

**CHALLENGES IN TEACHER EDUCATION IN A CONNECTED WORLD:  
REPRESENTATIONS, PRACTICES AND INNOVATIVE LANGUAGE**

**DESAFIOS NA FORMAÇÃO DE PROFESSORES EM UM MUNDO CONECTADO:  
REPRESENTAÇÕES, PRÁTICAS E LINGUAGENS INOVADORAS**

**DESAFIOS EN LA FORMACIÓN DOCENTE EN UN MUNDO CONECTADO:  
REPRESENTACIONES, PRÁCTICAS E LENGUAGES INNOVADORAS**

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**ABSTRACT:** In the Pedagogy course from School of Education at the Fluminense Federal University, we have been reflecting on the emergence of systematic studies on cyberculture and informational technologies. We conduct research, extension and teaching aiming to broaden discussions about the relations between cyberculture, education and teacher formation. We interact with the concepts such as pedagogical innovation, digital inclusion, hacker culture and collective intelligence, considering their intersections in language studies. We present, in this work, the result of 3 meetings with university students and professors: "Technologies and Languages: teacher education and multiple languages in the connected world". Identifying the fields of interest of these groups has favored the construction of a transversely welcome topic among disciplines already offered. We consider that it is paramount to expand the regular provision of courses in the initial and continuing education for teachers, striving for greater clarity and critical reflection on the implications of educational policies and teaching practices in the connected world.

**KEYWORDS:** Teacher education. Languages. Cyberculture. Digital inclusion.

**RESUMO:** No curso de Pedagogia da Faculdade de Educação da Universidade Federal Fluminense, temos refletido sobre a emergência de estudos sistemáticos sobre cibercultura e tecnologias informacionais. Realizamos pesquisa, extensão e ensino com o objetivo de ampliar discussões sobre as relações entre cibercultura, educação e formação de professores. Dialogamos com os conceitos inovação pedagógica, inclusão digital, cultura hacker e inteligência coletiva, considerando seus atravessamentos em estudos de linguagem. Apresentamos, neste trabalho, o resultado de 3 rodas de conversa com estudantes universitários e professores do ensino superior: "Tecnologias e Linguagens: Formação docente e múltiplas linguagens no mundo conectado". Identificar os campos de interesse desses grupos tem favorecido a construção de uma oportuna transversalidade temática entre

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*disciplinas já ofertadas. Consideramos necessária a ampliação da oferta regular de cursos na formação inicial e continuada para professores, visando maior clareza e reflexão crítica sobre as implicações das políticas educacionais e práticas docentes no mundo conectado.*

**PALAVRAS-CHAVE:** *Formação docente. Linguagens. Cibercultura. Inclusão digital.*

**RESUMEN:** *En el curso de Pedagogía, de la Facultad de Educación de la Universidad Federal Fluminense, estuvimos reflexionando sobre la premura de estudios sistemáticos sobre cibercultura y tecnologías de la información. Llevamos a cabo investigación, extensión y enseñanza con la finalidad de ampliar las discusiones sobre las relaciones entre la cibercultura, la educación y la formación de maestros. Dialogamos sobre los conceptos de innovación pedagógica, inclusión digital, cultura hacker e inteligencia colectiva, considerando la incursión de éstas en los estudios de lenguaje. En este artículo, presentamos el resultado de 3 círculos de dialogo con estudiantes universitarios y docentes de educación superior: "Tecnologías y lenguajes: formación docente y lenguajes múltiples en un mundo conectado". La identificación de los campos de interés de estos grupos ha favorecido la construcción puntual de una transversalidad temática entre las disciplinas ya ofrecidas. Consideramos necesario la ampliación de la oferta regular de cursos de formación inicial y continua para docentes, con el objetivo de una mayor claridad y reflexión crítica sobre las implicaciones de las políticas educacionales y las prácticas docentes en el mundo conectado.*

**PALABRAS CLAVE:** *Formación de maestros. Lenguajes. Cibercultura. Inclusión digital.*

## Introduction

This text arises from research, extension and teaching initiatives. We identified theoretical and methodological convergences in our studies on cyberculture, languages and informational technologies in the context of teacher formation in basic and higher education. We question educational policies and practices that are guided by market interests in the use and distribution of equipment and information to schools and universities. We prioritize their critical and cooperative appropriation, the creative production of knowledge in virtual environments and the investigation of interactive processes on social networks.

We maintain a dialogue with public schools in the state of Rio de Janeiro and with students from teaching degree courses at Fluminense Federal University. We know that informational technological artifacts and the internet network, also known as digital information and communication technologies (DICT), reached schools due, especially, to government incentives that were justified by the digital inclusion discourse and higher quality for the processes of teaching-learning. However, in addition to issues involving acquisition, distribution of equipment for educational institutions and provision of access to the network, we have identified that narratives of teachers and students are interested in formation both for

the use of equipment and also for critical, autonomous appropriation. and author of the technological and digital world in his classroom. Also involved in these interests is the debate about the multiple languages that objectively and subjectively materialize interpersonal relations in cyberspace, indispensable aspects to be addressed in teacher formation.

In order to broaden the debates on the theme, during the 2018 Academic Agenda, we held a first Conversation Round which we called “Teacher education and multiple languages in the connected world”. We seek to broaden the debate and socialize teaching and student production, focusing on teaching work in the classroom and the modes of pedagogical appropriation of digital technologies. How are digital media dialoguing with cultural diversity in and in the classroom? Students from different undergraduate and graduate courses and professors from the University participated. A teacher in higher education, with a critical stance to the concept of pedagogical innovation, considered our approach relevant and fundamental: establishing a reflective perspective, expanding the debate beyond the use of informational equipment.

We argue that an innovative pedagogy is one that displaces the teacher from the center that drives the whole process, breaking with the role of content transmitter, as was conceived in the old schemes of modern schools. We recognize an innovative perspective as a mediating, purposeful, provocative, researcher, instigator of reflection and authorship. This type of teacher asks questions, develops debates, opens up fields of experimentation and reflection with students.

Sharing, collaboration, openness to the students' singularities, in addition to the individual and collective systematization of the constructed knowledge leads to the innovative appropriation of digital and analog technological artifacts. In this perspective, ruptures are taking place with the master's speaking-dictating model, opening space for genuine participation which, for Silva (2010, p. 44), is “bodily and semantic and not just mechanical participation, capable of overcoming the centrality of the traditional learning modality, in favor of betting on the interactive modality, the communicational dynamics of cyberculture and authentic education”<sup>4</sup>. For us, an innovative pedagogy needs to articulate the dialogue between teachers and students and between them and the knowledge that is available in different media. Languages become, therefore, at the heart of the process of connecting people, artifacts and knowledge.

