INNOVATION POLICY FOR CONNECTED EDUCATION: UNIVERSALIZATION OF INTERNET ACCESS AND PEDAGOGICAL USE OF TECHNOLOGIES

POLÍTICA DE INOVAÇÃO EDUCAÇÃO CONECTADA: UNIVERSALIZAÇÃO DO ACESSO À INTERNET E USO PEDAGÓGICO DE TECNOLOGIAS

POLÍTICA DE INNOVACIÓN PARA LA EDUCACIÓN CONECTADA: UNIVERSALIZACIÓN DEL ACCESO A INTERNET Y USO PEDAGÓGICO DE TECNOLOGÍAS

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ABSTRACT: The Innovation Policy for Connected Education (PIEC) seeks to support the universalization of *internet* access and foster the pedagogical use of digital technologies in education. It appears in the form of a Program instituted from Decree No. 9,204 of 2017 and becomes a policy through Law No. 14.180/2021. The research aimed to understand the determinants of PIEC and the discourses around the universalization of *internet* access and the pedagogical use of technologies. We rely on a quantitative-qualitative approach as a broader possibility, which was developed through bibliographic and documentary research, and data analysis is based on the content analysis approach. We evidence that, explicitly, there is a recurrence of proposals and approaches that express the need to universalize access to digital technologies and, implicitly, we perceive that this emphasis is presented as a condition for the pedagogical aspect.

KEYWORDS: Innovation Policy Connected Education. Educational Policies of Technologies. Universalization of the Internet. Pedagogical Use of Technologies.

***RESUMO**: A Política de Inovação Educação Conectada (PIEC) busca apoiar a universalização do acesso à internet e fomentar o uso pedagógico de tecnologias digitais na educação. Surge no formato de um Programa instituído a partir do Decreto nº. 9.204 de 2017 e transforma-se em política por meio da Lei nº. 14.180/2021. A pesquisa teve o objetivo de compreender as determinantes da PIEC e os discursos em torno da universalização do acesso à internet e do uso pedagógico de tecnologias. Apoiamo-nos numa abordagem quanti-qualitativa como possibilidade mais ampla, a qual foi desenvolvida por meio de pesquisa bibliográfica e documental, sendo as análises dos dados pautadas na abordagem da análise de conteúdo. Evidenciamos que, explicitamente, há recorrência de propostas e abordagens que expressam a necessidade de universalizar o acesso de tecnologias digitais e, de forma implícita, percebemos que essa ênfase se apresenta como uma condição para o aspecto pedagógico.*

***PALAVRAS-CHAVE**: Política de Inovação Educação Conectada. Políticas Educacionais de Tecnologias. Universalização da Internet. Uso Pedagógico de Tecnologias.*

***RESUMEN**: La Política de Innovación en Educación Conectada (PIEC) busca apoyar la universalización del acceso a internet y fomentar el uso pedagógico de las tecnologías digitales en la educación. Aparece en forma de Programa por Decreto N° 9.204 de 2017 y se convierte en una política a través de la Ley N° 14.180/2021. La investigación tuvo como objetivo comprender los determinantes de PIEC y los discursos en torno a la universalización del acceso a internet y el uso pedagógico de las tecnologías. Apoyamos un enfoque cuantitativo-cualitativo como una posibilidad más amplia, que se desarrolló a través de la investigación bibliográfica y documental, y el análisis de datos se basa en el enfoque de análisis de contenido. Evidenciamos que, explícitamente, hay una recurrencia de propuestas y enfoques que expresan la necesidad de universalizar el acceso a las tecnologías digitales, e implícitamente, percibimos que este énfasis se presenta como una condición para el aspecto pedagógico*

***PALABRAS CLAVE**: Política de Innovación Educación Conectada. Políticas Educativas de Tecnologías. Universalización de Internet. Uso Pedagógico de las Tecnologías.*

Introduction

In Brazil, we have records of several programs and actions related to attempts to implement technologies in education, such as public policies for digital inclusion[3] aimed at meeting national guidelines for the development of innovation practices and the use of technology in schools.

Sometimes, these actions present different discourses and proposals that justify the insertion of technologies in the educational space, such as: streamlining and facilitating the teaching and learning process; innovate pedagogical practices; improve conditions for teaching and disseminating knowledge, among other justifications. However, as Oliveira (2022, p. 19, our translation) points out, we need to be attentive, as there are certain discursivities that present themselves with "a partial and even mistaken view of reality, contaminated by productivist logic". Many looks and justifications present technology with a focus on the tool/instrument, the one that will be able to solve the problems of education in the country, but where the interest would be based on the aspirations that the neoliberal project has for education.

