Education and cyberspace: technologies promoting learning in child education

Educação e ciberespaço: a tecnologia promovendo aprendizagem na educação infantil

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SUMMARY

This text details the contributions of children’s cyberspace to children’s cognitive performance. Its objectives are to identify how children see and use technologies in learning and which technologies are more intensely part of early childhood education. It is a text of bibliographic and qualitative knowledge in which it asserts that technological interfaces should be used in early childhood education with a critical view on the part of those involved in teaching-learning. It also argues that it is necessary to develop ways of learning that children develop learning through the use of various resources, such as digital technologies.

Keywords: Early childhood education; Technologies; Cyberculture.

RESUMO

O presente texto discute as contribuições do ciberespaço infantil para o desempenho cognitivo da criança. Apresenta como objetivos identificar como as crianças veem e usam as tecnologias na aprendizagem e quais tecnologias fazem parte com mais intensidade da educação infantil. É um texto de cunho bibliográfico e qualitativo, no qual se assevera que as interfaces tecnológicas devem ser utilizadas na educação infantil com uma visão crítica por parte dos envolvidos no ensino-aprendizagem. Defende-se que é preciso desenvolver formas de apoiar a criança a desenvolver a aprendizagem através da utilização de recursos diversos, a exemplo das tecnologias digitais.

Palavras-chave: Educação infantil; Tecnologias; Cibercultura.

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INTRODUCTION

We are currently experiencing a time of different changes in society. Societies evolve and change over time, influenced by many factors, such as the knowledge produced and the technologies that are their own. In historical moments, the existing relationships between technology, knowledge, and authorship acquire specific characteristics.

Among the factors contributing to changes, including at school, are cyberspace and cyberculture. For a better understanding, Lévy (2010, p. 22-23) states:

Cyberspace, which I will also call “network”, is a new means of communication arising from computers' worldwide interconnection. The term specifies not only the material infrastructure of digital communication but also the ocean of information it houses and the human beings that navigate and feed this universe. As for the set of cyberculture and intellectuals, practices, attitudes, ways of thinking, and values that develop development techniques specify the growth of cyberaço.

It understands that cyberspace is provided by the internet and involves a structure composed of computers and several technological interfaces and many. In order for this information to be diverse among the people who deal with/interpret and who is common to cyberculture, or people with technologies are needed.

We observe that the virtual spaces accessed by technologies are called cyberspaces, which, in turn, give rise to what today may come from cyberculture.

Cyberculture means ways of life and historical behavior and daily assimilation and marked in the experience by computer technologies, mediating communication and information via the internet. This mediation takes place from a central communication not defined by the traditional media (radio, press, television) in the logic of distribution that supposes the concentration of media, standardization of flows, and institution of legitimacy. In cyberculture, a communicational logic supposes a hypertexual network, multiplicity, interactivity, immateriality, synchronous and asynchronous process, multsensoriality, and multi-directionality (SILVA, 2010, p.36).

Thus, the cyberculture present in our daily lives is a consequence of the technological advancements in media culture. Today, access to various media can be found in a single device, which allows the child to interact and even produce new content. This new and articulated way of obtaining, creating, and reinventing information and cultures changes human relationships.

Commitment, involvement, and actions that strengthen this intelligence imply learning processes for the development of cooperative and collaborative actions. This sharing of information, cultures, and communications can be accessed anywhere, distant, or in the same environment, which can be called cyberspace. “Cyberspace allows individuals to remain interconnected regardless of the geographic location in which they are located. It diversifies knowledge and works as a support for the development of collective intelligence” (BEMBEM; COSTA, 2013, p. 142, emphasis added).
From this perspective, the school must become an educational territory of cyberspace, mediating and empowering its students in sharing information that generates knowledge, communicating through the internet, participating in the exchange of these collective bits of intelligence, and recognizing and supporting the development of this intelligence.

Every day we see children exploring mobile technology devices for entertainment with the greatest intensity, given that smartphones and tablets are often provided by their parents so that they can entertain themselves, watch their videos, and images or explore their favorite games.

Therefore, Santos and Vasconcelos (2020, p. 3) state:

By approaching how we are in the context of education, analyzing how children's possibilities through the experiences of discoveries for children, given that this generation is embedded in the technological era and has the capacity to develop their proposals for activities in the classroom. Technology must be available as a cultural asset to children, providing knowledge.

