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TEACHER TRAINING AND TEACHING KNOWLEDGE RELATED TO THE USE OF DIGITAL TECHNOLOGIES IN A NORMAL COURSE

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ABSTRACT

Technological advances have had a transformed impact on different areas of knowledge, so this article aims to analyze the knowledge of students of the Normal course on the use of digital technologies in education, based on an intervention project carried out within the scope of the specialization course in Digital Technologies Applied to Education, by the University of the West of Santa Catarina (Unoesc), involving students from a Normal course in the city of Curitibanos-SC, the invitation came from the proposal of an intervention project, where a workshop on methodologies focused on the aspects of educational technologies in teacher training was worked, the workshop took place in two face-to-face meetings with a total duration of eight hours. whose methodological procedure, based on qualitative research, was based on the focus group. The results show that technological demands are still a challenge, they consider that being a teacher is the central figure in the student's education, in addition, the search for training starts to be configured as a means of "improving" knowledge. In addition, students agree that they need to know more about the use of technologies applied to education, as well as their role in training.

Keywords: Teacher Training. Digital Technologies. Teaching Knowledge.

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Revista ARACÊ
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INTRODUCTION

Technological advances have had a transformative impact on different areas of knowledge, in addition to an inference in teaching practice and especially in their teaching knowledge, in this sense, the ability to access information, communicate, collaborate and innovate has been significantly expanded, redefining the way we learn and teach and especially the way we influence people.

The broad concept of technology includes the diversity of ways in which we solve the problems we set out to solve. It is possible to think that institutions, machines, and simpler things make up extended concepts of intelligence. Not as subjects in themselves, but as facilitators of exchanges and communications (NEVADA, 2006).

Teaching knowledge, on the other hand, is constructed at different times, and in different spaces, which shows the complexity of the process of appropriation and construction of knowledge. This relationship of knowledge begins to be resignified and affected from the insertion of a new actor in this environment, the use of technologies.

According to Moran, "If cyberspace is a media incubator, mixing different types of content." (MORAN, 1999, p. 13). The author considers cyberspace an environment rich in media and diverse contents, as he announces, cyberspace is a propitious place to teach and learn, and here he brings the reference that teachers need to get involved from the beginning of their training in this environment in order to make this new environment familiar, and this would allow them to acquire skills to use new pedagogical strategies and explore the approach of knowledge construction offered by the cyberspace. In addition, this "immersion" would allow teachers the opportunity to understand the meanings and possibilities of insertion in their educational practice. This engagement also creates spaces for methodological discussions and learning opportunities, contributing to a deeper analysis of teaching practices.

This convergence includes different types of actors in order to seek their space in this system of relations, it is important to highlight that the transformations of organizational regimes and the constant demand to establish sources of income will mainly affect the organizations of schools and their actors and future teachers, as highlighted by Castells (2002. p. 57) "The new information technologies are integrating the world into global networks of instrumentality".

Revista ARACÊ
ISSN: 2358-2472

Therefore, the presence of "New Technologies" has assumed a prominent role, especially in recent years, with special attention to issues of mobility and universal access to education.

In addition, the way we think about teacher training and their knowledge and the way in which the use of digital technologies impacts or does not impact their training, reaffirms our basic premise that in a new context of insertion, other and new teaching knowledge is forged to deal with the technological demand for training, especially in the educational context in which they are inserted.

In view of the above, the objective of this article is to analyze the knowledge that teaching students have about the use of digital technologies in education, for this, it was based on an intervention project carried out within the scope of the specialization course in Digital Technologies Applied to Education, by the University of the West of Santa Catarina (Unoesc), involving students of a Normal course in the city of Curitibanos-SC.

METHODOLOGY

The research methodology with a qualitative focus group approach was used. According to Cervo (2007, p. 51), he mentions that "[...] The interview is not a simple conversation. It is a conversation oriented towards a defined objective: to collect data for research through the interrogation of the informant". In this way, the interview guarantees an interpretation based on the answers given by the interviewees. And, as for the qualitative approach, according to Richardson (1999, p. 70), "it is not intended to number or measure homogeneous units or categories, it is an adequate way to know the nature of a social phenomenon".

