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Digital Culture and Teacher Education: an analysis from the perspective of undergraduate students in Pedagogy[1]

Cultura Digital e Formação de Professores: uma análise a partir da perspectiva dos discentes da Licenciatura em Pedagogia

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ABSTRACT

This investigation presents an exploratory qualitative research that was carried out with 127 undergraduate students in Pedagogy at a private University in Curitiba, who take the course in person, blended modality, and distance modality. The aim was to analyze and reflect on Digital Culture in Teacher Training from the perspective of students. Data were collected from an online questionnaire and analyzed from the perspective of Bardin (2011), with the aid of the ATLAS.ti software. The data analysis allowed verifying that the Licentiates in Pedagogy identify the Digital Culture in the initial formation when the university makes possible the presence of the digital technologies in the living spaces and the access to the wireless network, as well as also recognizing when the teacher makes use of the digital technologies in pedagogical practice.

Keywords: Technologies. Digital Culture. Teacher training.

RESUMO

Esta investigação apresenta uma pesquisa de abordagem qualitativa do tipo exploratória que foi realizada com 127 alunos da Licenciatura em Pedagogia de uma Universidade particular de Curitiba, que realizam o curso

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na modalidade presencial, semipresencial e a distância. O objetivo foi a análise e a reflexão sobre a Cultura Digital na Formação de Professores a partir da perspectiva dos discentes. Os dados foram coletados a partir de um questionário *online* e analisados a partir da perspectiva de Bardin (2011), com o auxílio do *software* ATLAS.ti. A análise de dados permitiu constatar que os Licenciandos em Pedagogia identificam a Cultura Digital na formação inicial quando a universidade possibilita a presença das tecnologias digitais nos espaços de convivência e o acesso à rede *Wi-fi*, assim como também reconhecem quando o professor faz uso das tecnologias digitais na prática pedagógica.

Palavras-chave: Tecnologias. Cultura Digital. Formação de Professores.

Introduction

Digital Culture can be understood as the set of habits, practices and social interactions that are carried out from the use of digital technological resources. This culture prospered from the development of Digital Information and Communication Technologies (DICT), which are present in our daily lives. Its advancement made possible countless contributions to society, transformed the world and the way we interact in it.

Our society remains in constant growth and transformation, where Digital Culture appears as social practices, which can reconfigure aspects and functions of our lives. The school and its teachers, as part of society, find themselves as actors who receive this culture posed by digital technologies, used for the most diverse purposes, where they strongly alter our forms of communication, information and interaction.

Education, over the generations, has been guided by a traditional conception based on the reproduction of information, without considering the student as the main learning process. However, this teaching model, also called traditional, is still present in the classrooms of schools and universities. Many teaching processes seek to overcome this concept of education and make use of digital technologies as resources in favor of learning. Currently, educational institutions seek to insert digital technologies in the curriculum, in teaching processes, in continuing education, with the aim of improving the quality of education, as they have proved to be of great importance in the mediation of the teaching process, as can be seen in face of the Covid-19 world pandemic.

From this perspective, it is known that DICT and digital technologies contribute to the increase in offering initial and continuing teacher training in distance learning. The National Curriculum Guidelines for Initial Teacher Education for Basic Education, along with the Common National Base, emphasize the importance of digital technologies in teacher education (BRASIL, 2019).

The aforementioned legislation emphasizes that one of the teaching skills is related to "understanding, using and creating digital information and communication technologies in a critical, meaningful, reflective and ethical manner in the various teaching practices, as a pedagogical resource and as a training tool [...]" (BRASIL, 2019). The legislation also mentions that the dimension of professional teaching practice must enable the use of "[...] digital technologies, virtual content and other technological resources, and incorporate them into pedagogical practice, to enhance and transform students' learning experiences, and encourage an investigative attitude" (BRASIL, 2019).

Based on this understanding, the importance of digital technologies as resources in favor of teachers' education processes, this article aims to analyze and reflect on Digital Culture in Teacher Education, from the perspective of undergraduate students in Pedagogy.