Access to digital technologies at an earlier age can provide children with different learning possibilities, in such a way that the context in which they are immersed, the ease of obtaining this equipment, and how new situations are presented will favor development. intellectual and autonomy.

Thus, from an early age, there are children in our society who already have contact with the most varied technological resources, games, software, and different media. Videos, online games, and apps are part of the daily context and favorite games.

The child acquires knowledge through what he wants to explore, he owns his learning. As much as the adult wants to add knowledge on his way, he can choose, determining what and how to think. “Knowledge is metabolized, assimilated along with all other direct experiences in the world” (PAPERT, 2008, p. 24).

The knowledge necessary for children will be built according to their interests, that is, knowledge will help them to obtain more knowledge, for this, it is necessary to develop ways to support the child in carrying out the construction, as well as offer good resources, in this case, digital technologies.

The school is an environment where children live with their peers and stay for a few hours to learn routines, readings, numbers, rules of respect for others, and being prepared to live in society. But these children will need to learn to deal with information and communication technologies (ICT). That is why it is essential that early childhood education schools prepare these students to interact with the technological world.

In this way, thinking about an education focused on the present day is to include the various technologies in the teaching-learning process. From a very early age, even before participating in the school universe, the child is influenced by the family environment, whether
through observation of the parent's behavior, through cartoons, electronic toys, television, tablets, and non-school spaces.

Children today are born in a world of digital context, a world focused on technologies where they explore new knowledge [...]. Children already have technology in their midst and play. They should use this technology in favor of learning practically and coherently in our school routine (CARVALHO; CORNELIO, 2016, p. 1, emphasis added).

Children, when entering the early childhood education school, bring with their records of the world of the senses they capture in their daily lives. Therefore, it is necessary to diversify their learning skills, with varied options that stimulate the child's senses, bringing teaching and fun. Some children have not yet developed the ability to speak, but they already know how to use the cell phone for children's games, for example.

Therefore, bringing ICT to the educational environment in early childhood education becomes an attitude consistent with the current education that is being produced, as it favors learning by communicating in the same way through which children have been observing and interacting, and still brings playfulness to the school environment.

When we research children's cyberspace, some questions arise: How do children see these technologies? Which technologies are a more intense part of early childhood education?

Current technologies will effectively help students at school, and by timely they will feel encouraged to seek and socialize with these resources to improve their school performance. These technological interfaces, in addition to facilitating access to different knowledge, also serve as the basis for several adaptations to the various systems of knowledge transmission to improve, transfer and transform complicated factors into something more accessible and sedimented, transforming theory into practice. (SOUZA; SOUZA, 2010, p. 2, emphasis added).

We understand that when technology is used properly, it may result in a gain for children throughout the teaching-learning process. When using this resource, they feel encouraged to discover different possibilities for learning, given that technology reassures interpersonal relationships between students and keeps the focus on school activities.

In early childhood education, the use of media helps to attract the attention and interest of children, making it an interesting way to work with content because of its playful power.

According to Moran, Masseto, and Behrens (2013, p. 50):

The child is also educated by the media, especially by television. He learns to inform himself, to know – others, the world, himself – to feel, to fantasize, to relax, see, listen, and “touch” the people on the screen, who show him how to live, be happy, and unhappy, love and hate. The relationship with electronic media is pleasurable – no one obliges – Executing through seduction, emotion, sensory exploration, and narrative – we learn by seeing the stories of others and the stories that others tell us. Even during school moments, the media shows the world in another way – easier, pleasant, compact – without having to make an effort. She talks about everyday life, feelings, and news. The media
continues to educate as a counterpoint to conventional education, it educates while we are entertained.

Therefore, we observe that the media contribute to the education of children, especially television. Children which are in touch with technologies and with each discovery, feel happy, have their cognitive development and become able to build knowledge.

As we mentioned earlier, when we research children's cyberspace, some questions arise. We will make some comments on these issues.