The initiatives of the federal government in Brazil for the insertion of technologies in education date back to the 1980s, although experiments with the use of computers began in the mid-1970s. However, it was only in 1997 that the first national public policy, known as National Program of Educational Informatics (Proinfo), which was reconfigured in 2007 into the National Program of Educational Technology (Proinfo Integrado).

From it, several others were created, such as: the urban Proinfo; rural Proinfo; the Broadband in Schools Program (PNBL); the Teacher's Portal; Media in Education Program; One Computer per Student Program (PROUCA), among others that marked the insertion of technologies in education in the period from 2008 to 2017.

Connected Education Innovation Program (ProIEC) was created through Decree no. 9.204, with the aim of "supporting the universalization of high-speed *internet* access and promoting the pedagogical use of digital technologies in Basic Education" (BRASIL, 2017a). In July 2021, ProIEC was transformed into the Innovation Policy for Connected Education

[3] The term digital inclusion has been used to refer to the promotion and democratization of access to digital technologies for everyone who does not have access to them. However, this concept has to be problematized, as Peixoto and Echalar (2017, p. 523, our translation) draw attention to the fact that "The uniqueness of neoliberal policies for digital inclusion via education is based on the foundations of the capitalist model disguising – under educational guidelines that propagate the 'compensation' of the so-called less favored through access to digital devices – the production of a competitive workforce".

(PIEC) through Law no. 14.180, based on strategy 7.15 of the PNE (2014-2024) and maintaining the same objective of the program.

According to the analyzed regulatory framework, the PIEC presents itself as a policy of a complementary nature, whose characteristics are focused on equity in the conditions of the pedagogical use of technologies; access to innovation; collaboration between federated entities; teachers' autonomy; the protagonism of teachers and students; high - speed internet; access to digital educational resources and encouraging the training of teachers and managers for pedagogical practices.

In this context, our research sought to understand what are the determinants of the PIEC[4] and the discourses on the universalization of *internet access* and the pedagogical use of technologies. Attentive to the possibilities of the multiple determinations in which the object of study is inserted, the investigation considered its historical dimension in the political, economic and social context through a methodological posture in which it sought to situate the study problem in the movement between the general and the particular, relying on the need to know and interpret reality from its roots and social relations.

We start from the assumption that the object of study, the PIEC and its reality, are part of a complex totality, immersed in a movement marked by the contradictions that engender and determine it, and that constitutes a potential for the production of knowledge. In this sense, understanding the determinants of the education innovation policy does not deny the concrete conditions experienced, the historical totality, as well as the movement and contradictions of the reality in which the interests, objectives and subjects involved are inserted.

We sought a quantitative and qualitative approach as a theoretical and methodological support, as a broader possibility to support the general research procedure, which was complemented with the phases of bibliographical research, through a mapping of productions on the subject, and documentary research. In the documentary research stage, we took as a data source 7 (seven) legal documents that constituted the regulatory framework of the PIEC. To aid in data processing, we used the IRAMUTEQ *software*, and in both phases of the research, the analysis of the collected data was developed from the content analysis approach, based on the perspective of Bardin (2016).

[4] In our research we used the acronym ProIEC to refer to the Connected Education Innovation Program and PIEC to refer to the Connected Education Innovation Policy. It is worth noting that some authors only use the acronym PIEC for both the program and the policy.

Mapping on the Connected Innovation and Education Policy - PIEC

The mapping of scientific production on PIEC was carried out in the Google Scholar database, considering the time frame between 2017 and 2021, the period from the creation of the ProIEC program until its transformation into policy. 10 articles were selected, considering the inclusion and exclusion criteria for selection of productions, aiming to obey, among others, the rules of representativeness (the sample must represent the universe) and pertinence (the materials need to adapt to the content, theoretical framework and objective of the research) (BARDIN, 2016).

The results showed that, although it is a current and necessary theme for discussions in the field of education and technology inclusion policies, there are not many studies available in the format of scientific articles on PIEC. On the other hand, even if the number of articles is incipient, there is an important representativeness compared to the total of other types of publications in relation to the theme, as shown in Table 1, in which publications of theses, dissertations, annals of events and others stand out.

Table 1 - Survey: productions related to the PIEC (2017-2021)

	Search Term	*Results*	*Selected*
Academic Google	"Connected Education Innovation Program"	38	3
	"Connected Education Innovation"	336	7
Total		*374*	*10*

Source: Prepared by the authors

Of the 10 articles selected for the research and listed in Chart 1 below, 7 (seven) of them, articles 3, 4, 5, 6, 7, 8 and 9, had the ProIEC as the central theme of the discussions, and only the article 8 mentions Law no. 14,180/2021, creating the PIEC. The other articles 1, 2 and 10 only signaled general themes about other policies and programs for the inclusion of technology in education, and only mentioned ProIEC.

