

TEACHING CHALLENGES IN THE PANDEMIC (POST) CONTEXT. THE COLLEGE FOR THE APPLICATION OF BASIC EDUCATION OF UFPB AS A LEARNING ORGANIZATION



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ABSTRACT

This research analyzed the challenges and opportunities of teaching practice in the post-pandemic context, within the scope of the College of Basic Education Application of the Federal University of Paraíba, northeast Brazil. This was a qualitative study, which reinforces the role of the school as a learning organization, capable of reviewing and changing conducts, processes and functions, learning from its own experience, in constant dialogue with other areas of knowledge. Through semi-structured interviews, it was intended to know the different pedagogical strategies used by the teachers of the Colégio de Aplicação in conducting synchronous and asynchronous classes during the pandemic and in the return to face-to-face classes; to present and reflect on the limits of virtuality as a school model in the early years of basic education. In the analysis of the data and interpretation of the results, categories based on Ibero-American studies and research were used, in which the communication tools were analyzed; content and materials; control and monitoring; management and planning of the teaching-learning process of remote teaching and in the post-pandemic context, which culminated in the direction of innovative strategies

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considering the great challenge of ensuring inclusive, equitable and quality education, in line with the Sustainable Development Goals.

Keywords: Learning Organization, Teaching Challenges, Post-Pandemic, Quality Education.

INTRODUCTION

The pandemic broke out in an untimely way and "submerged" us in a world of isolation and vital issues. The questions that have arisen and the views on what will happen after the virus is brought under control are diverse and contradictory. In the field of education, one of the side effects of the health crisis is the impact on the right to education, which leads us to question how to guarantee it and to reflect on the challenges for teachers in times of pandemic/post-pandemic in the Brazilian scenario (SOUSA, MELLO and CARVALHO, 2022).

On March 17, 2020, through the publication of Ordinance No. 343 of the Ministry of Education of Brazil (BRASIL, 2020), it was determined that face-to-face classes should be replaced by remote classes, made possible by digital means, for the duration of the pandemic situation. Following the guidelines of the National Council of Education, faculty, technical-pedagogical staff and school coordination developed, sent and supervised the execution of various didactic resources, guidance guides and almanacs for students in early childhood education and elementary school, although in a context of improvisation and little training to contemplate the educational needs of students in social vulnerability (SANTOS, 2020; SOUZA, 2020).

This new and unusual scenario has raised numerous questions, leading us to reflect on the role of the school in analyzing and understanding the teaching challenges during and after the pandemic, such as: how will the teaching-learning processes be conducted by the school in the post-pandemic? How should the school, learning organization and territory that provides opportunities for learning and improvement, think about the pedagogical management of remote teaching in the pandemic context? And how will it lead to the innovations that will need to occur in educational practice in the post-pandemic? (FULLAN and HARGREAVES, 2000; LIBÂNEO, OLIVEIRA and THOSCHI, 2012; MONDILANE and LIASSE, 2017).

In addition to these issues, the experience in the territory of the basic school raises concerns ranging from the preparation of educational institutions and teachers to develop virtual programs, such as the creation of programs and evaluation systems in virtual contexts, to the way in which the school should conduct educational processes to ensure equal learning conditions in situations of public calamity. Perhaps the latter is the most challenging in situations of social/school isolation (TRUJILLO *et al.*, 2020).

The changes in the way of seeing the role of the school, and its legitimacy, give rise to questions such as: is the school capable of building new approaches that contemplate the challenges of education in the post-pandemic? Does the school organization have the resources to face a collective process in which teachers, technical-pedagogical staff and school management can create innovative methodologies? In addition to teaching, what is the school capable of learning?

In this sense, this research reinforces the role of the school as a learning organization, capable of reviewing and changing conducts, processes and functions. An organization that learns must be adept at creating, acquiring and transmitting knowledge, and in modifying its conduct to adapt to innovative projects, to learn (SENGE, 1992; GARVIN, 2000). The challenges imposed on educational institutions that the context of social isolation has brought to light must be analyzed and understood in a rational and systematic way, valuing experimentation, being able to transfer knowledge and critical memory.