THE INFLUENCE OF MEDIA AND DIGITAL TECHNOLOGY ON CHILDHOOD

Braga (2013) emphasizes that there are two distinct audiences regarding the use of technologies, characterizing them as the generation of “natives” and “digital immigrants”. He explains that the generation of “digital immigrants” is composed of “People who grew up before digital technologies became popular” (BRAGA, 2013, p. 137), while the generation of “digital natives” is represented by “young people who have already grown-up” (BRAGA, 2013, p. 137). Immersed and interacting with this type of technology” (BRAGA, 2013, p. 138). From what can be analyzed, the latter would represent the generation of people who were born in the year 1980 and, according to Marc Prensky (2001) represents the generation of young people born from the availability of fast and accessible information on the large computer network. – the Web. Emphasizing that from the second decade of the 21st century onwards, these digital natives increasingly have skills with contemporary technologies in various contexts such as relationships (social networks), search for information, new forms of communication, and possibilities of learning.

These digital natives probably have greater cognitive development, and therefore naturally accelerate learning, since, in a way, they dominate technology. In this regard, it is worth noting that basic education students also stand out in terms of handling these technological resources. (CÉSAR; COSTA, 2021, p. 29)

With the improvement and scope of media and digital technologies around the world, the educational scenario has not and cannot escape these changes. Given this, it is necessary to understand that Brazilian early childhood education, addressed by the Law of Directives and Bases - LDB (BRASIL, 1996) as the first stage of basic education, must accompany the new conception of society. Given this, one must consider the transformations and innovations that have occurred and experienced by people during the technological and media explosion of the last decades.

Given the above, it appears, therefore, that the insertion of digital media in the classroom, from the beginning of the child's school life, is important since children of this generation already have access to technologies. Even the beginning of learning takes place under
the tutelage of the processes of interaction with everything around, from an early age, usually long before attending school. Therefore, it is not interesting or productive to interrupt this process. Here comes the role of the teacher, prepared to deal with these various technologies pedagogically, because only then will it be possible to favor learning in the context of early childhood education.

Vygotsky (1989 apud BARBOSA et al., 2014) ratifies the idea of the previous paragraph, stating that child learning begins well before school learning because the child has a previous history, that is, he never starts from scratch. Furthermore, the author's speech corroborates the fact that, despite the existence of this previous history, this does not mean that there is direct conformity between the two stages of development. In this way, the child's learning process needs someone else to take effect and consolidate itself through individual development and social history.

It is understood, then, that the media and the advertising conveyed in it can directly influence childhood, including about the very act of playing, because, generally, almost everything children see on TV or on the internet they want to have access to or play. This is where the importance of the intervention of the family comes in, whose responsibility, in addition to caring, protecting, and educating, is also to guide and mediate the actions and conduct of their children, who are inserted in this technological universe and, practically, ruled by the media.

To analyse how much media and digital technology on childhood is, we need to consider two different factors: the first is the one in which children, when they are having fun with traditional toys and games such like (songs, house games, handmade toys) transmitted and taught from generation to generation. The second is the current reality that children use electronic toys (remote control cars, dolls that talk and move by themselves, tablets, among others) to have fun.

It is necessary to make it clear even though that early childhood education, as well as other levels of education must work with technological resources with caution, having a defined pedagogical proposal for their use. This is because, although TV, the internet, and the computer, among others, are important resources, it is necessary to know how to use them properly to generate significant learning, thus avoiding simple use for the sake of use. With this, it is clear that such changes represent a challenge for educators and families, since, amid this enormous media appeal, for parents and children to buy and use only electronic toys, it is necessary to act reflectively, so that the most traditional toys and games are not extinguished or forgotten. In addition, parents and teachers must understand that it is the duty of both to guide and control the use of technological resources, as well as to intersperse them with more traditional toys and games. On the subject, Hartinger and Max (2008, p. 57) highlight, “Despite all the modernity, the games and games of the past are still important for the children's universe. Children
still play fetch, five Marias, hopscotch, rotten eggs, hide, and other games that our grandmothers already enjoyed.”

Cyberspace provides children with cognitive performance, as it presents a communication environment and consequently new demands and challenges in the modes of information transmission and knowledge production. The child learns and develops through contact with their peers using information and communication technologies.