It is inferred that the results of this investigation may, following the perspective of Bogdan and Biklen (1994) and Gil (2011), in relation to qualitative research of the exploratory type, contribute to more information and knowledge about the importance of Digital Culture in the formation of teachers. Also, it serves as to identify significant contributions in relation to the use of digital technologies in the teaching and learning process, as well as to benefit researchers and students of undergraduate courses in understanding Digital Culture as a social practice that can significantly collaborate to improve the quality of education.

It seems that, based on the analysis and reflection on Digital Culture in Teacher Education, it is possible to discuss how to further develop teacher education processes engaged in the use of digital technologies, as well as the proposition of educational policies to improve its quality in relation to the investigated theme.

To this end, this investigation was carried out with the participation of 127 undergraduate students in Pedagogy from a private University in Curitiba, who take the course in person, hybrid and distance learning models. Data analysis was performed from the perspective of Bardin (2011) with the Content Analysis (CA) technique, together with the help of the ATLAS.ti software in organizing the data. The next section is based on Digital Technologies in Teacher Education.

Digital Technologies in Teacher Education

Digital Information and Communication Technologies (DICT) have been constantly used in today's society. Whether from a social or educational point of view, they are present in almost all spaces. When used in teacher training, DICT contribute to changes in the trainer's pedagogical practice, especially in the training process, with repercussions on the teaching and learning process, in the face-to-face and virtual classroom, and in the organization of time and space for teaching and learning.

The increasing progress of DICT in society leads students to be (inter) connected with digital technologies, which is why the teacher education processes invest in moments and courses that allow the teacher to become increasingly aware of the importance and use of digital technologies as resources to promote the teaching and learning process.

However, Bates (2017) emphasizes that the simple use of digital technologies in education does not imply an educational innovation or an improvement in the quality of education, if they are not used through methodological proposals that meet students' learning needs, or have access to the technologies and structure suitable for use. Therefore, the use of digital technologies in educational institutions does not constitute improvement, advancement or innovation if the teaching practice remains conservative. In relation to this perspective, Belloni (2012, p. 23) emphasizes that:

> Why is it so difficult to integrate new technologies into teacher education and educational processes in general (when everyday life and communication processes have long integrated them)? What can schools do in this context? How to build change scenarios?

These questions raised by Belloni deserve a reflection, as it is known that a good part of society incorporates digital technologies in people's daily lives, but in relation to the use by teachers, many are still understanding, learning and identifying their contributions to education.

A very important factor that needs to be highlighted in the training of teachers is that the teacher is unable to know and use all the technologies that are available in society. Many technologies become obsolete in a short time, so the teacher needs to choose the ones that are available in their teaching institution,

the ones that students have and those that are of interest to them to use them in the learning process. In this perspective, Silva, Barreto and Silva (2017, p. 455) emphasize that:

> integrating curriculum and technology is not just about digitizing content. In other words, it is not a matter of replacing board and chalk with digital whiteboards or notebooks with portable computers. This is because the mere transposition does not bring anything new to school practices - it is just a traditional practice "dressed up" as an innovation. [...] Furthermore: it is necessary to encourage the re-articulation of social practices when making use of technology.

From the understanding of Modelski, Giraffa and Casartelli (2019), Atanazio e Leite (2018), Valente, Freire and Arantes (2018), Motta (2017), Imbernón (2016), Brito and Purificação (2015), Kenski (2013)) and Almeida and Valente (2011), teacher education, both initial and continuing, needs to go beyond the instrumental action of teaching how to use technologies. It is necessary for teachers to understand its use in a critical and integrated way, in their daily pedagogical practice, in an inseparable way from the curriculum and the pedagogical proposal. A training where teachers are able to teach the future teacher to produce knowledge through digital technologies.