The premise should be to learn from one's own experience, in constant dialogue with other areas of knowledge, assuming challenges and mistakes as a consubstantial part of learning, in order to build a shared view of the difficulties, possibilities, threats and strengths of teaching practice, which will allow modifying the organizational functioning of the school and anticipating strengthened future scenarios. This is the legacy of the school as an organization that learns (LIMA, 2011; SAVIANI and GALVÃO, 2021).

Therefore, the objective of this research was to analyze the challenges and opportunities of teaching practice in the post-pandemic context, within the scope of the College of Application of Basic Education of the Federal University of Paraíba (Cap/EBAS/UFPB onwards), northeast of Brazil. In addition, it intended to stimulate dialogues, reflections and scientific studies on the school as a learning territory, which promotes equal opportunities and where omnilateral education is developed (TONUCCI, 2020; MELLO and FARIAS, 2010), as well as the potential of digital technologies applied to education, on the way to promoting B-Learning with quality (BARTOLOMÉ, GARCÍA-RUIZ and AGUADED, 2018; GARCÍA-PEÑALVO *et al.*, 2020).

METHODOLOGY

APPROACH, PARTICIPANTS AND INSTRUMENTS

This is a qualitative research (DENZIN and LINCOLN, 2012; SAMPIERI, COLLADO and BAPTISTA-LUCIO, 2015), focused mainly on the interpretation of 21 teachers who work in Early Childhood Education and in the early years of Elementary Education at Cap/EBAS/UFPB, out of a universe of 28 teachers in effective practice, on the teaching challenges in the post-pandemic context, understanding that the behavior of the subjects involved and the situation (context) are closely linked to the formation of the experience.

To this end, it was decided to carry out bibliographic research, analyzing recent publications in indexed journal platforms and national and international repositories, combined with the technique of semi-structured interviews, tools conducive to the analysis, understanding and description of "what happens there", both explicitly and implicitly (ANGROSINO, 2012).

DATA ANALYSIS

For the analysis of the data collected during the application of the semi-structured interviews, the content analysis technique was chosen, based on Krippendorff (1997; 2004), a technique that enabled the organization, selection and detailed analysis of the content of the semi-structured interviews, in the attribution of analysis categories and inferences (intellectual process according to which it is possible to reach a conclusion based on premises, propositions and information collected in a systematic way), which allowed us to go beyond the explicit and implicit content of the transcripts.

In the attribution of the categories of analysis, textual elements indicated in the work coordinated by Fardoun *et al.* (2020), with the objective of analyzing, understanding and describing the different pedagogical strategies used by CAP/EBAS/UFPB professors, in conducting synchronous and asynchronous classes, as well as identifying the strengths and weaknesses of the process of implementing teaching models for the post-pandemic period, considering the learning processes in this learning organization. Four (4) categories of analysis were delimited:

- **Category 1 - Communication tools:** technological platforms used to support the teaching-learning processes; organization of shared workspaces that allow the teaching activity to be carried out appropriately; adequate technological resources that allow a correct interaction between teacher and student.

- **Category 2 - Contents and materials:** All didactic-pedagogical material prepared by the teachers: Manual games and games, almanacs, videos, recordings and presentations.
- **Category 3 - Control and follow-up:** planning that allows specifying the form of feedback of the work carried out with the students (feedback from the families and the children themselves) and mechanisms for evaluating and monitoring the activities developed.
- **Category 4 - Management and planning:** strategies for organizing teacher planning and actions developed by the technical-pedagogical team; administration of human, material and financial resources to meet the needs of the school organization.

With the delimitation of the categories of analysis of this research, it was possible to build a semi-structured interview script attentive to the different situations experienced by the research subjects, in order to obtain information that could answer the research questions and meet the proposed objectives. In addition, it enabled a careful process of analyzing all the information collected for a better understanding, description, and interpretation of the data.