In this sense, motivated by the school and by living with peers, the child understands that the world must be sought and cannot be expected to be offered, both by the school and by family guidance, as was practiced before. According to the same author, associated with the advance of a less conservative pedagogy, in which the child is no longer a simple depository of information, currently, the incentive is for the search for knowledge already in the early school years, in which the primary sources are the children themselves, media (to the detriment of traditional encyclopedias and textbooks). Children, naturally avid and curious about everything that surrounds them, are increasingly encouraged to appropriate the world by the media. (MAGALHÃES, 2007, p. 78-79).

Children show a preference for using the technical resource and, when they see it, they are already euphoric, being curious to know what they will explore. And if they have an affinity with these technological interfaces, their performance will become better. Students are immersed in technologies that provide them with knowledge.

Childhood, as we know it, is changing as a result of numerous factors: contact with various manifestations of culture, the complexity of the transformations present in the contemporary world about the city, families, and the forms of interaction with technologies, which modify ways of life and signal changes in the way of understanding childhood and the place that the child occupies in this scenario in which the systems of meaning and cultural representation multiply. In this multiplicity, which involves the relationship between childhood and culture, much remains to be done regarding the description, criticism, and understanding of the role of ICT in everyday life and children's playful culture (MENEZES; COUTO, 2012, p. 145).

The restructuring of people, especially children, involves a multiplicity of meanings, generating various ways of interaction between people and technologies. The result of this current form of interaction constitutes a new form of culture, that is, cyberculture, and it is in this current context that children continue to play in their daily lives.

For Santaella (2003, p. 30):

Cyberculture, like any other type of culture, is a human creature. There is no separation between a form of culture and a human being. We are those cultures. They shape our sensitivity and our mind, especially digital, computational technologies, which are intelligence technologies [...].

All people are very involved in the digital world. They are responsible for the expansion of cyberculture and make cyberspace communicative with the use of digital communication and information technologies. They are human being capable of performing
various activities in this media universe, if not only receptive beings, active when interacting with the assets of the activities.

Interaction, however, is not enough to explain children's fascination with digital life. Some researchers highlight that children's great interest in the internet and electronic media is not just to interact with the computer, but to interact with other children through technology. [...] the interactive possibilities of the new medium must be in favor of children so that they can participate in digital media and increasingly recognize themselves as authors in this environment. The internet generation is the pioneer of the digital technological imaginary society, as they have the impression of creating their terrain of adventures, of being able to invent something and differentiate themselves from previous generations, without having to justify themselves (MENEZES; COUTO, 2012, p.147).

Faced with this new context, a childhood shrouded in the technologies that exist and others that will emerge. All of this provides children with not only cultural but also intellectual and cognitive performance. Children are discovering new and different elements to their world. The various technological interfaces as forms of communication, creation, play and learning have been constituted in practices that collaborate for learning.

Chaudron (2015), when talking about children's preferences about devices, states that, when they have a choice, they prefer more compact technologies, due to the multifunctionality, mobility and autonomy they provide to users.

Also according to the aforementioned author, children's favorite devices to explore are tablets. They show a preference for exploring it, because these resources, from their eyes, have an adequate screen size, are easier to manipulate due to touch-screen technology and also because of the practicality of being able to take it everywhere.

For Rogers (2012), being in front of screens, exploring applications or being connected to the internet does not mean that skills and learning will be built, but rather that they can be used as a contribution to facilitate and maximize children's learning opportunities, in view of the potential that the resource offers.

In the eyes of the child, technology has a “magical value”, it is an object that awakens a desire to deal with these interfaces, especially in devices that provide greater mobility and autonomy (CHAUDRON, 2015).

It is observed that children are attentive to the stimuli received by technologies, and visual and sound effects. When they have tablets, they watch the screen change, the colors draw attention and they notice the changes that occur, as they are aware of the differences in the sizes of objects and their geometric shapes.

Every day we come across children exploring mobile technology devices for their entertainment, given that sometimes smartphones and tablets are provided by parents themselves so that they can entertain themselves, watch their videos, images or explore their favorite games.
Information and communication technologies are transforming the world around us and the behaviors and relationships of all people. Searching for information and acquiring new knowledge are almost instant tasks, at the click of the keyboard or the swipe of the fingers on a cell phone. Children and teens are part of this digital generation and are increasingly using devices, apps, video games and the internet at an early age and everywhere. Some of the parents are also digital natives and do not notice the changes or problems that arise, as if everything were part of the family routine (AZEVEDO, 2006, p. 1).