Chart 1 – Selected Articles

Qt	Title	Year/Pub.
1	Comparative studies of educational public policies for digital inclusion: Brazil and Uruguay	2019
2	Digital inclusion and public policies: what is the role of the school and the teacher?	2020
3	Digital inclusion: a path to individual accountability.	2020
4	The discourse on technologies in public policies in education	2019
5	Lemann Foundation and ProIEC: on the agenda the relations between public and private in the field of educational policies	2020
6	Public Policies for Technologies in Education and Computing Education	2020

7	Connected education program: the use of technology to meet basic education goals in the national education plan	2020
8	Public policies for technological integration and teacher improvement in Goiás.	2021
9	*Internet* access and digital inclusion in the Brazilian scenario	2021
10	Perceptions about public policies for digital inclusion in basic education during the covid-19 pandemic: a bibliographical analysis	2021

Source: Prepared by the authors

In general, the studies look back at policies and actions aimed at the insertion of technologies in education in Brazil. Six of them, articles 3, 4, 5, 6, 9 and 10, present an approach to more critical studies in the field of educational policies, and the other four (articles 1, 2, 7 and 8) present a more descriptive and not critical, suggesting ideas such as: the insertion of technologies in education is important for schools to face digital illiteracy; the insertion of technology in the school is an element that can transform and innovate it, leading it to achieve better quality, among other discussions that point to the understanding of technology with a more deterministic and instrumental character.

Mapping data were reorganized into subcategories, which were cut from context units and allocated into two axes of analysis: "technology inclusion policies" and "pedagogical use of digital technologies". Regarding the first axis, the mapped articles point to more general discussions about programs and actions related to the implementation of technologies in education more generally, making a historical retrospective since the 1970s, highlighting policies for this area and reaching the ProIEC program in 2017. Articles 3, 4, 5, 6, 7, 8 and 9, when situating the ProIEC, present its characteristics, its objectives, focusing on the proposal of universal access to the internet, highlighting the concerns that the program emphasizes *about* the establishment of the necessary partnerships to guarantee the achievement of the Program's general objective.

Article 1 (one) shows that the non-evolution of the theme related to the insertion of technologies in education in Brazil - in particular the delays in digital inclusion policies - is related to changes in government in public administration, either by not giving continuity and improvement to those policies, or because they are simply changed and replaced by others.

Regarding the second axis of analysis "pedagogical use of technologies", the mapping shows that articles 1, 2 and 10 point to the objectives, actions and principles of the ProIEC Decree, highlighting that the Brazilian government, concerned with serving an audience that is digitally excluded, proposes the creation of programs to support: infrastructure and provision of *internet* for public basic education schools, training courses for teachers and administrators, and provides material resources and digital platforms for access by teachers and students.

However, articles with a more critical perspective, articles 3, 4, 5, 6, 9 and 10, point out that there are still more discourses in government actions and proposals than a real scope of concrete practices for the pedagogical use of technologies in schools. Regarding ProIEC, Heinsfeld and Pischetola (2019) recall that although there is a concern with the pedagogical practice of digital technologies, the program reinforces a concern to solve the problem of *internet access* as opposed to a problematization between technology and society, which "represents a historical continuity of public policies in the belief that access, by itself, is capable of guaranteeing inclusion, in addition to reinforcing the perspective of technological determinism" (HEINSFELD; PISCHETOLA, 2019, p. 11, our translation).

PIEC's regulatory framework - pedagogical use of technologies

At this stage of the research, we used the IRAMUTEQ *software* (*Interface de R pour les Analyzes Multidimensionnelles de Textes et de Questionnaires*), which processes the texts of the analysis corpus by dividing them into segments, called elementary context units.

Thus, the corpus was formed by 7 (seven) legal documents, among them Decree nº. 9,204, of November 23, 2017 (BRASIL, 2017b), Law no. 14,180, of July 1, 2021 (BRASIL, 2021), and 5 (five) Ordinances: 1) Ordinance no. 1602, of December 28, 2017 (BRASIL, 2017c); 2) Ordinance no. 29, of October 25, 2019 (BRASIL, 2019); 3) Ordinance no. 34, of December 27, 2019 (BRASIL, 2019a); 4) Ordinance no. 35, of December 27, 2019 BRAZIL, 2019b); and 5) Ordinance no. 126, of July 21, 2022 (BRASIL, 2022).