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<sup>4</sup> “participação sensóricorporal e semântica e não apenas mecânica, capaz de superar a centralidade da modalidade tradicional de aprendizagem, em favor da aposta na modalidade interativa, da dinâmica comunicacional da cibercultura e da educação autêntica”

In 2019, we held two more rounds of conversation on the same theme, with the same title: “Teacher education and multiple languages in the connected world”. We had the participation of undergraduate students in Pedagogy (the majority), Letters, Nursing, Mathematics and History. There were also graduate students who are teachers in basic education. It is these two wheels, linked by our experiences of teachers-researchers-educators, that articulate the discussions in this text.

At the end of each round, we provoke: “Propose two themes that you would like to discuss in teacher formation. Indicate sub-themes for developments”. The participants produced written records, shared in the group, in the form of posters, raising questions with a focus on teacher education.

In order to present and reflect on the proposals made by undergraduate students, we outline, in this text, the following path: we problematize the use of information technologies based on languages and their appropriation in school spaces; we approach the conversation wheel as a social technology that enables both debate and data collection; we present the quantitative and qualitative data collected from the participants of the two rounds of conversations; and we analyzed possibilities to include the theme in undergraduate teaching degree courses based on the proposals presented by the participants.

### **Problem and theoretical views**

What do we take into account when we identify the emergence of the deepening of the debate that articulates studies on the formation of basic and higher education teachers regarding the different configurations that constitute the virtuality of human relations in slight expansion in Brazil and in other countries, especially from the advent of the internet, wifi networks and also smartphones?

We found in the Atlas of Violence 2019<sup>5</sup> the profile of a country whose social and economic inequality reaches alarming rates. The lack of opportunity that leads around 23% of young people to drop out of school, according to 2017 data, the high rate of lethal violence against young people, among so many other problems that hinder the country's development, lead us to rethink school failure and the role of the university in educate teachers aware of the political and social responsibility to be materialized to resize pedagogical practices in a way that favors social inclusion.

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<sup>5</sup> Organized by the Institute for Applied Economic Research and the Brazilian Public Security Forum in Brazil.

Lèvy (2010, p. 12) encourages us to be more open to novelty, seeking to understand the expansion of new communication networks from the perspective of “qualitative changes for social and cultural life”<sup>6</sup>. We know, however, of the dominance that capital exercises over cyberspace and its interests in feeding the market, corroborated, also, by some international policies, against which the United Nations (UN) has been positioning itself (SILVA; ANTUNES; VOSS, 2019). We know that overcoming social inequality is not part of the neoliberal agenda. In the educational context, we identified speeches about efficiency and effectiveness, as well as policies for technological and educational innovation that start from the logic of capital. In view of this political panorama, it is necessary to problematize in a purposeful way the ways of reading, interacting and producing scientific and technological knowledge, even showing the dangers of possible appropriations that intensify social exclusion.

Castells, in July 2019, was in the city of Niterói participating in the International Seminar on Education, Culture and Technology: the 21st century school<sup>7</sup>, with the aim of intensifying the debate, among education professionals, about network communication, digital technologies and the production of knowledge in contemporary times. He stated that education has a fundamental role in economic, professional, social and personal development, as it is a key element for understanding and questioning life itself, it is the basis for "informed informed people capable of making decisions for themselves". Emphasizing the amount of information available, he stated that the problem is not in the quantity, but in the domain of search, management, treatment and understanding of the information. According to him, the educator has a central role as an agent for transforming the quality of connectivity of future generations. The technological apparatus does not replace the work of the mediator.

The speaker explained his concerns about the lack of focus of the students given the amount of information and the speed with which they circulate. Castells calls our attention to the fact that children and young people have a great capacity to deal with many simultaneous tasks and to generate new combinations from different sources of information. He explained his understanding that “learning in community”, “personalizing learning” and “establishing relations with life experiences” are aspects that enhance the innovation of the educational process in contemporary times, and pointed out that it is up to the teacher to improve himself to deal with the profile of students, who are already connected to the virtual world in everyday life, regardless of whether the school incorporates technological inclusion methodologies or not.

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<sup>6</sup> “mudanças qualitativas para a vida social e cultural”

<sup>7</sup> Organized by the Arte de Niterói Foundation.

Institutions need to prepare to transform the relation between teachers and students, resizing roles, rethinking forms of interaction and connectivity. In short, the sociologist urges us to reflect on and debate the policies and practices of teacher formation in the information society.

With regard to the treatment and understanding of information that circulates in quantity before the eyes of cyberspace navigating students, we highlight not only the different modes of reading that compete in the contemporary world about which Santaella (2013) discusses, when dealing with processes of ubiquitous communication, when cell phones are an instrument for synchronous and asynchronous communication, support for countless possibilities for the production of texts and various interactions through games, social networks, e-mails, among others, in addition to allowing almost instant access to a world of information. It is a mobile source that accompanies the user.

The range of interactive possibilities transforms the reader's formation processes, generating new educational demands, in a panorama where not even old demands have been overcome. How to search, select, process and understand relevant information in the cybercultural universe? How to form critical readers, informed informed subjects?

Bakhtinian studies on language contribute to the quality of the actions of selection, combination and treatment of information, enabling the understanding of the ideological character of the circulating texts, as well as the control strategies, persuasion of the reader impregnated in the language games produced in the composition between the images, texts, videos and other languages that materialize content in cyberspace. The understanding of non-neutrality in verbal interactions, of discursive strategies for capturing a public that consumes determined ideas and opinions, requires further studies on discursive productions on social networks. “The relations of meaning that are established between two statements”<sup>8</sup> (FIORIN, 2006, p. 19) is what Bakhtin calls dialogism:

Any object from the inner or outer world is always shown to be permeated by general ideas, by points of view, by the appreciation of others; it makes itself known to us discredited, contested, evaluated, exalted, categorized, illuminated by the discourse of others (FIORIN, 2006, p. 19).<sup>9</sup>

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<sup>8</sup> “As relações de sentido que se estabelecem entre dois enunciados”

<sup>9</sup> Um objeto qualquer do mundo interior ou exterior mostra-se sempre perpassado por ideias gerais, por pontos de vista, por apreciações dos outros; dá-se a conhecer para nós desacreditado, contestado, avaliado, exaltado, categorizado, iluminado pelo discurso alheio (FIORIN, 2006, p. 19).