These authors also highlight the importance of appropriating Digital Technologies and consistent practices so that teachers know how to make good use of them in the teaching and learning process, as well as meeting the learning needs of students in this century, who use digital technologies to study, inform and build knowledge.

Almeida and Valente (2011) corroborate to this issue in the face of teacher education, where they emphasize that teacher education "[...] involves much more than providing them with technical knowledge about DICT". It is necessary "[...] to create conditions so that the teacher knows how to recontextualize the learning and the experience lived during their formation to their reality in the classroom, matching the needs of their students" (ALMEIDA; VALENTE, 2011, p. 50).

The technological training of the teacher must allow them to acquire a digital pedagogical practice, which leads them to rethink their action, as well as thinking the student as the center of the teaching process, allowing the teacher and student to be connected, creative subjects, active and reactive to the teaching process mediated by technologies. According to Tardif and Lessard (2009, p. 268):

> Information and communication technologies can transform the role of the teacher, shifting its center from the transmission of knowledge to assimilation, to its incorporation by students, who are increasingly competent to perform complex learning tasks autonomously.

It is possible to identify in research, such as Costa, Duqueviz and Pedroza (2015) and Menegais, Fagundes and Sauer (2014), that initial teacher education still presents many difficulties in training teachers who know how to use digital technologies in the teaching and learning process, critically and creatively, so that they can use these teaching resources to educate for digital citizenship.

Another important factor regarding teacher education for the use of digital technologies is the lack of adequate technological resources, such as good quality wireless internet, which significantly compromise the teaching process when technology is the means by which pedagogical mediation happens.

Moran (2012) comments that the use of digital technologies by teachers is not an easy process, but a highly complex one. It is a daily learning process, involving educational institutions, teachers and students, because, together, they can identify difficulties to propose changes and improvements for classroom practice. Moran (2012, p. 90) warns "[...] it is not enough to have access to technology to have a pedagogical domain. There is a long time between knowing, using and modifying" the pedagogical practice.

In undergraduate courses, future teachers take a subject that generally deals with the use of educational technologies in the teaching and learning process. However, it is important to highlight that this theoretical-practical knowledge needs to be continuous and procedural, as a cross-cutting theme that must be present and integrated with all subjects / modules / cycles, and the teacher, after graduating, lacks constant continuous training on digital technologies.

Currently, digital technologies bring new challenges and several possibilities for education and training. Therefore, the teacher trainer needs to assume a mediating role in which technologies are resources that enable access to knowledge, participation, collaboration, new forms of learning in different virtual environments, as well as the autonomy of the student. For this reason, teacher education processes need to be flexible to the point of training a teacher to work in classroom, in-person and in distance education. Covid-19 pandemic revealed how much teachers need to be competent to use and act through technologies.

The processes of teacher education must focus on the digital literacy of the teacher, so that they can act in their context from the existing technological resources and, thus, promote knowledge among students who immerse themselves in digital culture. Kenski (2013) and Moran (2012) comment that

many teachers are resistant to the use of digital technologies in the teaching and learning process. Such resistance is related to three factors, according to Table 01, which are the following:

TABLE 01 – FACTORS THAT LEAD TEACHERS TO PRESENT RESISTANCE TO USING DIGITAL TECHNOLOGIES

1ST - FACTOR	2ND - FACTOR	3RD - FACTOR
Total rejection of digital technologies, many of them are not part of the daily life of teachers, they also do not know how to use them in teaching	Lack of knowledge and lack of familiarization from the teacher to use digital technologies	Lack of technological resources in the teaching institution where the teacher works, and in personal life

SOURCE: Adapted from the perspective of Kenski (2013) and Moran (2012).

These factors can be overcome when the teacher education process makes use of digital technologies as resources present throughout the course – technologies must be one of the bases of the training process. It is necessary to contemplate technologies at all stages of teacher education, remembering that their use must be constantly improved.

It is in the initial training that the teacher needs to develop technical-pedagogical skills so that they can teach through digital technologies. Any teacher training process needs to be in line with the reality of the school, so that teachers know how to intervene and overcome the present challenges of school reality, especially those related to digital technologies.