The clippings socialized in this research contemplate important parts of the documentation pertinent to the Connected Education Innovation Policy, although it does not reach its entirety. They present important clues, considering our assumption that the object of study, the PIEC, and its reality, are part of a complex totality, and that is immersed in a movement full of contradictions.

The data collected and processed in IRAMUTEQ showed that the expression "pedagogical use" appears in the regulatory framework 15 times, while the word "technology" appears 51 times. In the mapping of productions on the subject, as we highlighted in the previous topic about the 10 selected articles, we found that the term "pedagogical use" appears at least 142 times.

In the text of the PIEC regulation, we observe that the Law is clear in reaffirming a concern that is old in other actions and programs, that technologies must be inserted in

educational practices, must be universalized and must be used pedagogically. However, with regard to the last item, as these are legal documents, it is not possible to clearly identify what is actually considered and what they expect when they mention the pedagogical use of technologies. At the same time, this lack of clarity can lead to interpretations in which technology is either enhanced only in a deterministic view, as a savior of educational problems, or interpretations of technology are enhanced in a neutral view, only as a tool and instrument that must be shaped by the user.

In fact, the term "pedagogical use of technologies" can receive different understandings based on different intentions. In a rereading of Law no. 14,180, of July 1, 2021, we find that the term "pedagogical use" appears at least five times, in Articles 1, 3 and 4:

> Article 1: with the aim of supporting the universalization of high-speed internet access and promoting the *pedagogical use* of digital technologies in basic education.
> Art. 3 - I - equality of conditions among public schools of basic education for the *pedagogical use* of technology; [...] VI - access to the internet with quality and speed compatible with the *pedagogical use* needs of teachers and students;
> Art. 4 - [...] IV - publication of: c) parameters on electronic devices for internet use, in order to allow different types of *pedagogical use* of technology; and d) references for the *pedagogical use* of technology; (BRASIL, 2021, emphasis added, our translation).

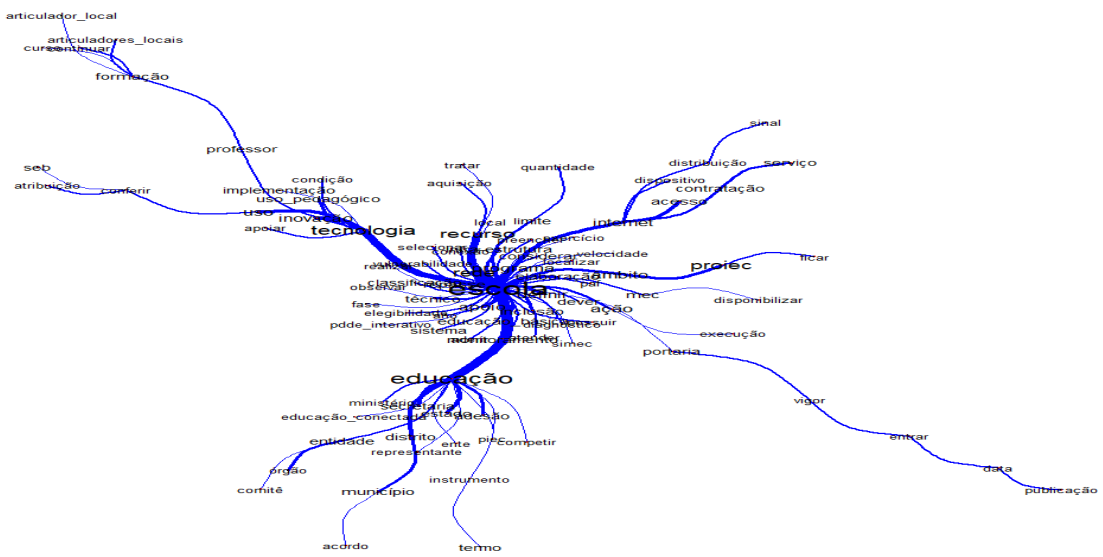
We observe in the highlighted excerpts of these articles that the expression "pedagogical use" is linked to the words "technologies", "digital", "equity"; "Internet"; "parameters", "devices", "connectivity" and "speed", which define, according to the Law, the conditions for achieving quality, equity and digital inclusion in public schools.

These terms appear in line with the principles of the PIEC, which are detailed in Article 3 of the Law, which is composed of eight items in which the connection with the terms is verified: "equity", "promotion", "access", "performance indicators", "collaboration of federated entities", "student protagonism", "expanded access to digital resources", "socioeconomic vulnerability", "autonomy", among others.