In this sense, the formation of teachers in the connected world cannot do without the study of the discursive processes involved in the content of texts, in the form of texts, in the multiple languages that constitute them.

### **Innovative languages: concepts and practices**

In the field of language studies and pedagogical innovations, we chose to highlight perspectives that seem to open paths for the transformation of the conditions in which didactic-pedagogical work can become innovative. In the context of higher education, Cunha (2016) treats innovation as a “paradigmatic break”.

It explores this concept based on the relation between pedagogy, epistemology and culture. Criticizes the positivist conception of knowledge that, in the search for neutrality, order, control... moves away from classes emotion, authorship, doubt, question... It questions the discourses on pedagogical innovation that do not make an effective change, since they do not resize the bases on which they support pedagogical practices. For her it is necessary to “change the culture of teaching and learning”<sup>10</sup> (CUNHA, 2016, p. 92), which is not built through the inclusion of new technological and digital resources, but understanding the new ways of teaching and learning that these means make it possible.

Cunha (2016) reflects that the ways of circulating information have changed, the role of the teacher has changed, the ways of reading, studying, knowing have changed. The focus stops being the transmission and becomes the articulation between the apprentice and the knowledge. For her, the class is constituted by opening up to other learning times-spaces, considering heterogeneity, interculturality.

The contemporary school, consequently, gains other meanings to be investigated and understood. To innovate would be to invert the theory-practice relation. Without hierarchies or linearities, we broke with the notion of curriculum as the sum of disciplines.

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<sup>10</sup> “a mudança da cultura do ensinar e do aprender”



## Schools and the “connected world”

The school census (INEP, 2018)<sup>11</sup> indicates that today there is more access to information technologies in schools than ten years ago, although our practices and research show us that, in the classroom, there are teachers and students who do not engage in inclusive dialogue with the available artifacts, which leads us to think about the emergence of policies and practices, which, in addition to access, seek to qualify the modes of appropriation of the technological apparatus in favor of the transformation of education.

We know that banning the use of cell phones on the pretext of not dispersing students from the focus of classes is not an unusual strategy. We identified, in spaces with computer labs, that there is no regularity in the functioning of computers or the internet. Also seem to be rare teachers who carry out activities with students' cell phones or in the computer lab.

The lack of Wi-Fi networks accessible to students and also the ignorance of the possibilities of making these activities part of the process of teaching and learning linked to the innumerable forms of interaction, already prevalent in society in different non-school spaces, are elements that trigger the distance formal educational processes in the context of cyberculture. There are undergraduate students in the Pedagogy course who express discomfort when invited to browse, to get used to it and perform activities on virtual learning platforms in order to problematize this space as a didactic resource. Data from our research are available in articles published by Coaracy and Alves (2018), Dominick and Silva (2013), Dominick and others (2018), Dominick and Alves (2018) and Silva (2018).

As with basic education students, also at the university the lack of personal artifacts (cell phones with powerful Wi-Fi, laptops or desktops), even with a computer lab at the College of Education, makes it difficult to carry out activities in or from these environments. Added to this is a strong criticism from many of those who supposed to approach the model of distance courses, in many cases produced in a light manner, commonly set on virtual platforms.

The School Census (INEP, 2018) points out that more than 90% of federal units and more than 70% of state schools offering elementary education have computer lab, internet or broadband resources available. With regard to municipal networks, which today mainly serve the first segment and early childhood education, we can see in the graph that the situation is still precarious, as only 35% of schools have a computer lab, 55.9% have Internet access and

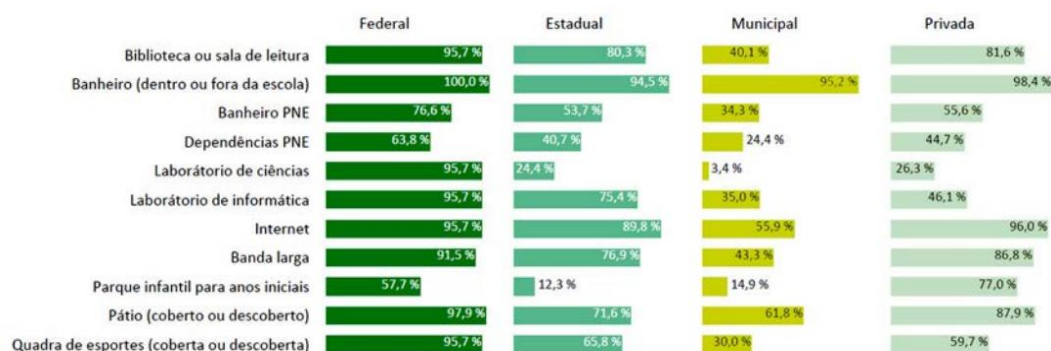
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<sup>11</sup> Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira. *Resumo Técnico: Censo da Educação Básica 2018* [recurso eletrônico]. – Brasília: Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira, 2019. 66p. Available: [http://download.inep.gov.br/educacao\\_basica/censo\\_escolar/resumos\\_tecnicos/resumo\\_tecnico\\_censo\\_educacao\\_basica\\_2018.pdf](http://download.inep.gov.br/educacao_basica/censo_escolar/resumos_tecnicos/resumo_tecnico_censo_educacao_basica_2018.pdf). Access: July 2019.



43.3 % have broadband access (Image 1). In municipal schools in the city of Rio de Janeiro and Niterói, there are computer labs or tablet-type equipment that can be used in the classroom by students and teachers. However, we know that in the Municipality of São Gonçalo, the origin of the vast majority of our students in Pedagogy, there are no computer labs in schools.

**Image 1** - Resources related to the infrastructure available in elementary schools - Brazil - 2018<sup>12</sup>



**GRÁFICO 51** Recursos relacionados à infraestrutura disponíveis nas escolas de ensino fundamental – Brasil – 2018

Fonte: Elaborado pela Deed/Inep com base nos dados do Censo da Educação Básica.

Source: School Census - Technical Summary - Basic education census 2018 - INEP (p. 54)<sup>13</sup>

Despite the lack of equipment and internet in schools and universities, children and young people in basic education are participating in the world connected via domestic access or by cell phone. We are experiencing what Castells (1999) calls the information society, which arises from the 1960s and 70s. It is a “new world”, in which society, economy and culture are interconnected through advances in information technologies information and communication, giving rise to a network society, an information society.

However, most children, young people and their parents do not have information that enables digital inclusion with a guarantee of minimum security in accessing virtual content or even in the process of making private content available online. We identified both students and teachers who do not act in the spaces as interacting subjects (CASTELLS, 2002).