The participants of this research were the teaching students of a school in the city of Curitibanos-SC, The invitation came from the proposal of an intervention project, where a workshop of methodologies focused on the aspects of educational technologies in teacher training was worked, the workshop took place in two face-to-face meetings with a total duration of eight hours.

After applying the activities, the participants were instructed about the research objectives and adherence to the research was voluntary, on the day of the interview, only two participants were present. Data collection was carried out in August 2023, through the application of a script with semi-structured questions that guided the conversation.

Revista ARACÊ
ISSN: 2358-2472

In this relationship, the choice of the method makes it possible to understand the meanings and understanding of the subjects regarding issues related to teaching knowledge and their relationship in the use of technologies, in order to seek an understanding of the aspects that involve the research problem. This study focused on the focus group, which is a research technique in which the researcher integrates the objectives and theories that already exist and those that he intends to insert into the general set of research (GATTI, 2005).

Thus, the basic precepts of interview and protection of the research participants were respected so that they could actually expose their speech, ensuring the preservation of their identities.

The article is structured in four topics, the first details the path of the constitution of being a teacher and the choice of the research method beyond the public, while the second topic systematically presents the authors who give the theoretical support of the work, with emphasis on Moran (1999, 2013), Tardiff (2012), Castells (2002), Levy (2007), whose theme addressed by these authors deals with issues of cyberculture, teacher training and, mainly, aspects of the use of technologies. The next topic discusses the results of the research, highlighting what the students bring in their speeches from the intervention project, and finally the considerations, bringing the meaning of the use of technologies in the student's education and how this impacts their perception of the use.

REFERENCE

CONTEMPORARY SOCIETY, TEACHER TRAINING AND TEACHING KNOWLEDGE

Authors such as Levy (2007) and Castells (2002), bring to the discussion aspects related to contemporary society and how this impacts on relationships, for these authors, contemporary society is characterized by the current period in which we live, covering the social, cultural, political, economic and technological aspects that define our time. It is marked by a series of changes and challenges, such as globalization, technological advancement, cultural diversity, and interconnectivity.

In this context, issues such as the digitization of information, the emergence of social networks, growing urbanization and the concern with environmental sustainability have had a profound impact on the way we relate, work, consume and express ourselves, Levy (2007) considers that "the power and identity of a group depend more on the quality and intensity of its connection with itself than on its resistance to communicating with its

Revista ARACÊ
ISSN: 2358-2472

environment", In addition, the speed of technological change and the influence of the media play a fundamental role in building culture and disseminating information, influencing our opinions and behaviors.

As Moran (2013, p. 11) points out, "the advancement of the digital world brings countless possibilities, at the same time that it requires institutions to be perplexed what to maintain, what to change, what to adopt", that is, the assumption that the use of digital platforms in the daily life of the school is negative as the only way to improve pedagogical practices. A good praxis will be well done if it knows how to do it. It can be done well without computers, without technologies, and it can be done even better with computers and allied to new technologies, active methodologies in perspectives of the student as the protagonist of his learning. (MORAN, 2013).

Society as a whole contributes to shaping the environment in which education takes place by influencing the values, norms, expectations, and opportunities available to individuals. This implies that both formal and informal education play an important role in shaping people.

Moran's (2013) understanding that education is a process of the whole society highlights the importance of the participation of various actors and elements in the formation of individuals. Education is not only the responsibility of educational institutions such as schools and universities, but also involves the family, the community, the government, and other segments of society.

In addition, society as a whole contributes to shaping the environment in which education takes place by influencing the values, norms, expectations, and opportunities available to individuals. This implies that both formal and informal education play an important role in shaping people. From Arruda's perspective;

> Unlike the perspective of current public policies, which privilege the continuing education of teachers to work with digital technologies in the classroom, the perspective defended in this text is of profound changes in the initial training of teachers at higher level, which circumscribe the incorporation of media in all dimensions of the practice of university teachers. (ARRUDA, 2013, p.234).

In a research conducted by Gatti in 2009, which points to the lack of significant changes in the organization of teacher training courses in Brazil, however, even with the discussions that took place over the previous decades, the curricula and didactic

Revista ARACÊ
ISSN: 2358-2472

approaches of teacher training courses still do not adequately reflect the social transformations resulting from Digital Information and Communication Technologies (DICT), (GATTI, 2009).