> Art. 3 The principles of the Connected Education Innovation Policy are:
> I - *equality* of conditions among public basic education schools for the pedagogical use of technology;
> II - *promotion* of *access* to innovation and technology in schools located in regions of greater *socioeconomic vulnerability* and low *performance in educational indicators*;
> III - *collaboration between federative entities;*
> IV - teachers' autonomy regarding the adoption of technology for education;
> V - encouragement of the student's *protagonism*;
> VI - *internet access* with quality and speed compatible with the pedagogical use needs of teachers and students;
> VII - broad access to *quality digital educational resources*; It is
> VIII - encouraging the training of teachers and managers in pedagogical practices with technology and for the use of technology (BRASIL, 2021, emphasis added, our translation).

These terms and expressions are connected to the most recurrent words in the 7 (seven) documents of the regulatory framework, highlighting the main connections with the three most cited words in the analyzed documents: “school”, “education” and “technology”; “school” is a more cited expression than “education”, and both appear connected with the word “technology”. In Figure 1, it is possible to visualize this connection of ideas.

Figure 1 – Similitude Analysis – PIEC regulatory framework



Source: Generated by IRAMUTEQ (2022)

In the text of the PIEC Law, the word “technology” is the most cited, appearing with a frequency of 19 times, followed by the term “education” which appears 15 times (except for the 18 times in which it appears linked to the expression “Policy of Innovation Education Connected"), and after the word "school", which appears 12 times.

Both in the general regulatory framework and just in the text of the PIEC Law, specifically, the word education does not seem to be the focus and, moreover, it is only in connections with the word “technology” that we see the presence of terms related to the pedagogical aspects of technology in school and education, such as “training”, “teacher” and “pedagogical use”, as we can see in Figure 1.

In a reductionist and instrumental view of education, it is common for there to be an inversion of values and priorities, in which education does not appear as a central landmark. In the regulatory framework, we see that the term “school” is the central axis and in the PIEC Law, we observe that it is “technology”, and, in second place, the word “education”.

Guerra *et al*. (2022) point out that visions of inversion of values such as these are elements that have been reinforced by the consequences of managerial reform since the 1990s and that often appear veiled in the guidelines of International Organizations (IOs), justifying themselves, among other causes, the lack of quality in schools, which could be overcome through the insertion of technologies in educational practices.

This posture points to a technicist, pragmatic and instrumental view of technology, in which the idea of progress and innovation in schools and education based on the use of technologies is exalted, as Peixoto (2009, p. 222, our translation) points out: “ technology it is associated with a notion of (technological) progress which is, in turn, identified with the notion of linear and indefinite evolution towards a future dominated by the principles of science and technology. From this point of view, the future is in the equipment and not in the school”.

These are recurrent proposals in some educational policies, and which are strengthened in the current phase of neoliberalism. In an economic vision in which the necessary relationships between technology and education are established, as expected by the neoliberal project, the inversion of values is common and, therefore, education is restricted to the scope of the school's conformation and insertion of technologies. Thus, the school becomes a place of technical training to ensure skills and competencies needed by the job market. In the same sense, technologies, especially digital ones, are now seen as a “supernatural entity” that would have a decisive force to change relationships in schools. Peixoto and Echalar (2017, p. 511, our translation), indicate that:

> Education has been configured as a globalized market, since the mercantile logic imposes itself on its purposes and priorities. This market is dominated by networked digital technologies, culminating in mergers and alliances for publishing multimedia products, designing and providing online services. This fuels the idea that education has become fundamentally a media issue and reverses the relationship between means and ends. Such an explanation is based on technological determinism, according to which "technology is much more conditioning than conditioned to the society in which it is inserted".

We observe that this movement is in line with the political perspectives undertaken in the current phase of neoliberal thinking, which point to discourses of a humanist nature, with emphasis on social and digital inclusion, in which it is reaffirmed that technology will be able to change pedagogical relations between teachers and students, as Shiroma, Campos and Garcia (2005) point out.

Heinsfeld and Pischetola (2017, p. 1358, our translation) highlight, in a study on the relationship between "subjects, new technologies and society", that they perceive the existence of a "mask of social inclusion, without articulating too many elements that in fact favor exchanges and social, cultural or even economic opportunities". The authors point out that the results of policies with this bias are perverse, as:

> [...] exempt the school from pedagogical proposals that favor the true participation and appropriation of technologies by the actors involved in the teaching-learning process. This aspect becomes relevant for the discussion of the challenges for education, since this condition of "inclusion" also determines what the real use of the equipment will be, distributed as mere tools, in a mechanical and authoritarian way, imposing certain relationships between the subjects and machines (HEINSFELD; PISCHETOLA, 2017, P. 1358, our translation).

Our research points out that the PIEC regulatory framework refers to technologies as pedagogical tools, which leads to the interpretation that, even in the case of the newest policy for the insertion of technologies in education, there is a gap with a real condition of social inclusion and digital by focusing on solving infrastructure and *internet access problems*.