In addition, it is mentioned the need for educational policies for teacher education, aimed at the relevance of technologies for the teaching and learning process, as well as their feasibility and use of digital technologies in the school context, without forgetting the appreciation of their work. Policies play a very important role in teacher education, as they can promote changes and improvements in the quality of education.

The teacher in training should perceive the integration of DICT as a factor in professional development. The United Nations Educational, Scientific and Cultural Organization (UNESCO) reiterates that teaching professionalization mediated by technologies can improve the learning process, and emphasizes that the use of digital technologies can "contribute to a higher quality that can continue the country's economic and social development" (UNESCO, 2009, p. 05). The use of different digital media enhances the learning process, streamlines and favors teaching, communication and interaction between students.

Teacher training, which enables Digital Culture to be ubiquitously present in training processes, can help teachers to critically view the relationship between educational institutions, society and Digital Culture, as well as the relationship between the possibilities of experiencing Digital Culture at school and in the training processes. It should start from the students' learning needs, where digital technologies are seen as resources that can help to overcome such challenges.

Methods

The qualitative approach and the exploratory type of interpretative nature of this research, in relation between Digital Culture and teacher training, meets the requests of Bogdan and Biklen (1994) and Gil (2011), regarding to the characteristics of qualitative exploratory research, where: there is a detailed description of the analyzed phenomenon; allows the researcher to explore a theme for better understanding; prioritizes the point of view of the investigated. It is an investigation type that allows the use of different types of data collection instrument, such as questionnaires and interviews, and the data is analyzed in an inductive way, in addition to its flexible planning.

The investigation was carried out with 127 undergraduate students in Pedagogy from a private University in Curitiba, who take the course in-person, hybrid and distance learning. The students are in different years in the degree, ages ranging between 17 and 45 years old. The data collection instrument used in the investigation was an online questionnaire, which was validated by the researcher and sent by e-mail. The data collection instrument used had six closed and four open (descriptive) questions, which were formulated to answer the research objective. The online questionnaire was sent to 263 undergraduate students in Pedagogy and only 127 answered it. The time for data collection took 6 months.

All ethical issues were respected and the anonymity of the research participants occurred during all stages of the investigation. The Free and Informed Consent Form was attached to the email along with the online questionnaire. The investigation carried out was approved by the Research Ethics Committee under the number 1,801,624.

In the online questionnaire sent, descriptive question number 08 presented the following question: *How do you identify Digital Culture in your initial training?* This was the object of analysis in the investigation of this article. The systematization of the data occurred from the perspective of Bardin (2011) in the

Content Analysis (CA) technique for the operationalization of the data analysis, specifically the categorical analysis, along with the software ATLAS.ti, which helped in the systematization and interpretation of the data.

Content analysis based on Bardin's proposal (2011), with an emphasis on categorical analysis, presents itself with a set of techniques that allows data analysis through a systematic methodology, which allows the description of the content that can be in the form of texts, audios, images, among others. Bardin (2011, p. 37), comments that content analysis "is a set of communication analysis techniques. It is not an instrument, but a range of equipment; or, more strictly, it will be a single instrument, but marked by a great disparity of forms and adaptable to a very wide field of application". From the perspective of Bardin (2011), the content analysis technique consists of three phases, namely: pre-analysis, material exploration and treatment of results.

Pre-analysis is the phase in which the researcher organizes and identifies the material to be analyzed, it is the moment when the data are operationalized for the other phases. In the pre-analysis, the researcher also performs fluctuating reading, which basically "consists of establishing contact with the documents to be analyzed and knowing the text allowing oneself to be invaded by impressions and guidelines" (BARDIN, 2011, p. 126).

In the material exploration phase, Bardin (2011, p. 131) mentions that it is "[...] the analysis phase itself, it is nothing more than the systematic application of the decisions taken. Whether there are procedures applied manually or computer operations [...]". In this case, the coding and categorization of the data that were selected for analysis takes place.