According to the author, the research revealed that teacher training courses in areas such as Pedagogy, Mathematics, Portuguese Language and Biological Sciences have few changes in the curricula. In many cases, training continues to be generic and lacks content related to technologies and their applications in the school environment. The presence of discourses that do not adequately address these issues was also noted.

In addition, the research highlights the absence of specific curricular components focused on technologies in the school context. This suggests that teacher training institutions were not yet effectively incorporating the use of DICT into their pedagogical practices. This lack of integration of technologies into initial teacher education can affect their ability to effectively use these tools in the classroom, limiting educators' preparation for an increasingly digital and interconnected educational environment. (GATTI, 2009).

When dealing with knowledge in the context of training and professional practice, we seek to explore this theme in order to understand what authors have problematized in this regard, when analyzing the literature, there are several authors and studies that deal with teaching knowledge, however, we will address the understanding proposed by Tardif (2012).

In this understanding, Tardif (2012, p. 21) points out that the "[...] teachers' knowledge does not come from a single source, but from several sources and from different moments in the history of life and professional career". Thus, Tardif (2012) tells us that professional knowledge is plural and temporal. The plurality of knowledge is explained by the fact that it comes from the initial and continuous training of the individual, from the curriculum and from school socialization, from knowledge of the disciplines that will be taught, from professional experience and personal culture, that is, from various sources.

Charlot (2000) points out that knowledge is a form of representation of an activity, of the subject's relations with the world, with himself and with others. Thus, "[...] there is no knowledge that is not inscribed in relations of knowledge" (CHARLOT, 2000, p. 63), which means that the knowledge of teachers is intrinsic in the relationship with the subjects, as it is a social knowledge and of relationships.

Revista ARACÊ
ISSN: 2358-2472

The temporal character of knowledge is justified because it is acquired through a period of variable learning and socialization (incorporation of institutionalized practices and routines of teaching work) that consider life history and career (TARDIF, 2012).

Thus, in this research, the subjects already have knowledge acquired in a certain context, have already incorporated practices of Elementary School and the routines of that educational context, but are inexperienced in relation to the routines and practices institutionalized in the context of Basic Education.

Regarding temporality, Tardif and Raymond (2000) understand that, in many occupations, learning is long, since it takes enough time to learn theoretical and technical knowledge, but it is rarely knowledge that is not enough, it needs to be complemented. The authors point out that there is "[...] situations at work that require knowledge that initial training does not provide, which means that professional experience provides learning and complements theoretical training" (TARDIF; RAYMOND, 2000, p. 210). We agree with this premise of the authors with regard to our investigation.

For Serrão (2005), knowledge is often understood as accepted facts and theories, they are taken for granted, signifying a deep and almost mystical belief in exact answers. This fact ends up creating obstacles to the reflective practice of the teacher, which is of fundamental importance in the process of building their knowledge and, consequently, of the student. Tardif (2012) says that teachers' knowledge is not a set of definitive cognitive contents once and for all, but a process under construction throughout a professional career in which the teacher progressively learns to master his or her work environment.

The teacher's teaching trajectory is sometimes permeated by challenges, especially when it comes to their insertion in a new context. For this reason, when we analyze this insertion in a new context, we do so with the intention of understanding the teaching knowledge of future teachers who worked in basic education, more precisely from two perceptions, from the perspective of teachers who already work in elementary education and another from the perspective of future teachers who attend training at the teaching level.

In this sense, the teacher is built from his or her experiences and, mainly, from the reality in which he or she is inserted. In addition, there is the understanding that the constitution of teaching practice is closely linked to diverse knowledge and to the relationship we establish with our students.

Revista ARACÊ
ISSN: 2358-2472

We understand, therefore, that the knowledge of teaching teachers is a process that is under constant construction. According to Nóvoa (1992), it means that identity is not a given, it is not a property, it is not a product.

The word "knowledge" can mean someone's knowledge, experiences, aspirations, information, ideas and practices on a given subject (COSTA, 2012). In the understanding of Nóvoa (1992, p. 11), "[...] knowledge is always the knowledge of someone who works on something in order to achieve any goal". In view of this, we question: What makes a teacher at the teaching level identify with the new challenge of working in basic education.