<sup>12</sup> We read on the image from top to bottom: Categories, first line – Federal; State; Municipality; Private / Column from top to bottom: Library or reading room; Bathroom (inside or outside the school); Bathroom PSN; Dependences PSN; Sciences laboratory; Computer Laboratory; Internet; Broadband; Playgrounds for initials years; Schoolyard (covered or not); Sports court (covered or not). / Bellow the data – Graph 51 – Infrastructure-related resources available in primary schools.

<sup>13</sup> Available:

[http://download.inep.gov.br/educacao\\_basica/censo\\_escolar/resumos\\_tecnicos/resumo\\_tecnico\\_censo\\_educacao\\_basica\\_2018.pdf](http://download.inep.gov.br/educacao_basica/censo_escolar/resumos_tecnicos/resumo_tecnico_censo_educacao_basica_2018.pdf). Access. 2019.

Although access to artifacts and even the computer network has grown, awareness of the limits and possibilities of/in cyberspace has not been systematically addressed in undergraduate teaching degree courses. Little is perceived in public schools, systematic continuing formation that enables teachers to appropriate cyberculture in favor of a digital inclusion thought from the perspective of the reflective teacher, of the diversity and culture of sharing from the point of view of a rationality based on hacker ethics (BONILLA; PRETTO, 2015), which seeks to share information freely, enabling the construction of new forms of social relations.

We believe that it is the role of the school to contribute by discussing and even producing content for electronic media. This is a path of formation for citizenship that must be linked to the principles of social technology<sup>14</sup> (FRANCO; SÁENZ, 2013), especially with regard to the valorisation of local knowledge.

In order to appropriate the production movement on the theme, we conducted a search in SCIELO with the descriptors "digital", "school" and "teacher". There were 15 results, in Portuguese, in the period between 2014 and 2017. In a search on Google Scholar, with the same descriptors, we found more than 168,000 results. However, the fact that there is a strong academic production does not mean that the discussion is effective in undergraduate teaching degree courses in Brazil, much less in the classroom. Freitas (2015) narrates his strangeness when, upon arriving in Portugal for a doctorate, he identifies that the Portuguese teachers of the course

in the classes of the Seminars for access to the PhD in Educational Sciences at the University of Madeira (UMa), they addressed the vanguard of discussions about the Information Society and its impact on the educational process. In addition, the inverse experience related to the fact of not having detected in the studied Brazilian literature, when developing activities for the elaboration of scientific articles and others, discussions about the subject matter of study [...] (p. 5).<sup>15</sup>

Santos (2009) carried out a survey on the works presented, between 2000 and 2008, in the GTS Teacher Formation and Education and Communication of ANPED (National Association of Postgraduate Studies and Research in Education), related to the theme

<sup>14</sup> Em texto publicado em: <https://periodicos.fclar.unesp.br/iberoamericana/article/view/11647>. Desenvolvemos um pouco mais o tema.

<sup>15</sup> nas aulas dos Seminários de acesso ao doutoramento em Ciências da Educação da Universidade da Madeira (UMa), abordavam a vanguarda das discussões sobre a Sociedade da Informação e o seu impacto no processo educacional. Somou-se ao ocorrido a experiência inversa relativa ao fato de não ter detectado na literatura brasileira estudada, quando do desenvolvimento das atividades de elaboração de artigos científicos e outras, as discussões acerca da temática objeto de estudo [...] (p. 5).

“formation of teachers for the use digital technologies”. This work helps us to reflect on how, at the beginning of the 21st century, discussions were going. The author states:

It is a fact that the demands placed by contemporary society, permeated by technologies, are guiding a new dynamic for teaching performance and questioning the efficiency of public policies for teacher formation to face this reality. If, on the one hand, the information society requires the appropriation of knowledge in this area by the teacher, on the other, public policies have not yet managed to fully include schools in the digital world and, in the formative processes of teachers, such issues do not find much space. Thus, the teacher finds it difficult to conceive information and communication technologies (ICTs) as a condition of production and, paradoxically, to be in tune with the students' digital culture (SANTOS, 2009, p. 02).

Seven years earlier, Preto (2002, p. 130) wrote:

We cannot, therefore, be content with proposals for the introduction of these technologies at school as if they were, by themselves, the transformers of this whole process that is outdated and that does not account for the transformations of the contemporary world: a planet in motion, not the well-known, traditional and harmonic movements of rotation and translation, but more complex movements, which make the world more complex as well (p. 130).<sup>16</sup>

He analyzed, in his text, that was born from a speech at the 24th ANPED Meeting<sup>17</sup>, government policies for the inclusion of information technologies in schools and concluded that

It is from this new context that the role of a new teacher emerges, no longer a repeller of information, who is satisfied with lightened certifications. This whirlwind in motion requires another professional, who is not content with simply providing and receiving information distributed through ICT, but who acts as the leader of multiple processes that value teaching work and their profession, in rich processes of de-verticalization of the system (2002, p. 130).<sup>18</sup>

As we can see, the discussion is not new. There is a significant production on the subject, but in many spaces of teacher education, we are still crawling in relation to including the different angles of the theme in the dynamics of the disciplines and to enable, by the teaching

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<sup>16</sup> Não podemos, portanto, nos contentar com propostas de introdução dessas tecnologias na escola como se elas fossem, por si só, as transformadoras de todo esse processo que está superado e que não dá conta das transformações do mundo contemporâneo: um planeta em movimento, não os conhecidos, tradicionais e harmônicos movimentos de rotação e translação, mas movimentos mais complexos, que fazem o mundo, também, mais complexo (p. 130).

<sup>17</sup> ANPED – Portuguese initials for National Association of Postgraduate Studies and Research in Education.

<sup>18</sup> É desse novo contexto que emerge o papel de um novo professor, não mais um repassador de informações, que se satisfaça com certificações aligeiradas. Esse turbilhão em movimento exige um outro profissional, que não se contente com o simples fornecimento e recebimento de informações distribuídas através das TIC, mas que aja como liderança de múltiplos processos que valorizem o trabalho docente e a sua profissão, em ricos processos de desverticalização do sistema (2002, p. 130).

degree student, a dialogical professional formation, considering the digital technologies in the classroom.

At the UFF College of Education, recently, a group of teachers has proposed, in addition to classes in the disciplines taught and specific coordinated projects, actions that enable the construction of instituting experiences (LINHARES, 2001), theoretical and practical reflections on pedagogical innovations that connect people, artifacts and knowledge via teaching-learning interactions through conversation circles.