Coding is the moment when the researcher creates codes to be able to group and interpret the data so that he can later categorize them. The codes correspond to a system of symbols that allows the researcher to interpret a representation.

In the categorization, the researcher groups the codes that have the same semantic meaning in order to establish a category of meaning. Bardin (2011, p. 147) mentions that the categorization consists of "[...] an operation to classify the constituent elements of a set by differentiation and, subsequently, by groupings according to gender (analogy), with the criteria previously defined. The categories are rubrics or classes, which bring together a group of elements".

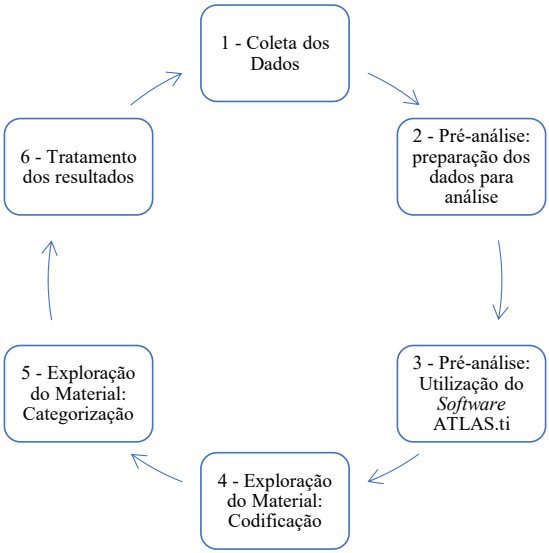
In the last phase, treatment of the results, the data analyzed is ratified, where the researcher "[...] having significant and faithful results at his disposal, can then propose inferences and advance interpretations regarding the objectives foreseen or that relate to other unexpected discoveries" (BARDIN, 2011, p. 131).

Content analysis was performed on the responses to the online questionnaire with the support of the ATLAS.ti software. ATLAS.ti is a qualitative data analysis software that helps the researcher in data organization, interpretation and

management, in addition to allowing the recognition of complex phenomena in research, such as the interrelation of data. Lage (2011, p. 208) emphasizes that data analysis software is "[...] computational tools tend to be especially useful when there is a qualitative research with significant data volume or when it is necessary to cross information from the attributes of the subjects". The Content Analysis, with the aid of the ATLAS.ti software, will be described below from the content analysis phases: pre-analysis, material exploration and treatment of the results.

To illustrate the stages of Content analysis carried out in the online questionnaire, with the aid of the ATLAS.ti software, Figure 01 is presented with the phases of the analysis process carried out in this investigation.

FIGURE 01 – CONTENT ANALYSIS PHASES WITH THE ATLAS.ti SOFTWARE ASSISTANCE



SOURCE: The author.

Regarding the analysis carried out in the online questionnaire, the application of the data analysis phases supported by Content Analysis with the aid of the ATLAS.ti software is described below, as shown in Figure 01.

Pre-Analysis: The researcher received the online questionnaire and identified whether all answers were included in the collection instrument. The responses to the questionnaire received an identification to facilitate

the organization of the data and, mainly, to preserve the anonymity of the participants. All answers to question 08 of the online questionnaire were identified to maintain the anonymity of the participants and the organization of the data. The responses received an acronym, LPXRPX, for example, LP13RP8, which means: LP13 – Licentiate in Pedagogy number 13 – corresponds to the identification of the participant and RP8 – represents the answer to question 8 of the questionnaire. The mentioned identification occurred in all the answers to the questionnaire so that the researcher could identify the participants and their answers.

Subsequently, the researcher carried out a fluctuating reading on all the answers of the students of the Pedagogy Degree, which were saved in PDF format and attached to ATLAS.ti. All answers to question 08 of the questionnaire were selected in the software so that the researcher could move on to the next phase, exploring the material with coding and categorization.