Access to digital technologies at an earlier age can provide children with a learning perspective, according to which the context in which they are immersed, the ease of obtaining this equipment and the way in which current situations are seen will favor intellectual development and autonomy.

Currently there are public policies in the sense of providing technologies to all people and in all spaces. Nonetheless, the quality of these technologies and access is questioned, especially with quality aimed at the teaching and learning of children and even teachers. A good example was the period of the pandemic, in which we had remote teaching (VASCONCELOS; CARVALHO, 2021).

Long before communicating, children are already able to make themselves understood and understand others, “since linguistic competence encompasses both children's ability to understand language and their ability to make themselves understood” (BRASIL, 1998, p. 126).

From a very early age, there are children in our society who already have contact with various technological resources, games, software and various media. Videos, online games and applications are part of the daily context and favorite games.

Currently, the use of digital technologies by children, especially in early childhood, still divides opinions. The use has increased a lot in the last two years, but it is observed that it needs objectivity.

The information we have so far is based on Neuroscience. For Almeida (2012), childhood is a rich period in synapses, much richer than any other period of human life, even brain plasticity occurring at all stages of life. “The developing brain is plastic, that is, capable of reorganizing patterns and synaptic connections with a view to adapting the organism's growth to the child's new intellectual and behavioral capacities” (ALMEIDA, 2012, p. 65).

During childhood, cells have a greater ability to adapt than adult cells, which are already mature. For this reason, with age, plasticity decreases, and consequently it takes a greater effort to learn. This does not mean that in adulthood one does not learn, but that a greater effort is needed, as the natural advantages are lost (ALMEIDA, 2012).

Given the current context, the use of different technological resources can be a great ally for the construction of learning in children in early childhood, in view of their potential in relation to cognitive stimuli, which can be used at any time and place.
THE CHILD AND TECHNOLOGIES: VARIOUS FORMS OF INTERACTION

It is essential that schools provide students with the use of technologies in the performance of their school activities, because, from the moment children use technologies in the classroom, they are putting their knowledge into practice with the help of interfaces, and to promote discoveries. and provides an opportunity for interaction in the classroom. Thus, it is necessary that the school environment is cyberspace that supports knowledge and collaborates for the technological development of children.

It is necessary to break some paradigms and recognize the need to bring digital technology into the classroom to promote quality education that meets the demand of the current context we live in. The school needs to assume a didactic posture of commitment offering the student several possibilities for learning. In line with this need, we are faced with the possibilities that the Digital Age offers, meeting cultural diversity and the needs of a society in constant and intense change (HESS; ASSIS; VIANA, 2019, p. 12.

From this perspective, in times of cyberculture, it is essential to propose different ways of learning to students, to provoke, arouse questions, instigate skills and competences. We should, as practices, focus only on the textbook or memorization. It is essential that children have access to technologies so that they contribute to the development of school activities and even daily life.

“A common inclusion, when it comes to the various technologies in the classroom, is swimming against the tide” (RIBEIRO, 2015, p. 15), seeing digital technologies as mere distractions, that is, just as entertainment. However, according to Gadotti (2000), considering that the school must be the center of innovations and its essential role is to guide young people, it is believed that technological education must start from education. This is because “student appropriate technologies and coexist harmoniously with the digital world […]” (ALMEIDA; VALENTE, 2011, p. 27).

They are common scenes in results and in public transport children of the toys with iPads and cell phones parents, involved by the screens and oblivious to what happens around them.

All over the world, children have entered into a passionate and enduring love affair with computers. What they do with them is as varied as their activities. The greatest amount of time is devoted to gaming, with the result that names like Nintendo's have become household words. They use computers to write, draw, to communicate and to obtain information. Some use computers as a means of establishing social connections; others, to isolate themselves. In many cases, their zeal is so strong that it brings the word addiction to the minds of worried parents (PAPERT, 1994, p. 7).