Studies by Heinsfeld and Pischetola (2017) point out that the phase of the current economic model shows that there are interests of governments and reformers of the educational system to collaborate with the strategies undertaken for the development of the New Public Governance. These are strategies and actions that demand that the population, from all social classes, urban or rural, among other issues, have access to the internet and know how to operate equipment and various technologies, and in this sense, all actions are necessary, including the

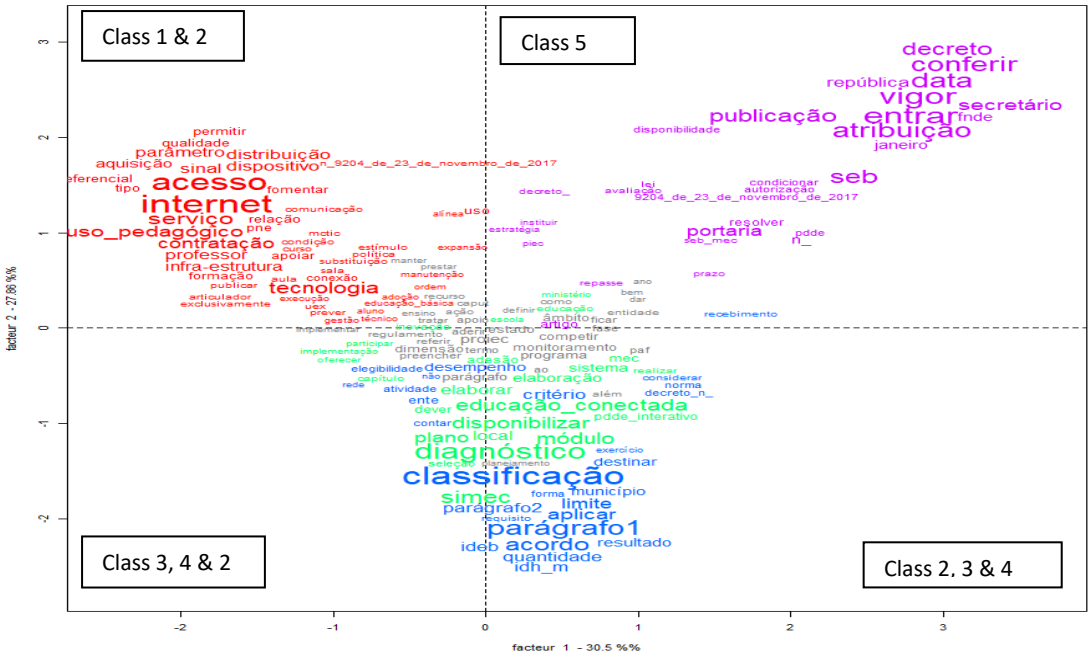
support policies for the insertion of technologies in the school, however, without adequate pedagogical support.

In a conception of technology with a deterministic view, the term "pedagogical use" can lead to a perspective that takes this "technology" as a mediator and savior of educational problems, as it would determine the results. In the wake of this perspective, in a conception of technology in the instrumental view, its "pedagogical use" can refer to a means, a way to facilitate the teaching and learning process (PEIXOTO, 2009).

In a more critical view, in which technology is understood as a social construction, its "pedagogical use" is not restricted to these views, but is related to the conscious choices that subjects can make from the use of technological tools. It has to do with the relationships between technologies and social subjects, which take place in a perspective of reciprocity, as technology is conceived as a socio-historical production and inherent to all human action.

In fact, this last view is not the one presented in the proposal for the regulatory framework of the PIEC, as the concern to universalize internet access is *explicit*. In Figure 2, extracted from IRAMUTEQ, we can see in more detail the most common expressions and their interconnections in the set of collected data.

Figure 2 - CHD - Factorial Representation



Source: Generated by IRAMUTEQ software (2022)

In Figure 2, we see the forming words of each class and the degree of importance of each one. Regarding classes 1 and 2, we see the words that appear with greater expressiveness:

"internet" and "access", followed by the variables *"pedagogical use"* and *"technology"*, all of which are registered in the first quadrant.

These terms, in turn, mark the constancy of appearance in the analyzed documents and the relationships they establish with other terms throughout all the documents, based on the central argument of Art. 1 of Law no. 14,180, which shows the policy objective of: "universal access to high-speed internet and encourage the pedagogical use of digital technologies" (BRASIL, 2021), as well as being associated with the goal of "universalizing access by schools to tools and digital platforms by 2024 and provide, as early as 2018, access to quality broadband for up to 22,400 public schools" (BRASIL, 2017a, our translation).