### **Conversation circles as a methodology**

According to Warschauer (2001), one of the characteristics of a conversation circle is “bringing together individuals who bring different life stories and unique ways of thinking and feeling”<sup>19</sup> (p. 46). Thus, from the encounters, in a fruitful process of exchanges, entanglements and approximations, life is generated through the production of meanings. In a similar way, the author states: “From the encounter, the egg is born. From intersubjectivities the group is born”<sup>20</sup> (p. 46). Corroborating this perspective, in the proposed conversation circles, we look for clues about the diversity of interests and the creation of meanings, of bonds between the subjects for the development of a group conscience, for the “embodiment” of a collective, constructed, dialogued knowledge. Such a moment of exchange between the participants, sitting in a circle, the mutual view of each other has been, for us, an invitation to speak and listen, producing intersubjective experiences. We know that it is not a simple process, “because being able to hear what the other has to say to us, not only when we agree, but mainly, when we disagree with it, is a very difficult task, but very useful [...]”<sup>21</sup> (WARSCHAUER, 2001, p. 51).

In the perspective of an innovative pedagogy, the speech of the students, valued in the circle, produces cracks in the perspective of the teacher as the sole holder of knowledge. Voices are enhanced in the circle, creating another political culture. The conversation circle also connects us to the Freirian proposal for a culture circle. Created in the 1960s with the aim of teaching adults to read and write, this practice also removes the teacher from his place of power and control and allows for more dialogical and democratic interactions both with regard to the relationship between subjects, as for the content treated, as the participants' counter words enter

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<sup>19</sup> “reunir os indivíduos que trazem histórias de vida diferentes e maneiras singulares de pensar e sentir”

<sup>20</sup> “Do encontro, nasce o ovo. Das intersubjetividades nasce o grupo”

<sup>21</sup> “pois conseguir ouvir o que o outro tem a nos dizer, não só quando concordamos, mas principalmente, quando dele discordamos, é tarefa muito difícil, porém muito útil [...]”

the circle without the arrogance that hierarchizes knowledge. A collective reading of the world is built.

In cultural circles, the power of the shared word is sought, above all, generating interest in knowing, co-responsibility for group life, restlessness and questioning in relation to the pre-established as truth. Thinking about different cultures as a social construction, we conceive the importance of a work aimed at the formation of this awareness, moving from the place of acceptance of reality, starting to involve us deeply in the observation and reflection on life. We are looking for the formation of reflective teachers (SCHÖN, 1983), those capable of producing “knowledge in action”. However, for a reflective practice with the construction of implicated knowledge, it is necessary that the experience produces reflection and the analysis potentiates the improvement of teaching practice.

In a collective and collectivizing movement of multiple voices and bodies that weave together, the intersubjectivation that affects each and many emerges from human problematization in a circular dialogue. To criticize culture and cyberculture is to rework and rework in the world, becoming humanized.

In a conversation circle or in a culture circle, we can assume that every educational process has a political character, a sharing policy. We know that “there is not and never was an educational practice in any space and time in such a neutral way, committed only to predominantly abstract and untouchable ideas”<sup>22</sup> (FREIRE, 1992, p. 78). We need to assume the political character of all educational actions, both face-to-face and those that take place through the mediation of different technologies, as there are emancipatory policies and there are also those that reproduce the logic of dominators.

## **Research dialogues - results and analysis**

Understanding the potential of dialogue for the construction of knowledge and praxis, in 2019, we proposed two rounds of conversation within the scope of the College of Education/UFF, continuing the actions that we had been developing on the theme “Technologies and Languages: teacher education and multiple languages in the connected world”.

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<sup>22</sup> “não há nem jamais houve prática educativa em espaço e tempo nenhum de tal maneira neutra, comprometida apenas com idéias preponderantemente abstratas e intocáveis”

These events took place in April, in the morning and night shifts. There were a total of 79 participants, with 43 people on the night shift (Conversation Circle 2) and 36 on the morning shift (Conversation Circle 3).

The conversation circles started with the participants' presentations, so that the group could establish mutual knowledge. Then, some reflections on the theme were explained from the research and experiences of the proposing teachers. After the first hour of conversation, the wheel started to spin due to the reflections of the students present. The circle “constitutes a moment of dialogue, par excellence, in which the interaction between the participants of the group occurs, under the organization of the coordinator, the teacher”<sup>23</sup> (WARSCHAUER, 2001, p. 47). We, teacher-researchers, were the “coordinator of the group”, who had the role of stimulating and enhancing the discussion, seeking to deepen the theme and achieve the goal of dialogue.

The circle was enriched with questions, debates, reflective provocations, so that the voices of all participants resonated in all of us, through the exchange of experiences, questions about expectations, discovery of possibilities and problematization of experiences both in the personal journey and in the path's academics and professionals.

The last moment of the circle took place after a break, when we shared a community-produced *coffebreak*, which provided moments of relaxation and greater closeness.

The work was resumed with the proposal to form groups, provoked to carry out a production based on the generating question: “Propose two themes that you would like to discuss in the formation of teachers. Indicate sub-themes for developments”<sup>24</sup>. This proposal was based on the conception presented by Hernández and Ventura (1998). We proposed to the participants to make a kind of primary index<sup>25</sup>, indicating themes and topics that they considered important to be addressed in teacher education. The groups produced posters that constituted an important record and systematization of the points discussed during the conversation, serving as a source of research to survey elements considered relevant and significant by the participants.

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<sup>23</sup> “constitui-se num momento de diálogo, por excelência, em que ocorre a interação entre os participantes do grupo, sob a organização do coordenador, o professor”

<sup>24</sup> “Proponham dois temas que vocês gostariam de discutir na formação de professores. Indiquem subtemas para desdobramentos”

<sup>25</sup> The index, in the perspective of Hernández and Ventura (1998), is an important strategy that helps to structure and organize the learning process and the work project itself. By objectifying study themes and detailing subthemes, it is possible to outline steps and resources for the organization of action schemes, which provides autonomy and engagement in the educational process. The primary index would consist of the first stage of exploration on the proposed theme, where prospective research and analysis perspectives are raised (p. 76-80).



The dialogues enhanced reflections on the theme of technologies, digital inclusion, teacher education in the connected world and the multiple languages that permeate contemporary communication processes. From the exchanges that took place and the production of the indexes displayed on the posters, it was possible to capture some representations about the group's interest to discuss in teacher education.

The tables that we present below present the contents of the posters and explain what we understand as the political will of the participants who integrated the conversations and dynamized dialogues.