For each category of analysis, we have assigned guiding questions, in order to know and describe the entire teaching-learning process in the remote teaching period and the teaching challenges faced, as well as the lessons learned in this process to be applied after the pandemic.

In relation to the registration units (KRIPPENDORFF, 2004), we bring the literal transcriptions of the most prominent statements of the research subjects, directly related to each category of analysis. The interviews were conducted at the end of the 2022.2 and early 2023.1 academic semesters, specifically, between November 2022 and May 2023.

RESULTS

Analyzing qualitative data is a difficult and thorough process. Extracting meanings and conclusions from unstructured and heterogeneous data, which are not presented in a numerical or quantifiable way, is a task that requires maturity and criticality. To do so, we took into account the methodological approaches of Angrosino (2012); Denzin; Lincoln (2012); Sampieri; Collado; Baptista-Lucio (2015); Krippendorff (1997; 2004) and Fardoun *et al.* (2020), who converge in their works that everything that makes up the object of analysis

has meaning and that "nothing is vulgar". These authors consider that all the data collected in the research have their potential and offer us "traces" that allow a more convincing understanding of our object of study.

To this end, we present the results of the interviews in tables organized by categories of analysis (communication tools; contents and materials; control and monitoring; management and planning); guiding questions of the interviews and registration units, in line with the content analysis procedure presented by Krippendorff (2004).

For each category of analysis, we have set guiding questions, in order to know and describe the entire teaching-learning process in the period of remote teaching within the scope of EEBAS/UFPB and the teaching challenges faced. Regarding the registration units, we bring the literal transcriptions of the most prominent statements of the research subjects, directly related to each category of analysis. As already mentioned, the interviews were carried out at the end of the 2022.2 and early 2023.1 academic semester, specifically, between November 2022 and May 2023, with 10 (ten) professors in effective exercise at the UFPB Application College, out of a universe of 15 professors. 01 (one) pedagogue and 01 (one) school coordinator also participated in the interviews. We emphasize that all these research subjects were actively involved, directly or indirectly, in conducting remote classes, planning, controlling and executing activities and managing virtual learning platforms.

RESULTS OF THE "COMMUNICATION TOOLS" CATEGORY

12 subjects participated in this moment of the research, who were identified with letters of the alphabet (from A - L), guaranteeing the right to anonymity of all interviewees. Table 1 presents the verbatim transcriptions of the most relevant records of the interview, related to the analysis category "Communication Tools".

Table 1: Main results of the analysis category "Communication Tools"

CATEGORY I- COMMUNICATION TOOLS		
GUIDING QUESTIONS OF THE INTERVIEWS		
- What technological platforms were used to support the teaching-learning process in times of pandemic? And in the post-pandemic?	- How did the management, training and use of virtual learning platforms take place?	- What difficulties did they face in using these tools? And the children?
UNITS OF RECORDS		
A: "WhatsApp to chat between peers, greater communication with families; meetings via Meet to produce the material; Guidance Guide	B: "The university itself ended up making it available through SIGAA and SIGRH for people management. With the technologies, there were other	B: "In relation to the children, in a way a little of the families in general in the meetings, the use of the microphone, what the button was, whether it was on the cell phone or