For the functioning of the principles and scope of the policy objectives, we highlight Article 4 of the aforementioned Law, which points out the following actions:

> I - *technical support* to schools and basic education networks for the *elaboration of diagnoses* and *local plans* for the inclusion of innovation and technology in the pedagogical practice of schools;
> II - *technical or financial support*, [...] for: a) contracting internet access *service;* b) implementation of *infrastructure* for internet signal distribution in schools; c) acquisition or contracting of *electronic devices*; and d) acquisition of *digital educational resources* or *their licenses*;
> [...]
> IV - publication of: a) *parameters for contracting the* internet access service; b) *technical references* on the internal infrastructure for internet signal distribution in schools; c) *parameters on electronic devices* for internet use, in order to allow different types of pedagogical use of technology; and d) *references for the pedagogical use* of technology;
> V- *availability of free digital teaching materials*, preferably open and in the public domain and free license; [...]
> VI - fostering the development and dissemination of *digital teaching resources* [...] (BRASIL, 2021, emphasis added, our translation).

These actions appear in line with Article 2 of the Law, which highlights that efforts will be made "to ensure the necessary conditions for the *insertion of technology as a pedagogical tool*". We corroborate with Heinsfeld and Pischetola (2019, p. 12, our translation) when pointing out that the "use of the word tool, once again, goes back to the perception of technology as a technical artifact, in an uncritical and decontextualized way from the sociocultural scenario in which it is inserted".

In the same sense, Melo Neto and Oliveira (202 2, p. 6, our translation), when analyzing the ProIEC Decree in relation to the goals of the National Education Plan (PNE), which deal with the insertion of technologies in education, point out that "although intends to promote the

pedagogical use of information and communication technologies, the only reference [...] is limited to a strategy with an emphasis on objects".

We see that the concept of technology appears in the regulatory framework as a product, a concern based on the supply of equipment and technical infrastructure, and, in this sense, it fails to point to broader processes or to the relationships between subjects. This could reaffirm a conception of technology only as a technical artifact, since the documents fail to point out what they intend for the pedagogical use of technologies.

In addition, by Art. 2 of Law no. 14,180 (BRASIL, 2021) we see that, in order to achieve the objectives of the policy, there are several possibilities for partnerships between "organs and entities of the Union, States, Federal District and Municipalities, schools, business sector and civil society", to provide the conditions for the insertion of technology in public schools of basic education. Art. 12 reaffirms this possibility, indicating that the PIEC may be financed by: "III - *other sources of funds,* from *public and private entities* " (BRASIL, 2021, our translation) which, explicitly, opens space for the action of private institutions, such as Fundação Lemann, Instituto Península, Fundação Telefônica, Vivo and others, which support and provide guidelines for the policy since its origin as a program.

Regarding this discussion, the study by Brito and Marins (2020) highlights problems of relations between the "public and private" and the Lemann Foundation in the field of educational policies, and points out at least two elements that are articulated in ProIEC under the interests of that Foundation. On the one hand, the guidelines of business logic are reaffirmed and, on the other hand, there is the attempt to materialize the ProIEC on a large scale, which is mediated by the totalizing command function of the State, which provides the "conditions for it to become effective, in this same movement, the expansion of capital accumulation" (BRITO; MARINS, 2020, p. 1, our translation).

In this sense, we corroborate with Laval (2022, p. 525, our translation), who asserts that in the current neoliberal system, the State continues to provide the necessary conditions for the whole of society, including education, to adapt to the logic of the market, that is, its central function does not change, as it seeks to ensure the "legal, political and cultural conditions of the free market, but also to create all the institutional and subjective conditions for the whole of society to adapt and conform to the logic of competition".

Through these reflections, we show that the PIEC regulatory framework dialogues with the interests guided by the new reorganization of the State, and as highlighted by Shiroma and Zanardini (2020), with interests that open the way for public-private partnerships, for the more

technical training of individuals, to reduce the subjects' social relationships, reducing them to the condition of mere users of technologies, which, among other purposes, helps provide data for the new global governance based on goals and strategies for sustainable development proposed by the objectives sustainable development (SDGs), among others.

Shiroma and Zanardini (2020, p. 700, our translation) point out that Brazil implemented the "possible development within the limits of neoliberalism in an efficient and effective way, to the point of gaining prominence at the time of the global proposition of goals and strategies for sustainable development". With regard to education, they show that sustainable development is linked to the theory of Human Capital, with education no longer the center, but the means to achieve the more general purposes of the current capitalist model: it is an "instrumental conception and reproductive nature attributed to education and school in capitalist society".