**Table 1** - Production of students who participated in Conversation Circle 2

<p><b>Theme 1 - Media Technologies and the formation of critical readers</b>                  A<sub>1</sub> - Reader x One who read<sup>26</sup>                  A<sub>2</sub> – Teacher formation                  A<sub>3</sub> - Processing of information</p> <p><b>Theme 2 - Access to technologies</b>                  A<sub>1</sub> – Public Policies                  A<sub>2</sub> – Quality in access                  A<sub>3</sub> - Day to day implications</p>	<p><b>Theme 1 - Technology and Education</b>                  Index:                  -Technology in the educational process                  -The role of the pedagogue in the development of technologies                  -The incorporation of technology in teacher formation</p> <p><b>Theme 2 - Media and Knowledge</b>                  Index:                  -Influence of Social Networks on Education                  -Use of media as drivers of learning</p>	<p><b>Theme 1 - Technology at School</b>                  Technology as a mediator of knowledge.                  The appropriation of technology as a social tool                  The impact of technology on teacher education.</p>
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Source: Devised by the authors

<sup>26</sup> The authors used the words “*leitör*” that translates to reader and “*ledor*” which also translates to reader, but in this game of words *ledor* would be the acritical reader, the one who reads, but it’s not really grasping the content, the meanings in that reading, the reading just for the sake of reading.

**Table 2** - Production of students who participated in the conversation circle 3

<p><b>Theme 1: Social Technology as a teaching methodology</b></p> <ul style="list-style-type: none"> <li>- Social inclusion</li> <li>- Transformation of reality</li> <li>- Collective participation</li> </ul> <p><b>Theme 2: Implications of the virtual world in school reality</b></p> <ul style="list-style-type: none"> <li>- Cyberbullying</li> <li>- Transformation of the teaching gaze</li> <li>- Knowledge of virtual communities</li> </ul>	<p><b>Theme 1: Introduction to digital technologies</b> Index:</p> <ol style="list-style-type: none"> <li>1.1. Developments in basic education</li> <li>1.2. Contemporary concepts</li> </ol> <p><b>Theme 2: Policies of access and permanence of technologies in formative processes</b> Index:</p> <ol style="list-style-type: none"> <li>2.1. Demystifying the use of new technologies in teaching practices</li> <li>2.2. Curriculum and technologies</li> </ol>
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Source: Devised by the authors

Many readings can be deepened on the material collected in our proposal, but in a first moment of analysis it is possible to observe the fact that, from the conversation circle, the meanings produced had a strong relation with issues related to teaching in the classroom of class. Teachers in initial and continuing education streamlined the dialogues and made visible on the posters the attention focused on learning that is connected to the action, the practice of the teacher and his relationship with the school. In the proposed themes and indexes, we have: “**Technology and Education**”, “Technology in the educational process”; “The role of the pedagogue in the development of technologies”; “**Technology at School**”; “Technology as a mediator of knowledge”; “The appropriation of technology as a social tool”; “**Media and Knowledge**”; “Influence of Social Networks on education”; “Use of media as drivers of learning”; “**Social Technology as a teaching methodology**”; “**Implications of the virtual world in school reality**”; “Cyberbullying”; “Transformation of the teaching gaze”; “Knowledge of virtual communities”; “**Introduction to digital technologies**”; “Developments in basic education”; “**Policies for access and permanence of technologies in formative processes**”; “**Demystifying the use of new technologies in teaching practices**”. Associated with the systematization of the questions on the posters, during the discussion, the participants expressed their concerns about how the new generations use technologies in their daily lives and how the interactions on the internet affect the student's life, reflecting in the context of the classroom. Lèvy (1999), when addressing the issues surrounding cyberculture, denotes that this movement brings changes in the way of learning, which should, in his view, since the end of the 1990s, modify educational structures, fostering intelligence collective and new knowledge production processes. However, as stated by Sibilia (2012), the school remains as an apparatus of modernity, following the same precepts, the same forms of control and practically the same

function with which it was thought in its beginnings. This fact contrasts with the languages dynamized in contemporary times, in spontaneous and informal learning processes that are configured in human existence and in established social relations.

The concerns and findings reflected in the conversation circle on this point were very striking and were very present in the speeches and in the systematization of the theme with a view to what the participants consider as important to be discussed in the formation of teachers, expressing a perception that they want understand how educational paths linked to technologies can be worked.

Inherent in this discussion, the following indices emerged: “Teacher formation”; “The incorporation of technology in teacher education”; “The impact of technology on teacher formation”; “Curriculum and technologies”. In a way, we understand that the process of teacher formation is already on the agenda from the very proposal of the conversation circle and the systematization activity, however, the participants, in their constructions, made explicit the need to discuss their own formation in dialogue with the issues of connectivity and multiple languages in the learning of the profession, placing the need for teacher preparation to deal with contemporary cultural issues of social performance of students, enabling innovative practices and contextualized to the interests and skills most developed by new generations. However, we need to reaffirm that the acquisition of techniques for the use of equipment is not enough, which could lead a person who thinks in a linear and traditional way to emphasize training, for example. Such perspective does not correspond to the work of teacher formation committed to autonomy, critical formation, so that teachers and students are interacting and not interacted subjects (CASTELLS, 2002). It is not a matter of preparing manpower to perform tasks thought by others, as many “innovative” projects propose. An innovative pedagogy dialogues with technologies seeking the formation of people to understand the world more and better, to build alternatives that enable cultural interconnections inclusive of human multiplicity. To understand the influence of this connected world in the lives of teachers and students of Basic Education, we cannot be prisoners of how to use the media in the pedagogical processes, but by not working with them in these processes, we are creating an increasingly wide gap between the that experience students from different backgrounds in their lives and the processes of construction and systematization of knowledge proposed by school education.

This issue is also clear in the representations of the participants of the circle, when they produce the themes and indexes: “**Media Technologies and the formation of critical readers**”, “Reader x one who read”, “Information processing”; “Transformation of reality”, “Collective participation”. These points were addressed in a very interesting way in the debate,

based on the understanding that it is necessary for the teacher to mediate the student in order to teach him to read the media, to establish relations and critical parameters for the appropriation of technological resources and information and knowledge conveyed in media contexts. Knowledge about the potential of languages in the cyber world and the need for us to manipulate information and content in the sense of not being hostages to information networks, but creators and owners of the knowledge production process, was denoted. In this sense, we denote how the issue of “hacker culture” was treated (PRETTO, 2017), highlighting the role of education in this process of emancipation of the subject in the use of networks. The hacker culture dialogues with a perspective contrary to consumerism and individualism so present in contemporary culture. It advocates the appropriation of cyberspace without the tutelage, mapping and monopoly of large corporations with a market interest based on exploitation, rooted in the colonization process. It proposes free, autonomous access, use and sharing of knowledge available on the network, providing situations in which humans are perceived as interacting and not just as uncritical consumers, interacted by electronic media. In this sense, educational institutions must encourage the free exchange and exploration of information, in a collective and shared production of knowledge, mediated by the use of the network.