Identity is a place of struggles and conflicts, it is a space for the construction of ways of being and being in the profession - which is strongly evident in all areas, but the attention here is focused on the teacher who is in training at the teaching level who will work in basic education.

According to Gauthier (2013), it is much more pertinent to conceive teaching as the mobilization of various knowledges that form a kind of reservoir from which the teacher is supplied to respond to the specific demands of his or her concrete teaching situation. Based on this idea, we were instigated to understand the constitution of knowledge in a new context and to understand how the new demands of this new context contributed to the constitution of a new repertoire, since the current context of the school requires much more complex specificities than other levels of education.

RESULTS

In order to guide us in this work, the data were generated through a focus group. We organized the questions into guiding axes so that we could clearly portray the position of the subjects and their respective perceptions, allowing us to reveal meanings around the same theme. This is what Barbour (2009, p. 77) calls "recognizing the existence of multiple voices". Remembering that the participants of the research were students in the last year of teaching at a school in the city of Curitibanos-SC. And only two students participated in the focus group. The activities carried out focused on the use of educational technologies in the teaching constitution, and how these tools connect or are part of the training path.

In this sense, we affirm that this research intended to give voice and time to the participating subjects. The adopted posture arises from the researcher's understanding of the meanings that emerged from the statements. Thus, it was in the methodological path that the research was constituted, thus creating reflections about the method. In choosing

Revista ARACÊ
ISSN: 2358-2472

this stance, we rely on the arguments defended by Moraes and Galiazzi (2011) who discuss the importance of the exercise of valuing voices, explaining that, although the objective of the analysis is the communication of new meanings that emerge from the understanding authored by the researcher, the meanings present in the texts produced by the participants need to be respected.

The comprehension of different sources that make up knowledge is produced in multiple movements, which means that it is a phenomenological attitude. This is what Moraes and Galiazzi (2011, p. 30) point out as "[...] to let the phenomena manifest themselves, without imposing direction on them, is to be attentive to the perspectives of the participants". Thus, the choice of the focus group technique aims to provide opportunities for the different knowledge from the student's experience and knowledge about the use of technologies to be explored under different perceptions brought by the research subjects.

THE ANALYSIS PROCESS

The beginning of the analyses should be marked by the resumption of the research objectives. According to Gatti (2005), they are the guides for the construction of analytical frameworks and for the organization of the materials collected. "The process of analysis is systematic, clear in the chosen paths and not spontaneous" (Gatti, 2005, p. 44).

The sessions were recorded and transcribed in full, and the notes resulting from the sessions helped at the time of transcription. In a second moment, the transcriptions composed a table by subject and by participant.

After the transcriptions, analytical tables were organized with the stages organized by the researchers, namely: conductive unit, unit of significance and meanings. Barbour (2009, p. 179) recalls that "[...] Focus group data is inherently complex, with discussions often taking place at more than one level and serving multiple functions for the various participants involved in constructing a response."

After this first pre-analytical process, we analyzed and discussed the data from the axes that generated the discussions, which now become analytic axes:

General perception of being a teacher, challenges and opportunities, resources and professional development, self-assessment and future.

To better illustrate these axes, based on the identification of the units of significance of the narratives, we organized the students' statements that demonstrate what was most

Revista ARACÊ
ISSN: 2358-2472

significant in the focus group. Thus, the statements and their contexts were always taken into account in our interpretations.

DISCUSSION

GENERAL PERCEPTION OF BEING A TEACHER

The students' narratives mark the different conceptions they have about being a teacher. This discussion is important because we believe that the perception that is made of being a teacher today induces the performance of being and acting as a teacher in his/her practice.

We started the discussion on the axis that concentrates the following questions: "How would you describe the role of a teacher today? What do you think are the biggest changes that have occurred in the role of teachers over the years?"

From this context, we accessed different perceptions translated by the teaching students. We grouped the units of significance of the students' statements about the previous questions, highlighting, in this understanding, what was most significant in their perception. In this way, it was possible to analyze the general perceptions about being a teacher most present in their statements. Being the concession between students A1 and A2 "Every day more important and less valued, As a transmitter of knowledge".

The evidence from the word highlighted by the students demonstrates how central the teacher is in the formative aspect, and that this importance is due to his role as a conductor of the formative process.