Furthermore, “this is a generation of children with skills to handle technological devices before they can even speak. Therefore, there is an increasing need for schools to develop pedagogical activities with TDIC since Early Childhood Education” (BARBOSA et al., 2014, p. 9).
In this perspective, it has become important that digital technologies are used as a pedagogical practice in early childhood education, contributing to the progressive and integral development of the child, because when the child has the opportunity to be in diverse contexts, according to their interests, motivations, and needs, the learning and development processes are enriched, and, consequently, early childhood education gains a lot when it makes use of technological resources in an integrated manner with other activities (BARBOSA et al., 2014).

By using technological objects, such as the computer, cell phone, tablet, digital use, a website with educational games that work or the website with educational games that work or count, such as through the symbolic game, playing only it makes us [sic] imagination; and promoting children's autonomy (BARBOSA et al., 2014, p.8).

However, for the construction of meanings, digital technologies cannot be seen in isolation, since they did not provide meanings, but must be worked in harmony with the pedagogical practice, so that they can contribute to children awakening their imagination. creator.

Let's start by highlighting the importance of social interaction for children's development and learning. The concept of social interaction is one of the focuses of Vygotsky's work (1989), which emphasizes the dialectic between the individual and society, and the intense effect of social interaction, language, and culture on learning. This process is fundamental for the internalization of knowledge – or the transformation of spontaneous concepts into scientific ones – which occurs when what was previously interpsychic becomes intrapsychic. Vygotsky (1989) gives special value to interaction, when he enunciates almost all its concepts. Frawley, when presenting the theorist's conception of the acquisition of superior thinking by the child, states:

The child is born into a pre-structured world. The influence of the group on the child begins long before birth, both in the implicit, historical, and sociocultural circumstances inherited by individuals and in the more obvious explicit, physical, and social preparations that groups make in anticipation of the individual. All this exerts its force even in simple everyday tasks that require the management and use of individual action (FRAWLEY, 2000, p. 91).

The learning carried out with the help of technologies and in collaborative learning environments (as is likely to happen, for example, in Distance Education and in software in which the user's action determines the progress of the application's structure) reinforce the idea that knowledge is built in a shared way and that this has a strong motivating effect for children.

Students are already trained in this way of reading. They practice all the time, from early childhood to literacy, they are already experts in the art of touching screens in search of infotainment that interests them. They recognize the icons, the clues, and the movements before they have any familiarity with the letters of the alphabet. The school's challenge today is another: that the jumps from branch to branch typical of networks are neutralized by patience exercises, without which there is no lasting learning (SANTAELLA, 2003, p. 6).
Corroborating with the author, we realize that modern technologies are present in children's daily lives. These students demonstrate skills in dealing with computers, tablets, and other types of technological artifacts. All of this is important for effective early childhood student learning.

It is possible to perceive that learning in cyberspace progressively provides all forms of interaction (from synchronous, when members of a group interact at the same time, even if from different places, such as in virtual classrooms; to asynchronous, in which interaction takes place at different times and places – such as forums and discussion lists), always allowing for a full educational encounter.

Martin and Ahijado (1999, p. 25) highlight the importance of communication provided by interactive environments:

> Without discarding any of the materials and means, as they all have important functions to fulfill, highlighting the importance of having technologies that allow synchronous communication and the establishment of an educational dialogue between the different actors in the teaching-learning process.

Another virtue of the emphasis on the concept of interaction was the overthrow of the “myth” of internalization in Psychology, a legacy bequeathed by subjectivism to this science. Studies on the “psychological being” have progressively migrated to approaches of the “social being”. This fact adds to what has been said about the historicist concept of identity.

Belloni (2001) speaks of a “digitized culture”, in which today's children and young people are immersed since the beginning of life. The author highlights, as characteristics of this culture, the fragmentation and horizontal extension of knowledge, in addition to the possibility of moving quickly from one subject to another. She uses the rhizome metaphor to illustrate the capillarization of this acquisition of knowledge.

For Lévy (2010, p. 54), these technological elements are “intelligence technologies”, which: “[...] reorganize, in one way or another, the worldview of its users and modify their mental reflexes. [...] As computerization advances, certain functions are eliminated, new skills appear, cognitive ecology is transformed”.