<p>for Families [...] Then we met Canvas, which perfected all this material. We also produce Catalogs and Almanacs for Early Childhood Education". These platforms are wonderful and we got a license from the university to use platforms linked to academic Gmail, such as Padlet, Canvas and Google Classroom.</p> <p>C: "First, there was the movement to understand what was happening as the public school and the difficulty of having access to technological tools. I think this is what made us think about immediately preparing the Guidelines for Families and then the use of <i>Google Classroom</i>, with a virtual room and other innovative teaching applications. I learned to use Wordwall and Kahoot to work with educational games.</p> <p>D: "We use <i>WhatsApp</i>, we use <i>Google Meet</i> for synchronous and asynchronous classes with students. Not everyone was able to use this platform, because it did not have a phone chip. We sent activities through paper, typed, and parents acquired the activity at school".</p> <p>F: "We use <i>Google Meet</i> for synchronous classes and in asynchronous classes, we use <i>WhatsApp</i> to pass on activity guidelines, game links. The pandemic has "forced" us to innovate teaching and expand our "arsenal" of games and teaching materials.</p> <p>K: "Fleap Classroom, and I also used videos from <i>Youtube</i>, <i>WhatsApp</i>, and <i>Google Meet</i>".</p>	<p>courses, some not exactly offered by the university [...] The instructions on the administrative use of the platforms, which until then many of them were unknown, represented a very significant moment to increase the quality of the learning process".</p> <p>C: "The university proposed training through the system and had training by self-taught teachers; We also had the sharing of a lot of information by the technical team as well as teachers. In the field of politics, it was the lack of support from the university, no resources from the university in relation to: equipment; Tools; there were no chips for the children, there were no cell phones, there was no internet [...] these are national public policies, the public school did not have access to it."</p> <p>A: The collective work of exploring the platforms, of sharing this knowledge, something that at first seemed not so institutional, but which was very important in our training process and became more systematized, including meetings via <i>Meet</i>, for us to share the paths that each one was building, the access that each platform had, the knowledge he had, including grouping between pairs of professionals. This is an aspect that was very positive that also strengthened the pedagogical work in the remote period, this is a fact. Everything that was made available by the institution had to be readapted to work with the children. We had to use other platforms to make the production of these materials. Families that are not pedagogically trained for this had to carry out pedagogical mediations together with the children, so it was a much larger dimension and all the tools were used in some way".</p>	<p>on the computer, attitudinal issues [...] The kids when they see themselves there on camera, and she has some kind of block. It didn't have the same quality as face-to-face. Sometimes, for technological reasons, we didn't know who was really on the other side of the camera."</p> <p>A: "The biggest difficulty was what the tool itself limits for the child. We had to continue along with this difficulty. Using <i>Meet</i> as a tool for direct communication with children, and the use of speech ends up being limited, interactions were limited; The games were limited, but at the same time, in the face of these many limits, they were possible. The biggest difficulty of all was not offering all children access, which was limited. So, the most problematic point was this, because some children were left behind."</p> <p>D: "Not all children had access to a computer, or a phone, or a chip. Needy children used their parents' phones, and parents would sometimes go out and take the phone and the child would be left without that access. We couldn't somehow make it effective, 100% work."</p> <p>And: "I would like to point out the challenges in which it was to migrate from face-to-face activities to remote activities [...] Using tools such as computers, <i>smartphones</i>, with mobile data that could communicate with these families, so it was a very big challenge, for the teachers, but also for the families who needed to make an internet plan, buy a cell phone, adapt the spaces of their homes. The most challenging part was that many children simultaneously attended classes and shared their cell phones; others had an internet plan that didn't connect properly, it was constantly dropping; In some cases they didn't even open the cameras, so we taught classes and it was very strange, we couldn't see who was behind that little face or that little square. The textbook was one of the ways I was able to find to continue</p>
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	<p>D: "Google Meet, WhatsApp, they were used by the students, not all of them, as I said, those students went there, took the activities and we corrected the activity, and in the next virtual class, we discussed the issue and made a learning assessment. There were training sessions and everything was virtual, through Google Meet, many <i>lives</i>. For us it was easier, because everyone had their computer; we learned to use some tools that we didn't know about, such as <i>Google Meet</i>, <i>Google Forms</i>, and other platforms. We also used a lot of videos, the videos on Google Meet, the children loved it when we put a video of the subject in the next class they already brought the feedback of that content".</p>	<p>the learning process. I confess that active methodologies and remote classes, despite being a great alternative in the world in which we live, still have certain limitations, because it needs a whole adaptation".</p> <p>K: "One of my biggest difficulties was teaching Mathematics classes, a subject that requires practice, and we have to do the repetition exercise, explain it properly. The use of a whiteboard was sorely missed. He took out his cell phone, inverted the cell phone camera; I did the exercise, showing them what it was like, especially division that was very difficult remotely, and they were seeing my movement with the cell phone camera, they only saw my hand and the cell phone. There is a delay of two years in terms of the necessary content for each level [...]".</p>
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Source: Prepared by the authors (2024).