CHALLENGES AND OPPORTUNITIES

Previously, we discussed the general perception of being a teacher that students had about the role of a teacher today, and the biggest changes that have occurred in the role of teachers over the years?", although they responded with examples of their current realities, from this perspective, we understand that these axes allow access to the relationships that students establish to compose the structure of their understanding of the role today of being a teacher is more significant.

In this sense, the discourses that are entangled around being a teacher come to have meaning through the way this professional is seen. In this aspect, we present the second analytical axis: "Challenges and Opportunities" This axis arose from the following questions: What are the most significant challenges that teachers currently face in their

Revista ARACÊ
ISSN: 2358-2472

profession? How have technological advancements affected the way teachers teach and students learn? Do you believe that social networks have an influence on the role of the teacher? If so, in what way?

From this perspective, we understand that these axes allow access to the relationships that students establish to compose the structure of their perception of the use of technologies, as well as the knowledge necessary to constitute this practice.

According to A1's understanding of technology, he considers that "I believe that it was only for the better with the advancement of technology to something more difficult, more for the new generation that is already born with the cell phone... in addition, it only made it easier", student A2 points out that

"Technology is an innovation for teachers, but it also has a lot of content that discourages students from being interested in studies, even to pursue a professional career"

Therefore, the integration of technology in education requires the review of teacher training strategies so that we can make the most of the new possibilities offered by this constantly evolving reality.

The temporal character of knowledge is justified because it is acquired through a period of variable learning and socialization (incorporation of institutionalized practices and routines of teaching work) that consider life history and career (Tardif, 2012).

As Santaella (2011) points out, most inventions are made up of technologies that enhance the human capacity for language production. This is because "it is through language that the human being constitutes himself as a subject and acquires cultural significance" (Santaella, 2001, p. 91).

In this sense, we are witnessing a constant increase in the emergence of new forms of communication, which inevitably causes changes in our perception of the world, time, spaces, feelings, and even in the way we live and relate to each other.

RESOURCES AND PROFESSIONAL DEVELOPMENT

In this section, we discuss resources and professional development. Its thematic axis was Resources and professional development. This question intended to address aspects of practices and methodologies, in addition to bringing to the discussion issues of professional development, for this the issues addressed dealt with; How do you stay up-to-

Revista ARACÊ
ISSN: 2358-2472

date with the latest teaching practices and educational methodologies? And what resources do you find most useful for your professional development?

Tardif and Raymond (2000) understand that, in many occupations, learning is long, since it takes enough time to learn theoretical and technical knowledge, but rarely is it knowledge that is not enough, it needs to be complemented. The authors point out that there is "[...] situations at work that require knowledge that initial training does not provide, which means that professional experience provides learning and complements theoretical training" (Tardif; Raymond, 2000, p. 210).

The different perspectives brought by the narratives of the students listed in the focus group allow us to navigate challenging paths regarding the constitution of their training path and the challenges of the teacher constitution, it is important to highlight that each one brings with them a history of cultural constitution and that sometimes this constitution will dictate their training path, as revealed by the students' understanding, that to keep up to date as A1 points out "always keeping an eye on the news" already A2 Researching, studying new methods that reach the student's interest.

It is important to remember what Tardif (2012) tells us, according to the author, teachers' knowledge is not a set of definitive cognitive contents once and for all, but a process under construction throughout a professional career in which the teacher progressively learns to master his or her work environment and different knowledge.

This construction becomes present from the moment that the teacher is constituted as a teacher, that is, through the experimentation of entering the training space. In addition, students consider that the most useful technological resources for their professional development are anchored in "Cell phone, notebook and tablet" as pointed out by student A1, which does not differ from the perception of A2 "Multimedia, the site that gives teachers the opportunity to create games"

As Perrenoud (2002) points out, "it is through experiences that the teaching and learning processes are triggered, since teacher and student evaluate the actions that were significant due to their involvement and level of deepening".

In addition, we assume that our students have solid skills in Digital Technologies (DTs) and navigate easily in virtual environments outside the school context, bringing with them their customs and behaviors, however, it was evidenced, even with abundant access to information, they still depend on teachers to guide and encourage them in their training.