Exploration of the Material: In the coding phase, codes were created from the answers of the students of the Pedagogy Degree. In creating the codes, the researcher performed an attentive and critical reading of the responses that were selected, creating codes that represent what the student identifies as Digital Culture in his initial training. According to the reading of the answers, the researcher had the option of using codes that have already been created. For the answers to question 08 of the online questionnaire, the researcher created 15 codes. Some of these codes can be exemplified, such as: computer lab, practical classes with DICT, use of digital technologies in teaching, University with digital technologies, use of cell phones to learn.

In the categorization, the researcher joined the codes to form sets of codes that have an incidence and semantic similarity in face of what was answered by the student to later consolidate a meaning. All responses were coded and categorized, which allowed the researcher to view in the ATLAS.ti software the codes that had the highest incidence in the face of the participants' responses.

Treatment of Results: Knowing the categorized codes that had greater incidence through Content Analysis with the aid of the software ATLAS.ti, the researcher performed four actions: 1) critical reading of the responses of the Licentiate in Pedagogy; 2) reflection on the answers presented; 3) identification and creation of categories to consolidate meaning; 4) creation of the analysis categories. Next, the following section presents the analysis of the data and the results.

Data analysis

The phases described above, in the methods section, in relation to the Content Analysis carried out in the 127 responses to the online questionnaire, allowed the identification of categories of analysis that served as indicators on how the Licentiate in Pedagogy identify Digital Culture in the initial training.

Based on the methodological strategy adopted, the researcher identified separately in the ATLAS.ti software the codes that have the highest incidence among the participants' responses. Question 08 in the online questionnaire asked the following question: *How do you identify Digital Culture in your initial training?* Based on this questioning, it was possible to identify, from the CA, that the codes that had the highest incidence and semantic similarity between the responses of Licentiate in Pedagogy were the following: (1) due to the presence of Digital Technologies at the University, with 38 incidences; (2) use of Digital Technologies in teaching, 33; (3) practical classes with DICT, 22; (4) use of cell phones to learn, 20; and (5) Computer lab equipped with Digital Technologies, totaling 127 responses from participants.

From the analysis carried out, the codes that presented the highest incidence and semantic similarity were "Presence of Digital Technologies at the University" and "Use of Digital Technologies in teaching". Next, the textual elements identified in the participants' responses are presented, which will be used as examples for the creation of the categories that emerged from the data analysis performed in the answers to question 08 of the online questionnaire.

Licentiates in Pedagogy identify Digital Culture in their initial training given the presence of Digital Technologies at the University and in Teaching

Below, Table 02, presents two discursive fragments, which were extracted from the participants' responses. Such fragments were selected by the researcher and are associated with the code "Presence of Digital Technologies at the University", which represents how the Licentiate in Pedagogy identifies Digital Culture in the initial training for the following categories that emerged: digital technologies in living spaces and access to the wireless network. This same table also shows the amount of incidence that the code had for each category together with the identification of the participant's response.

TABLE 02 – LICENSORS IN PEDAGOGY IDENTIFY DIGITAL CULTURE IN THE INITIAL FORMATION FROM THE PRESENCE OF DIGITAL TECHNOLOGIES AT THE UNIVERSITY

Code: Presence of Digital Technologies at the University
Category 1: Digital Technologies in living spaces
Amount of incidence that the code had: 21
"I identify the digital culture in my education when I see that my university makes use of these digital technologies, such as totems to pay for parking, to obtain information about the actions that take place at the university" LP54RP8.
"In my education in pedagogy, I identify digital culture when I realize that the university uses this culture in the academic space itself, in the library, in the cafeterias, in the parking lot, among other environments" LP79RP8.
Category 2: access to wireless network
Amount of incidence that the code had: 17
"The digital culture is present in my training as a future teacher, because in my university this culture is possible because we have wireless network that allows access to our cell phones" LP46RP8.
"I think that I identify the digital culture in my education when I realize that the university provides this as free access to a wireless network that allows students to access technologies, for example, in my laptop" LP09RP8.