RESULTS OF THE CATEGORY "CONTENTS AND MATERIALS"

Table 2: Main results of the analysis category "Contents and Materials"

CATEGORY II - CONTENTS AND MATERIALS		
GUIDING QUESTIONS OF THE INTERVIEWS		
- What pedagogical strategies were used in synchronous and asynchronous classes in remote classes in 2020 and 2021?	- What teaching materials prepared by the team in remote teaching were sent/received by the families involved in this process?	- Regarding synchronous classes, what methodology were used during classes?
UNITS OF RECORDS		
<p>C: "Review and study, in addition to nomenclatures such as synchronous and asynchronous, which we didn't know what this was. We didn't know what remote, virtual, distance learning was, that remote teaching was not the same thing. We had to learn together from all this. I really like the expression "change the tire of the car". We literally did that. In the field of analogy, we were learning and doing and we couldn't be left behind. So, in addition to the tensions that are common in any educational institution, methodologically, there was also an identity crisis. At times, reconfiguring ourselves as a school, understanding what this</p>	<p>A: "Every three months we made an evaluation of the use of that material: "The Guides of Experiences in times of Pandemic", then we made the Almanacs for Early Childhood Education three more times. We made a few more catalogs within a couple of months, which dealt with games and had other catalogs. There were other materials as well, from other institutions and departments, which we also used as a resource to guide families within the university itself. There were also other platforms where we made literature and videos available, within <i>Google Classroom itself</i>, a very</p>	<p>D: "In synchronous classes, the methodology used was the methodology of rediscovery. A methodology in which the children worked, let's say with projects, and we took it that way. To discover the little scientist in the child. Sharpen the senses and see how the child is interested in this issue of science. What do we want from the citizen of the future? Not only at school, but at home, as well as in their surroundings".</p> <p>And: "I used the textbook resource, as one of the ways I was able to find, to continue the teaching-learning process. I adapted the activities of the</p>