Revista ARACÊ
ISSN: 2358-2472

In fact, Tardif (2012) considers that the experience of teaching is not only a matter of controlling everyday situations; it also refers to the experience of oneself, in front of and with others. To live the experience day after day is also to become a teacher or, perhaps, a new teacher in the case of those who already have an experience.

SELF-ASSESSMENT AND FUTURE

Finally, this thematic axis focused on seeking understanding about the formative path of the teaching student and their expectations regarding the profession, in addition to understanding how technology influences their constitution as a future teacher. This axis had as central issues; How do you assess your own effectiveness as a future teacher? And, what are your expectations for the future of teaching and the role of teachers and how does the use of educational technologies affect this relationship?

Another relevant issue brought up by the students is anchored in the challenge of the new, that of constituting oneself as a teacher, according to the understanding of A1 "Only success because technology was another advance for education" in the perception of A2, it focuses on the search for improvement, "I want to improve myself and go in search of new knowledge, through courses".

At the same time, they recognize that the use of technologies bring efficiency to education, Palma (2001) considers that the construction of knowledge goes through stages, requiring a constant collective and individual analysis, that is, discussion, dialogue about action, abstraction, the reflection, individuality and subjectivity of each professional to arrive at teaching knowledge that will always be willing to re-evaluate and renew, like a cycle that is renewed with each resumption of thought. Thus: "Becoming a teacher is a complex, dynamic and evolutionary process that comprises a varied set of learning and experiences throughout different formative stages" (Pacheco; Flores, 1999, p. 45).

When asked what are the students' expectations for the future of teaching and the role of teachers, and how does the use of educational technologies affect this relationship? According to understanding A1 [...] for me they are the best because the ease to do activities and games are wonderful... That's what I understand... and it will affect everything! in the comment of A2 he considers that "The great challenge in my point of view, is to bring the interest that students have to technology, transforming it into interest in classes... And that will be the big challenge!"

Revista ARACÊ
ISSN: 2358-2472

Charlot (2000) points out that knowledge is a form of representation of an activity, of the subject's relations with the world, with himself and with others. Thus, "[...] there is no knowledge that is not inscribed in knowledge relations" (Charlot, 2000, p. 63), therefore, considering the different knowledge of teaching students as an inconclusive process, when acting in a new environment, allows the "young" teacher to resignify a new knowledge, that is, he/she starts to resignify his/her knowledge, because the formative demands to deal with technologies are evident and at the same time inconclusive.

CONCLUSION

The article had the purpose of analyzing the knowledge that teaching students have about the use of digital technologies in education, in addition, for the construction of the discussion contribution, which began as an intervention project applied with a group of teaching students, lasted 8 hours/class, initially the proposal focused on aspects of training and training path from contemporary demands, using active methodologies as training content.

This approach encouraged students to seek solutions and reflect on what they have learned and what they can use in their practice. Remembering that it was through group discussions and activities that the students experienced these methodologies in the intervention proposal, it was in this context of perceived experience that the future teacher needs a follow-up for the consolidation of his practice.

Technological demands are still a challenge, because for students, technology is summarized in cell phones, tablets [...], however, they consider that being a teacher is the central figure in the student's education, in addition, the search for training and specialization become a means of "improving" knowledge.

Therefore, considering the different knowledge of students as an inconclusive process allows future teachers, when working in a new environment, to resignify their knowledge. According to the research participants, there are several challenges, and also, according to their statements, they became aware of their weaknesses in training and admitted that they need to know more about the use of technologies with regard to those applied to education.

Finally, new experiences are necessary and new relationships are established in this context, thus, this theme is not exhausted in this research, there is a need for other studies that focus on the knowledge that teaching students have about the use of digital

Revista ARACÊ
ISSN: 2358-2472

technologies in education, and that other methodologies are necessary such as the observation of these practices to study the continuation of this new knowledge discussed here. In this research, we discuss how students/teachers at the teaching level constitute new technological knowledge are more evidenced in their practice? and, therefore, when meeting this future professional, this will guide us to a possible understanding of how this future teacher perceives the use of technology in his or her practice are the most evidenced, in addition to seeking more effective intervention strategies, which makes it interesting to observe other practices.

Revista ARACÊ
ISSN: 2358-2472

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