socially constructed knowledge as a channel for understanding and unveiling reality by the student, the theme of technology appears, indicating that knowing the digital world is a condition for the student to understand and explain the reality, for his lifelong education and for him to contribute “to the construction of a just, democratic and inclusive society”. For the first time, in the official discourse, digital media achieve the status of content, knowledge, teaching object, not just a mean and/or didactic instrument. In the second competency, the skills related to the use of technology are pointed in the field of scientific research by students, related to the promotion of intellectual curiosity, the ability to “create, formulate and solve problems and create solutions, in an articulated and interdisciplinary way”. The area of technologies, in the 4th competence, is focused on the domain of the languages that need to be used by the student to expand his abilities to communicate and interact with the surrounding world, to understand the other and to be understood. The 5th competence, in turn, emphasizes the critical, ethical, meaningful and reflective use of technologies by students from different social contexts and practices with the most diverse purposes, including to exercise their citizenship and their ability to act in the world and on the world in a proactive and relevant way.

In view of these considerations, it is clear that technologies have an essential value in the educational practices of the present century, so that their proper use becomes essential to the exercise of citizenship.

¹² 1. Valorizar e utilizar os conhecimentos historicamente construídos sobre o mundo físico, social, cultural e digital para entender e explicar a realidade, continuar aprendendo e colaborar para a construção de uma sociedade justa, democrática e inclusiva.

2. Exercitar a curiosidade intelectual e recorrer à abordagem própria das ciências, incluindo a investigação, a reflexão, a análise crítica, a imaginação e a criatividade, para investigar causas, elaborar e testar hipóteses, formular e resolver problemas e criar soluções (inclusive tecnológicas) com base nos conhecimentos das diferentes áreas.

[...]

4. Utilizar diferentes linguagens – verbal (oral ou visual-motora, como Libras, e escrita), corporal, visual, sonora e digital –, bem como conhecimentos das linguagens artística, matemática e científica, para se expressar e partilhar informações, experiências, ideias e sentimentos em diferentes contextos e produzir sentidos que levem ao entendimento mútuo.

5. Compreender, utilizar e criar tecnologias digitais de informação e comunicação de forma crítica, significativa, reflexiva e ética nas diversas práticas sociais (incluindo as escolares) para se comunicar, acessar e disseminar informações, produzir conhecimentos, resolver problemas e exercer protagonismo e autoria na vida pessoal e coletiva.

Morin, Ciurana and Motta (2003) emphasize that modern science and, consequently, the school insist on dividing and fragmenting knowledge, focusing on its linearity, compartmentalizing knowledge and being. For the authors, there are problems with the learning method. They present an idea of method, such as path, generative essay and "for" and "thought" strategy. The basis of this method would be work with complex thinking. The term complex originates from Latin and means "to intertwine"; "That embraces", "ensemble". This shows that, in the search for knowledge, there are not only certainties, determinisms, but also uncertainties, accidents. Thus, the method would be the action of the thinking subject who invents, creates "in" and "during" his path. Complex thinking encompasses the experience of the essay as a written expression of thinking action and reflection, as the most appropriate way for the modern way of thinking. Finally, forging educational practices based on complex thinking inevitably requires the use of media resources within a context that makes sense for students, which contributes to their individual, emotional, intellectual and social autonomy.

Therefore, knowing that public policies disseminate knowledge in its core, but they need to be fed back by the knowledge coming from the school's "floor", from their daily practice, it is essential to analyze and listen to teachers about the use of technologies in the classroom, their concerns, difficulties, proposals already consolidated, and the way they are appropriating (or not) this knowledge and technological instruments defined by the BNCC, incorporating them into their educational practice.

Final considerations

Faced with the new challenges pointed out by the new technological demands of this so-called "digital age", the roles of the school and the teacher are renewed and reinvigorated. Although often less technically 'trained' than the students themselves regarding the use of digital media, the teacher is the one who has (or must have) the domain of knowledge and didactic and methodological resources to mediate the significant construction of knowledge and the formation of skills, competences and values essential to the formation of critical, autonomous and participating citizens in this new century and for this new century. Therefore, the teacher needs to be prepared and to prepare, seeking continuous updating.

It is worth noting that one cannot think of applying media apparatus and resources within an a-historical, traditional teaching context, where vertical relations between subjects prevail because, as Lemes (2018, s/p) warns, "there is a rush the risk of developing media resources and placing them at the service of a methodologically verbalistic, unidirectional, essentially

reproductive and excluding school”, something that would imply pedagogical incoherence, which means loss of time and effort. Educational and pedagogical innovation does not combine with obsolete conceptions and practices, nor with a technicist and reductionist vision of teaching and learning, but with the formation of active, critical, creative and prepared citizens for the third millennium, through the means of media democratization. Pérez Gómez ratifies this when he points out that

Modernizing the school, however, does not mean simply introducing equipment and infrastructure that allows network communication. It is more than simply using the new tools to develop old tasks quickly, economically and effectively (2015, p. 28).¹³

This search for modernization cannot do without political articulation, an effort by the State to provide the necessary technical and structural conditions for this construction. One cannot fail to focus on the role of governmental bodies in ensuring the process of initial and continuing formation of educators and teaching professionals, forging public policies that meet and ensure the basic conditions so that the effective and appropriate use of technologies can take place in school spaces. On the other hand, assumes that all the actors involved in the educational field assume their responsibilities to adequately and significantly meet the challenges that emerge in the Information Society. Anyway,

This whole situation imposes challenges on the school to fulfill its role in relation to the formation of new generations. It is important that the school institution preserves its commitment to stimulate reflection and in-depth analysis and contributes to the development, in the student, of a critical attitude towards the content and the multiplicity of media and digital offers. However, it is also essential that the school understands and incorporates new languages and their ways of functioning more, unlocking possibilities of communication (and also manipulation), and that it educates for more democratic uses of technologies and for a more conscious participation in digital culture. By taking advantage of the communication potential of the digital universe, schools can institute new ways of promoting learning, interaction and the sharing of meanings between teachers and students (BRASIL, 2018, p. 59)¹⁴

¹³ Modernizar a escola, no entanto, não significa simplesmente introduzir equipamentos e infraestruturas que permitam a comunicação em rede. É algo mais do que simplesmente utilizar as novas ferramentas para desenvolver as tarefas antigas de maneira rápida, econômica e eficaz (2015, p. 28).

¹⁴ Todo esse quadro impõe à escola desafios ao cumprimento do seu papel em relação à formação das novas gerações. É importante que a instituição escolar preserve seu compromisso de estimular a reflexão e a análise aprofundada e contribua para o desenvolvimento, no estudante, de uma atitude crítica em relação ao conteúdo e à multiplicidade de ofertas midiáticas e digitais. Contudo, também é imprescindível que a escola compreenda e incorpore mais as novas linguagens e seus modos de funcionamento, desvendando possibilidades de comunicação (e também de manipulação), e que eduque para usos mais democráticos das tecnologias e para uma participação mais consciente na cultura digital. Ao aproveitar o potencial de comunicação do universo digital, a escola pode instituir novos modos de promover a aprendizagem, a interação e o compartilhamento de significados entre professores e estudantes (BRASIL, 2018, p. 59)

In short, to rethink, therefore, the role of the school and the teacher is to think about the remodeling of their didactics to adapt and meet the new social demands of their target audience. Innovation demands effort towards reflection and action. A new way of feeling, thinking and doing teaching and learning, based, therefore, on new concepts of knowledge, teacher/student relationship, culture, school curriculum. Only new conceptions confirm and consolidate innovative practices.

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