<p>is: We had clashes in the methodology, this is my reading. That was one of the conflicts."</p> <p>A: "Both in asynchronous and synchronous work, to then arrive in person, many pedagogical materials were produced really thinking about the place of this child and also thinking about the place of this family [...] Families also evaluated the work in the pandemic as very positive, considering this context, but in general, as already mentioned, with the limit of not reaching everyone. But it is a fact that we have also entered an intense identity crisis and our pedagogical proposal is also in the process of being updated, and even more so with the challenges of the pandemic that we needed to face, very challenging and at the same time. It was a formative and interaction process, which challenges us in the post-pandemic, to start over with this challenge moved back in the pandemic".</p> <p>G: "The textbook was one of them, we needed to have it to give a guide, and we knew that the children had it at home. So it helped a lot".</p> <p>D: "So... We worked on a process with thematic research, in which the children chose the themes to investigate, and from then on we put the curricular contents on this theme in an interdisciplinary way, understanding it as a significant process, to make roles more meaningful, although with all the challenges. The technological resources and the textbook were the resources we used. The issue of activities, they were produced together with the families, directed by the teacher. These activities were followed at home by the families, who returned through the platform with photos or via WhatsApp, for those who could not access the internet".</p>	<p>important tool to document everything that was made available to families, but the tool that was most used for greater correspondence with the family was WhatsApp".</p> <p>D: "The textbook with digital content. As I said, synchronous moments we taught and in the asynchronous moment, we recorded for those who were not present to watch, we recorded the explanatory video to be able to support them to do the activities in elementary school".</p> <p>C: "The Guidance Guides for families, which is part of the methodological process to categorize the games and transform all this into some activities, which were delivered printed to the teachers, specifically from Elementary School to work together with the textbooks, because we understood that it was a way to ensure that all children had access to the material, because not all of them had the facility to come and get the printed material or an activity, while management making reports with the teachers, the virtual room favored families a little to have access to these materials that were posted [...]".</p> <p>B: "I used more videos and posted them there; They had certain dates to post videos and posted them there. Others went according to the movement and within these communications also occurred on <i>WhatsApp</i>. So we saw some diversifications, especially considering children with disabilities, some children who had some peculiarities in the reading part and then there were some with complementary material, so sometimes the teacher organized this and left it at school and did the agreed, parallel instruction that depended on the profile of that class. As a technical team, we also organized material actually</p>	<p>platforms and from these activities, they followed the books, so I gave, for example, the guidelines how we were doing, specifically, the issue of literacy and from there we started to have this dialogue, but with limitations. I confess that active methodologies and remote classes, despite being a great alternative in the world we live in; it still has certain limitations".</p> <p>I: "We used the textbook in elementary school and digital content. As I said, in synchronous moments we taught online classes and in the asynchronous moment we recorded for those who were not present to watch and also when we did not give asynchronous activity, we recorded the explanatory video to be able to support them to do the activities".</p> <p>F: "A well-used didactic tool was the <i>Google Docs Form.</i>, mainly for evaluation. In asynchronous classes, I sent this form so that students could also follow the content, solved the questions there, in addition to the textbook".</p>
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<p>And: "Regarding the teaching contents, I followed those that were programmed in the textbook [...] It was what I had available for the children at that moment for them to follow. I made an adaptation of these contents. Regarding the resources, then the resources were the platforms, <i>Google Classroom</i>, <i>Meet</i>, <i>WhatsApp</i>, there were three platforms that needed to be present in all classes. The strategies then remained the dialogued class, which is the methodology we use; I had to adapt the digital whiteboard, because in the face-to-face class we have the fixed whiteboard, but on the internet it is different, and this verbal information is not consolidated, so I used some digital whiteboards on which I wrote and it was projected for the student. So, this was the main teaching strategy".</p> <p>F: "In the asynchronous class, it was the day to record videos explaining content, I took the book, with certain content, recorded a brief video explaining what it was and put it in the <i>WhatsApp</i> group, explaining how to try to solve it. When I finished, I sent photos or it was solved at the beginning of the next synchronous class".</p>	<p>aimed at positive emotional education, synchronous moment, you know, but it was synchronous because it was on <i>WhatsApp</i>, on the remote, many parents who I didn't even know were accessing this content, mentioning this material".</p> <p>G: "Weekly there was a schedule with a link, and some videos referring to, for example, the discipline of History and Geography, along with a book that already had the page number, all the tasks to be done. It was something that reinforced, and I knew that the parents gave feedback".</p> <p>K: "Activity notebook at school, in addition to the book, the projects we left the activity notebook at school".</p> <p>And: "Regarding the teaching material of the class, she already had a reading project, I just perfected it, class with <i>Google Forms</i>, and then they entered at the end of the class and always made the associations of concepts. I tried to consolidate their interpretation in this way and then they sent the photos of the answers written in the notebooks or answered in the form and their answers arrived by <i>WhatsApp</i>".</p> <p>F: "It is important to point out that there were many students who did not have access to technologies, and there were also students who, we left activities at school and family members collected these activities and did them at home and then left them here at school to be made the necessary corrections. In addition to these digital platforms, there were also students who took printed material, or through the book".</p>	
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Source: Prepared by the authors (2024).

RESULTS OF THE "MANAGEMENT AND PLANNING" CATEGORY

Table 3: Main results of the analysis category "Management and Planning"