SOURCE: The Author.

In Table 02, it is possible to identify that through the code "presence of Digital technologies at the University" two categories emerged, the first called "Digital Technologies in the living spaces", which presented 21 incidences in relation to how the Licentiate in Pedagogy identify Digital Culture in initial training. In this sense, it is understood that the research participants recognize that Digital Culture is present in the training due to the fact that the University provides technologies in the living spaces that students attend.

It is important for the University to provide the presence of Digital Technologies in its spaces, as this reveals how the educational institution is in congruence with the influences of Digital Culture in the academic environment. For Menegais, Fagundes and Sauer (2014, p. 4):

> Teachers responsible for the training of future professionals [...] must have sufficient clarity, so that, in addition to the appropriation of digital technologies as didactic resources, with which they will work, they need

> to know how to integrate this methodology into the basic education curriculum, in order to promote significant changes in pedagogical practice and, consequently, in the students' knowledge construction processes.

However, the fact that Digital Culture is at the University, present in its living spaces, does not make the teacher competent to the point of using digital technologies in the teaching and learning process. It is necessary for Digital Culture to be present at the University, in the pedagogical practice of teachers, in classrooms, in the curriculum, in the pedagogical proposal of the course, at all times of initial training.

It is essential that Digital Culture is present in teacher education in an inseparable way, not only in a subject the student takes during their studies in Pedagogy, but in a systemic way, in which the future teacher perceives the importance of Digital Technologies in the social and in the teaching and learning process, where they can use these resources critically and creatively to help students produce knowledge. Thus, it contributes to the formation of digitally committed and responsible citizens in society.

The second category that emerged from the code "presence of Digital technologies at the University" was the category "Access to wireless network" with 17 incidences. From the analysis carried out, it is possible to verify that the Licentiates in Pedagogy identify the Digital Culture in the formation when the University provides access to wireless network. Access to the wireless network can enable the use of Digital Technologies, such as cell phones and computers, for example. Wireless Internet access allows people to explore a multitude of information on the network, as well as learn and understand the relationships that exist in cyberculture. Access to this resource allows the exchange of information and interactions between students and teachers, and its quality promotes better conditions for the teaching and learning process. Lévy (1999, p. 17) comments that:

> The term [cyberspace] specifies not only the material infrastructure of digital communication, but also the oceanic universe of information that it houses, as well as the human beings that navigate and feed this universe. As for the 'cyberculture' neologism, it specifies here the set of techniques (material and intellectual), practices, attitudes, ways of thinking. and values that develop along with the growth of cyberspace.

However, the digital culture in teacher education is beyond access to wireless network. This resource is important to use digital technologies, however, the training process in teaching does not end with the use of this technological resource, and it is beyond technical and pedagogical training. Digital culture is ubiquitous; therefore, it requires teachers, mobility, sharing and collaboration to learn anywhere, in different virtual learning spaces using different digital technologies.

Regarding the code, "Use of Digital Technologies in Teaching", Table 03 presents two discursive fragments for each category, they were extracted from the responses of the Licentiate in Pedagogy and the following categories are related: in the pedagogical practice of the Trainer and in the subject.

TABLE 03 – LICENSORS IN PEDAGOGY IDENTIFY DIGITAL CULTURE IN THE INITIAL FORMATION FROM THE USE OF DIGITAL TECHNOLOGIES IN TEACHING

Code: Use of Digital Technologies in Teaching
Category 1: In the Pedagogical practice of the Trainer
Amount of incidence that the code had: 18
"I don't know if I'm correct, but I believe that digital culture is present in my training through **my teachers**, when they use technologies to teach, in their **own pedagogical practice**" LP98RP8.
"I realize that I am immersed in digital culture **by my teachers**, when they use technologies **every day** in the classroom" LP103RP8.
Category 2: In the subject
Amount of incidence that the code had: 15
"In my training I learned about digital culture by **the teachers** from the program, specifically by the teacher who teaches **the subject** of Digital Technologies in Education" LP55RP8.
"In my training I realize that **some teachers** played an important role in my training on this theme, especially those who teach **subjects** that involve technologies" LP111RP8.