The computer is present in the life of modern children and actively affects the construction of their identity. It is incorporated, along with the “technological ethos” of the culture, with varied meanings. It is important to emphasize that the child uses the computer to interact, learn and collaborate through knowledge. Child cyberculture is thus created, through the relationships of these children with technologies.

We also share the idea of the construction, and reconstruction of children's culture, as well as childhood itself, insofar as these constructions and reconstructions are based on technologies, that originated in culture, shaped by it, and which, in turn, help to create new situations, social and cultural aspects for that same childhood (CAPPARELLI, 2002, p. 131).
Children are gaining space as information producers in the virtual environment. In this sense, the interactive possibilities of the new medium must be in favor of children so that they can participate in digital media and increasingly recognize themselves as authors in this environment.

ICTs have brought more practicality to society by integrating the use of technological resources in the development of different tasks with speed and efficiency. It is a fact that we are, in large percentage, beings immersed in the digital culture that allows us to access, disseminate, share and modify various information instantly. This was due to the popularization of the internet, which boosted the use of Information and Communication Technologies, generating an association of inestimable importance for today's society (PIMENTA, 2020, p. 23).

We observed that technologies, including the computer, are technological interfaces that provide interactivity between students and teachers of early childhood education. In children's cyberspace, they become allies in the performance of the activities that are proposed. Being interactive is not an easy task, especially in early childhood education, because it requires an effort from the teacher to reach his student. The student needs focus to achieve their learning, and parents, when they can, should accompany their children in accessing classes.

It is notable that cyberculture is changing human imagination and relationships, often in a subjective and interactive way. Society today – and in the future – communicates and relates more and more through communication technologies, building emotional bonds, agreements and professional work.

When we refer to childhood, we know that children are uniquely inserted in the virtual environment, taking advantage of the interactive possibilities of this space, or rather, cyberspace, to build affective bonds, establish a relationship of learning and, even, of consuming and have fun.

Analyzing this interactivity, we have: “On the internet, on the contrary, children control a large part of their world. It is something they do themselves; they are users and are active. They do not just observe, but participate, ask, discuss, argue, play, buy, criticize, investigate [...]” (TAPSCOTT, 1999, p. 24).

Children's cyberspace can be seen as an environment in which, when interactivity is provided, models of attitude and behavior are easily accessed through the use of educational technologies made available by digital media.

First objectively incorporated as a game, fun, and leisure, the computer needs to be re-signified for representation as a learning resource and, later, as a working instrument. It is responsible for important mediations and is incorporated into the identity of the “digitally included” child, using a current expression.

According to Armstrong and Casement (2001, p. 22):
When children learn to use the computer, they are not just learning a technique, they are changing their own relationships with the world around them. The way information is accessed, the way it is presented, and the ways in which it can be manipulated all change children's perceptions of knowing and doing.

Therefore, it is essential that children's cyberspace has several technological interfaces available to children so that they can develop activities relevant to cognitive performance and contribute to quality education.

FINAL CONSIDERATIONS

Digital technologies and media are already part of people's lives today and it is no different with children. This text presented brief discussions about children's cyberspace and related issues related to early childhood education. But we understand that there is a long way to go in this area.

Educational institutions, in their pedagogical work, cannot disregard cyberspaces, as they are part of their student's lives. They are spaces for quick exchanges of information, interactions and knowledge sharing that, if properly mediated, can help in the teaching-learning process.

Cyberculture is already a reality in the lives of our students and it is up to educational institutions to recognize this fact and promote interactive activities that involve children, facilitating interaction and integration with the school community and at the same time contributing to the cognitive development of students.

Nowadays, there are schools that provide educational technologies such as computer labs, computers, data shows, projection screens, internet access, web cams and digital libraries. These technologies exist to provide effective learning to students and a satisfactory outcome to classes.

However, it is necessary that all those involved in early childhood education (teachers, managers and coordinators) have a commitment to the scientific progress of this school segment. The use of technologies will always be a challenge for teachers because innovations and improvements are emerging daily, which require updates from these professionals to deal with technological facilities.

In view of the above, we understand that technological modernizations are essential for the construction of children's significant and curious knowledge, given that they are part of the daily lives of boys and girls of this generation, called digital natives. For this, it is necessary that educational practices are designed and carried out considering the characteristics and needs of children.
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