CATEGORY IV - MANAGEMENT AND PLANNING		
GUIDING QUESTIONS OF THE INTERVIEWS		
- What teaching materials prepared by the team in remote teaching were sent/received by the families involved in this process?	- What will change in pedagogical praxis in the post-pandemic?	- What are the challenges of the education of the future? What are the limits and possibilities of virtuality in education?
UNITS OF RECORDS		
<p>A: "Every three months we did an evaluation of the "Guide to Experiences in Times of Pandemic", then we made the Almanacs for Early Childhood Education three more times. We made a few more catalogs within a couple of months, which dealt with games and had other catalogs. There were other materials as well, from other institutions and departments, which we also used as a resource to guide families within the university itself. We also made videos available on <i>Google Classroom</i> and other teaching materials, a very important tool to document everything that was made available to families, but the most used tool for greater correspondence with the family was WhatsApp".</p> <p>D: "The textbook with digital content. As I said, synchronous moments we taught and in the asynchronous moment, we recorded for those who were not present to watch, we recorded the explanatory video to be able to support them to do the activities in elementary school".</p> <p>C: "The Guidance Guides for families, which is part of the methodological process to categorize the games and transform all this into some activities, which were delivered printed to teachers, specifically from Elementary School to work together with the textbooks, because we understood that it was a way to ensure that all children had access to the material, because not all of them had the facility to come and get the printed material or an activity, while management making reports with the teachers, the virtual room favored families a little to have access to these materials that were posted [...]".</p>	<p>A: "We are starting to face other problems, of other dimensions, including impacts, that this social isolation has caused in the pedagogical life of the institution. And then we have been facing problems of different natures. We evaluated with the families that the evaluation processes needed to be put back on the agenda, because many learning indicators need to be reviewed and understood considering the dynamics after the pandemic. In the post-pandemic, five-year-olds arrived with serious diction problems, which means that the interactions that these children had during the pandemic period were also quite limited. The social sector and the psychological sector need to come together to better understand this phenomenon and we are still in this process, because one year is still too little to understand what impact this pandemic has had on the daily life of pedagogical action".</p> <p>G: "I understand that in the pedagogical praxis in the post-pandemic, there is a very large evaluation in relation to the disability that students find themselves in, since an average of 70% of these students were left with some gaps in relation to content. So an evaluation is made, reinforcement is sought so that the student fits back into that discipline. And this praxis is... it occurs, but remains, pending some situations. This new one, with this new pedagogical will</p>	<p>G: "The education of the future I think is a very technological education, it is a very big challenge for both children and their parents, The child, he is seeing in the future there in the media being the preponderant factor. The school has to modernize in some way, it has to keep up with these technological challenges. We can't stay in this sameness thinking that the student is that bookish student. Today we have to see that the student, who he has outside the school, outside the educational walls, he has many possibilities to learn too, setting limits, of course. What are the limits and possibilities of virtuality in education? I think that today these challenges are already happening... It's one thing, but in the long term, but they're already happening. These limits and the possibilities of virtuality in the issue of virtuality in education, the Educational System itself, the Ministry of Education, and its units, they have to adapt to this technological world. It is necessary for the teacher to have a mechanism so that he can help this child to develop this critical sense".</p> <p>A: "I think the first limit is the tool itself makes available to us. First is access, which we didn't reach everyone in the same way; second is that even though this access is for some, it occurs in a different way. I think that another issue of limits in the action of our work is that it can handle it so far, and this one that it cannot handle so far, is where we need to look for other</p>