These developments have been experienced in the Brazilian educational field through the diversified management tools implemented for the development of the New Governance and through policies for the insertion of technologies in education, with a view to improving the quality and scope of educational equity. Although the neoliberal economic system has been undergoing changes, which leads to demands for new reforms and transformations, as Shiroma, Campos and Garcia (2005, p. 428) reminds us, this has been the keynote of educational policy discourses.

In this sense, we understand that the Connected Education Innovation Policy does not advance in relation to other policies for the insertion of technologies in Brazilian education and continues to present the same obstacles as previous policies. In general, we perceive in the PIEC regulatory framework that technical guidelines regarding the functionality and development of the policy are intensified. The 5 (five) analyzed Ordinances mention that documents, guidelines and pedagogical and technical orientations would be published; however, these guidelines are restricted to technical and operational support.

The regulatory framework points to the promotion of innovation and the improvement of the quality of basic education by encouraging the use of digital technologies, however, they do not advance in proposing guidelines regarding the real possibilities of pedagogical use, which is very marginal documents, which do not go beyond pointing to the incorporation of technologies only as technical objects and not as sociocultural artifacts[5].

[5] Within the scope of this study, we understand cultural artifact in the dialectical perspective used by Peixoto (2009), who considers that technical objects are social constructs, since the relationships between technologies and

The documents do not advance in proposing guidelines that could guide schools, teachers and administrators on the possibilities of educational appropriation of technologies; for changes in pedagogical projects; for curriculum reorganization; they do not refer to successful experiences in Brazil, where some schools have been able to develop interesting teaching and learning processes with the insertion of technologies.

In turn, the documents seem to be in line with what Guerra *et al.* (2022, p. 605, our translation) highlighted as another strategy indicated by the World Bank, that, in order to remedy crises related to learning problems, among other guidelines, one has to " iii) focus all other areas on teaching and in learning – inputs, management and governance. Better use of inputs, inclusion of new technologies and reforms focused on management and governance are considered essential for improving results".

Data from the regulatory framework of the PIEC present terms and expressions that, at first reading, seem to indicate the policy's intention to support the universalization of the internet to encourage pedagogical use, by suggesting that the quality of the school will be better if the problems of internet connection speed and infrastructure. But a judicious analysis, relating the perspectives present in the regulatory frameworks to the social, political and economic context in which the PIEC proposal is developed, brings to light a vision of technology centered on the input through "internet access", which presents itself as a condition for the "pedagogical use of technologies".

Thus, the regulatory framework does not point to concrete clues for a real understanding of the pedagogical use of technology, since it focuses on approaches in the technical scope, showing an instrumental conception of technology, pointing out only that it will be possible to make pedagogical use to the extent that schools have quality *internet* access.

In summary, these perspectives in educational policies value the use of technologies as tools for learning and collaboration among students, proposing that technology can innovate the teaching and learning process, making it more interactive, engaging and personalized for each student. They emphasize the criterion of educational quality based on the insertion of technologies, which represent strategies to adapt school education in the context of the information society, and the subjects are taken only as users and consumers of these technologies.

social subjects take place in a perspective of reciprocity. Thus, technology is a social, historical and cultural production and inherent to all human action .

These are clues left by the creators of the PIEC in the texts of the legal documents, marked by the contexts in which they were managed and which, in turn, are in tune with the neoliberal movement and its demands for education in the present time.

Conclusions

The research aimed to understand the determinants of Innovation Policy for Connected Education (PIEC) and the discourses around the universalization of *internet access* and the pedagogical use of technologies. Through a bibliographical and documental study, we showed that approaches that express the need to universalize access to digital technologies predominate and, implicitly, we realized that this emphasis is presented as a condition for the pedagogical aspect.

From the way in which the regulatory framework and its formulation context are presented, the PIEC shows itself as a channel for the implementation of other policies for the educational field, which are articulated to a macro project of society, since the implementation of public policies does not it is a linear process, but flexible and dynamic.

Starting from a critical perspective of the concept of technology, we believe that we need to move towards policies for inserting technology into education and achieve results that can go beyond contributions around internet *connectivity* or promoting infrastructure conditions so that schools have access to a quality connection. We understand that the determinants of the PIEC do not deny the concrete conditions experienced, the historical totality, as well as the movement and contradictions of reality in which the interests, objectives and subjects involved in the proposition, execution and evaluation of such a policy are inserted.

However, we recognize that these determinants can be overcome and improved to the extent that we have educational policies and actions that go against the ideals imposed only by the neoliberal capitalist system. In this horizon, in the contradictory movement of the real, the PIEC may contribute in a concrete way to a re-signification of the use of technologies in pedagogical practices, to the extent that it is based on a more critical view of technological instruments.

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