The discussions and systematization also pointed to the following themes and indexes: **“Introduction to digital technologies”**, “Contemporary concepts”; “Social inclusion”; **“Access to technologies”**, “Public Policies”, “Quality in access”, “Implications in daily life”; **“Policies for access and permanence of technologies in formative processes”**.

The points raised problematize basic questions about the theme, demonstrating that the participants' representations express both the need to expand knowledge about digital technologies, their implications in the daily lives of individuals and their repercussions on educational processes, as well as awareness of the need for policies that guarantee equal access to the network and equipment, promoting social and digital inclusion. The question that runs through the reality of many of the participants and a large portion of the Brazilian population is the great difficulty in connecting to the internet in the regions where they live or study. In addition, the majority use of equipment is made through the use of cell phones - smartphones - which, on the one hand, allow greater mobility and “portability”, on the other hand have a greater limitation of information resources, such as related to capacity memory to store and streamline content and applications. We know that the most modern and latest generation mobile devices have more advanced features and attributes than many computers and tablets, for example, however, the cost is not accessible to the middle and low income population, which ends up segregating and excluding many people with broader access to the possibilities found

in these media. In this sense, we understand that artifacts and networks are limiting when it is known that connectivity conditions and resources are often very scarce. At school, despite the conditions that many have of having computer labs and having equipment, access and conditions for permanence and expansion of possibilities do not enhance the work. These points, therefore, allow us to glimpse that, in addition to the lack of initial and continued education in dialogue with the multiple languages of the connected world, there is a lack of structure that allows the school to dialogue in a richer way with the issues interposed by contemporary times. In this sense, the participants point out that, in addition to specific actions, there is a need for a public policy that guarantees or at least establishes the structuring and maintenance of the conditions for the transmission of projects with technologies in the formative processes, in order to expand spaces and strategies of learning.

The results and analyzes indicate that there is a long way to go towards developing innovative practices in basic education and higher education.

The dialogues established in the conversation circle pointed out rich elements for the continuity of this work in the training of teachers, so that more questions are raised and new paths are pointed out.

### **Innovative pedagogies in undergraduate teaching degree courses: proposals**

The work that has been developed at FEUFF through the initiatives presented in this work has been harming certainties and provoking, in the authors, instituting movements in/of pedagogical practice. Such mobilization ends up generating processes that are articulated with our vision of innovative pedagogy: one that demands that the teacher leave the center of the process and perceive himself as a subject who is no longer a transmitter of knowledge, when the teacher assumes himself as a mediator, a provocateur of thinking about the production of collaborative knowledge.

In view of what we have developed, many potentialities have appeared, indicating the need to continue and expand the scope of our actions, through research, teaching and extension work.

From this perspective, we have the horizon of conducting a broad research, so that we reach the representativeness of a large percentage of undergraduate teaching degree students at UFF. We understand as important points and possible horizons: to carry out an exploratory research, through the application of a survey, with students of undergraduate courses through the subjects of the Common Core of Undergraduate Teaching Degree Courses (Didactics,

Educational Psychology, Organization of Education in Brazil and Educational Research and Practice), which are offered by FEUFF in order to collect data and structure formative actions; extend research to teachers in the disciplines offered by the College of Education to undergraduate teaching degree students; create spaces to amplify the debate on the topic (promoting seminars, conversation circles, congresses); to tension with the coordinators of teaching degree courses the debate on the offer of face-to-face subjects with the use of informational resources, in view of the possibility of interaction also in a virtual learning environment; encourage the production of teaching materials using digital technologies in the educational practices of teacher formation; create optional, elective courses and complementary activities that use languages different from traditional ones, valuing and putting into perspective aspects related to the perspectives of interconnectivity, collective intelligence and network actions; encourage activities for sharing and producing knowledge between students and student-teachers using tools and virtual environments; create mechanisms that encourage teachers of the compulsory subjects to use the Information System that the University offers with their students, exploring the available digital resources more widely; produce short videos with guidelines for teachers on how to use some programs and applications with their students in the classroom; encourage students to consult, produce and post their productions on educational portals with free access (such as eduCAPES, etc.).

These initiatives are in perspective as a result of what has already been done, of the dialogues that have been built and of the actions implemented in the context of the Pedagogy Course and the College of Education at UFF.

The formulations developed in the text showed us indications of the type of formation that students are demanding of us, the debates that they see as pressing in their professional formation process.

In view of what we have seen and heard, we are aware that an innovative pedagogical action, which dialogues with multiple languages in the context of the connected world, foresees horizontality in educational relations, inclusion, the potentiation of instituting experiences and the process of human emancipation as paramount. Armed with these tools, we will be leveraging practices that can overcome and dialectically create new challenges for a teacher formation project committed to autonomy, democracy and equality.

## REFERENCES

CASTELLS, M. **A sociedade em rede**. São Paulo: Paz & Terra, 2002.



CASTELLS, M. **A Era da informação: economia, sociedade e cultura**. v. I. 6. ed. São Paulo: Paz e terra, 1999.

CASTELLS, M. Educação, cultura e tecnologia: a escola do século XXI. **Conferência proferida no Seminário Internacional Educação, Cultura e Tecnologia: a escola do Século XXI**. Niterói: Fundação Arte; Prefeitura Niterói, julho/2019. Available: [https://www.facebook.com/pg/PrefeituraMunicipaldeNiteroi/posts/?ref=page\\_internal](https://www.facebook.com/pg/PrefeituraMunicipaldeNiteroi/posts/?ref=page_internal). Access: July 2019.

COARACY, L. L.; ALVES, W. B. As tecnologias digitais e a escola: pesquisando o cotidiano. *In: COLÓQUIO INTERNACIONAL EDUCAÇÃO, CIDADANIA, EXCLUSÃO – CEDUCE*, 5., 2018, Campina Grande. **Anais [...]**. Campina Grande, PB: Editora Realize, 2018. Available: [http://www.editorarealize.com.br/revistas/ceduce/trabalhos/TRABALHO\\_EV111\\_MD1\\_SA6\\_ID1154\\_03062018232708.pdf](http://www.editorarealize.com.br/revistas/ceduce/trabalhos/TRABALHO_EV111_MD1_SA6_ID1154_03062018232708.pdf). Access: July 2019.