SOURCE: The author.

In Table 03, it is possible to verify that the code "Use of Digital Technologies in Teaching" allowed two categories to emerge, the first named "In the Pedagogical Practice of the Trainer", and presented 18 incidences in relation to how the Licentiates in Pedagogy identify Digital Culture in initial training. Participants identify Digital Culture through the pedagogical practice of the teacher who uses digital technologies. Students associate the use of technologies as digital culture. Teachers who make use of digital technologies in teaching

practice contribute significantly to students' learning. Digital technologies, when used by teachers, enable the future teacher to realize that the use of different technologies enhances the learning process, streamlines and favors teaching, communication and interaction between students.

However, the fact that the trainer uses technologies in pedagogical practice does not imply that Digital Culture is present in the training of teachers. As already mentioned, Digital Culture is a complex process that involves society, people and technologies, so, for a culture to be present in the training of teachers, it is necessary that the educational institution, teachers, the curriculum, technologies and educational practices are aligned, when all these elements become present in a group, promoting knowledge and practices.

The second category "In the discipline" presented 15 incidences. It was possible to verify that the Licentiates in Pedagogy identify the Digital Culture in the specificity of a subject that covers the theme. The fragmented educational model often allows students to only be able to visualize Digital Culture when knowledge is specific to a discipline that deals with digital technologies.

It is important that the teacher training process enables the understanding of Digital Culture in addition to a specific subject in the curriculum that addresses the subject. It is necessary, as mentioned in relation to the first category "In the Pedagogical Practice of the Trainer", a systemic and comprehensive view of the relationship of digital technologies in the social context and their manifestations, being a complex process. In teacher training, disciplinary knowledge has its value, but intercommunication between disciplines is necessary, effectively dealing with the common theme (digital technologies), across the curriculum.

Conclusion

This article aimed to analyze and reflect on Digital Culture in Teacher Education from the perspective of undergraduate students in Pedagogy. Based on the technique of Content Analysis from the perspective of Bardin (2011) with the aid of the software ATLAS.ti, it was possible to verify two codes, "Presence of Digital Technologies at the University" and "Use of Digital Technologies in Teaching", which had greater incidence and semantic similarity in face of the participants' responses.

From these two codes, four categories emerged in relation to the analysis carried out. The researcher verified that the Licentiates in Pedagogy identify the Digital Culture in the initial formation when the university allows the presence of

digital technologies in the spaces of coexistence and access to wireless network, as well as recognizing when the teacher makes use of digital technologies in pedagogical practice.

From the responses of the Licentiate in Pedagogy it was possible to identify that the students still did not understand that the Digital Culture is beyond the use of technologies in the initial formation and in the educational process. The students' understanding of Digital Culture was limited to the context of their experience at the university, as many only have access and understanding about this culture at the university, even if the understanding is not systemic.

In view of the research findings, it is very important that educational institutions allow access to different learning environments mediated by digital technologies, universal access is a relevant factor for Digital Culture, and the inequality of internet access can make it difficult to have quality in training.

Another factor that could be considered, given the responses of academics, is the fact that many universities have a fragmented disciplinary teaching model. Such a proposal can lead the student not to realize the complexity that involves Digital Culture.

The initial training of teachers should allow the understanding of Digital Culture not to be restricted to its use, to isolated practices with technologies in a context. It is important that the future teacher realize the wide dimension that Digital Culture presents in the social context and that in education, specifically in teacher education; it must happen in a transversal and integrated way, covering the training process as a whole. In this way, the teacher is able to view digital technologies as resources in favor of learning, in the possibility of a more dynamic, creative and comprehensive teaching to make the student a digital citizen.

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