CUNHA, M. I. Inovações na educação superior: impactos na prática pedagógica e nos saberes da docência. **Revista Em Aberto**, v. 29, n. 97, p 87-101, set./dez. 2016.

DOMINICK, R. dos S. e ALVES, W. B. Inclusão digital e inovação pedagógica: diálogo necessário. **Revista Ibero-Americana de Estudos em Educação**, v. 13, n. esp. 2, set. 2018. Available: <https://periodicos.fclar.unesp.br/iberoamericana/article/view/11647>. Access: June 2019.

DOMINICK, R. dos S., BARBIRATO, P. F. de B., FURTADO, E. B., CONCEIÇÃO, C B. da, VIERA, A. C. M. M., OLIVEIRA, T. D. de. Inovações pedagógicas e cultura da partilha na formação docente. *In: REUNIÃO ANUAL DA SBPC*, 70., 2018, Maceió. **Anais [...]**. Maceió, AL: UFAL, 2018. Available: [http://www.sbpnet.org.br/livro/70ra/trabalhos/resumos/3149\\_1663c956f1f2858262ca03554637e4d57.pdf](http://www.sbpnet.org.br/livro/70ra/trabalhos/resumos/3149_1663c956f1f2858262ca03554637e4d57.pdf). Access: June 2019.

DOMINICK, R. dos S.; SILVA, C. de F. **Relatório das ações e da produção de 2012 do Projeto de Pesquisa As “artes de fazer” a educação em ciclos: diálogos entre tecnologias na formação de Pedagogos II**. Niterói: UFF-PROPPi, 2013. Available: [https://www.dropbox.com/s/iikt91d4wajgiu0/Cinthia%20relatorio\\_final\\_PIBIC%2015-09.%20doc2013.doc?dl=0](https://www.dropbox.com/s/iikt91d4wajgiu0/Cinthia%20relatorio_final_PIBIC%2015-09.%20doc2013.doc?dl=0). Access: June 2019.

FIORIN, J. L. **Introdução ao pensamento de Bakhtin**. São Paulo: Ática, 2006.

FRANCO AVELLANEDA, M.; SÁENZ RODRÍGUEZ, M. Del P. Dimensiones educativas de la tecnología social. **Revista Educación y Pedagogía**, [S.l.], n. 62, p. 63-77, jan. 2013. ISSN 0121-7593. Available: <http://aprendeonline.udea.edu.co/revistas/index.php/revistaeyp/article/view/14110/12494>. Access: July 2019.

FREITAS, G. L. **O estado da arte das discussões sobre currículo na pós-moderna sociedade da informação: estudo de caso e análise de conteúdo da produção dos pesquisadores em educação no período de 2001 a 2011**. 2015. 463 f. Tese (Doutorado em Ciências da Educação) - Universidade da Madeira, Portugal, 2015.

FREIRE, P. **Pedagogia da esperança**: um reencontro com a Pedagogia do oprimido. Rio de Janeiro: Paz e Terra, 1992. Available: <https://digituma.uma.pt/bitstream/10400.13/1509/1/DoutoramentoGeorgeteFreitas.pdf>. Access: May 2019.

HERNÁNDEZ, F.; VENTURA, M. **A organização do currículo por projetos de trabalho**. Trad. Jussara Haubert Rodrigues. 5. ed. Porto Alegre: Artes Médicas, 1998.

INEP (Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira). **Resumo Técnico**: Censo da Educação Básica 2018 [recurso eletrônico]. Brasília: Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira, 2019. Available: [http://download.inep.gov.br/educacao\\_basica/censo\\_escolar/resumos\\_tecnicos/resumo\\_tecnico\\_censo\\_educacao\\_basica\\_2018.pdf](http://download.inep.gov.br/educacao_basica/censo_escolar/resumos_tecnicos/resumo_tecnico_censo_educacao_basica_2018.pdf). Access: May 2019.

IPEA. **Atlas da violência 2019**. Brasília, Rio de Janeiro, São Paulo: Fórum Brasileiro de Segurança Pública 2019. Available: <http://www.ipea.gov.br/atlasviolencia/download/12/atlas-2019>. Access: May 2019.

LEVY, P. **Cibercultura**. São Paulo: Editora 34, 2010.

PRETTO, N. Formação de professores exige rede! **Revista Brasileira de Educação**, Rio de Janeiro, n. 20, p. 121-131, maio/jun./jul./ago. 2002. Available: <https://www.redalyc.org/pdf/275/27502010.pdf>. Access: July 2019.

PRETTO, N. **Educações, culturas e hackers**: escritos e reflexões. Salvador: EDUFBA, 2017. Available: [novolivrode.pretto.info](http://novolivrode.pretto.info). Access: July 2019.

SANTAELLA, L. **Comunicação ubíqua**: repercussões na cultura e na educação. São Paulo: Paulus, 2013.

SANTOS, E. T. A formação dos professores para o uso das tecnologias digitais nos GTs Formação de professores e Educação e comunicação da ANPED - 2000 A 2008. In: REUNIÃO ANUAL DA ANPED, 32., 2009, Caxambu. **Anais [...]**. Caxambu, 2009. Available: <http://www.anped.org.br/sites/default/files/gt08-5899-int.pdf>. Access: May 2019.

SIBILIA, P. **Redes ou paredes**: a escola em tempos de dispersão. Trad. Vera Ribeiro. Rio de Janeiro: Contraponto, 2012.

SILVA, M. M. e. Cultura de paz: reflexões sobre o caráter restaurativo da pedagogia social. **Revista da Pedagogia Social**, Niterói, v. 7, n. 2, 2019. Available: <http://www.revistadepedagogiasocial.uff.br/index.php/revista/article/view/183>. Access: July 2019.

SILVA, M. M. e. Novas tecnologias e múltiplas linguagens na formação docente. VII Seminário Internacional de pesquisa em mídia e cotidiano. In: SEMINÁRIO INTERNACIONAL DE PESQUISA EM MÍDIA E COTIDIANO, 7., 2018, Niterói. **Anais [...]**. Niterói, RJ: PPGMC/UFF, 2018. Available: <http://www.ppgmidiaecotidiano.uff.br/site/wp-content/uploads/2018/10/Anais-2018-PPGMC-Artigos-Completo-GT1.pdf>. Access: July 2019.

SCHÖN, D. **O praticante reflexivo: como os profissionais pensam em ação.** Nova York: Livros Básicos, 1983.

WARSCHAUER, C. **A roda e o registro: uma parceria entre professor, alunos e conhecimento.** 3. ed. São Paulo: Paz e Terra, 2001.

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