<p>G: "Weekly there was a schedule with a link, and some videos referring to, for example, the discipline of History and Geography, along with a book that already had the page number, all the tasks to be done. It was something that reinforced, and I knew that the parents gave feedback".</p> <p>And: "Regarding the teaching material of the class, she already had a reading project, I just perfected it, class with <i>Google Forms</i>, and then they entered at the end of the class and always made the associations of concepts. I tried to consolidate their interpretation in this way and then they sent the photos of the answers written in the notebooks or answered in the form and their answers arrived by <i>WhatsApp</i>".</p> <p>F: "It is important to point out that there were many students who did not have access to technologies, and there were also students who, we left activities at school and family members collected these activities and did them at home and then left them here at school to be made the necessary corrections. In addition to these digital platforms, there were also students who took printed material, or through the book".</p> <p>J: "One thing I was very sad about was that I was never able to put a video or share the videos, I never learned."</p>	<p>with a curriculum, but appropriate, to close all this, a unity among teachers, in an interdisciplinary way, working on all this content, I think this post-pandemic issue. It will have to improve, I think we will have a gain, but at the front, but it is in the long term".</p> <p>G: "After the pandemic, we are resuming face-to-face activities. But emergency teaching has not left a worldview that we are experiencing and we need to adapt to technologies. Emergency education anticipated an advance in technologies that we would come across five years from now, but this advance left several positive aspects, such as the possibilities of learning and access to knowledge. We need to guarantee learning, but without abandoning technological resources and technology. This means that we need to be aware of advances in technology to keep our classes increasingly focused and with content that makes sense to children".</p> <p>J: "It was a forced technological maturation, but it advanced, everyone advanced in this sense. It is something that I see positive is that in a way it has brought us a little closer to the families, contact that we still have via <i>WhatsApp</i> with the families has become closer. A negative legacy that I see from the pandemic was the year of readaptation, and the great gaps that were left in the remote time were noticed, among them many children who could not participate online. A big challenge is for you to minimally try to balance, that's it, this heterogeneity that has never been so great, so I think that this was a legacy that was not so, not positive.</p>	<p>organizations, other tools. Technologies are not new and we feel the importance and need for them, that's a fact; It is also not new that it is a movement of ours, to democratize access to technologies for all professionals, so that we can actually use it in a pedagogical way at work, because we cannot do this, and we cannot do it because we do not have access to technological resources to implement a poster of technologies within the institution".</p> <p>G: "We live in a system that is organized in a very distinct and excluding way. The main challenge going forward is to ensure that all the knowledge generated by humanity and the resources are available to everyone. So, this is the main challenge because digital technologies are advancing, but as they are advancing they are excluding a large group, which are students from public schools, from poor families. We are moving towards a system in which it continues to be exclusionary, despite having more possibilities of access to knowledge. This is the great challenge today when thinking about a school, to maintain this equalization so that we can enjoy these resources. However, the limits are still concentrated, in the way it is handled, because these instruments and content continue to be tools for a few and they need to be distributed more equitably to all families, all students".</p> <p>T: "The limits I think is access. Because it is this use of technologies in remote teaching, mixing with face-to-face teaching, in short, maintaining this type of teaching that we had to adapt, it is necessary that municipalities, cities, families, have access to technologies.</p>
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	<p>T: "But the big challenge is for us to try to update this curriculum, because whether or not the children who entered the first year, as was the case with my current class, they did not have face-to-face early childhood education for 2 years. The children of the third jumped from kindergarten to the third year. So, this curricular readaptation requires a very large process of planning, organization, need, to mix materials, mix resources, mix instruments, try to build a new curriculum for the school, using both these resources that we have already used during the pandemic, and the resources that we were already used to doing. So, there is a large research center, because we have to teach children and young people to be researchers. Promote something that is consistent with that level he is at and, sometimes, go back with the one that has the most difficulty. Now more than ever, education must be focused on individual issues, starting from the reality of each student, this will demand a lot, but from the teacher".</p> <p>A: "I think that this will be the look at the children, this look at the moments, this look at work relationships, this look at relationships with families, it really is the organization of work, it is all sectors, not only the pedagogical, management, because we are not the same after the post-pandemic. I think we need to reach those who need it most because of everything the pandemic has caused, whether due to loss, or lack of pedagogical memory, or various situations. And in the context of more general policies, it is really necessary to understand this phenomenon of the pandemic, as something that needs to be</p>	<p>Social inequality is very glaring and public policies need to be rethought, in order to try to make this access to technologies and virtual environments more equitable."</p> <p>V: "We need to see and review this issue of technologies in education. First of all, know what it is about and I do not believe that technologies will replace human evaluation under any circumstances. Technologies have to be treated as another tool, just like a pencil, a book, but it does not replace the human under any circumstances. We have advanced at a rapid pace, because of the pandemic and integrating this into this daily life, I think it is the really institutional challenge. I believe that we should bring digital technologies into the school as allies and not a replacement. I think that's the challenge."</p>
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	restructured throughout the education process, an entire education project. In fact, it needs to be thought of in both the microstructure and the macrostructure. We cannot think about the macro without thinking about the micro and vice versa. We need pedagogical policies and practices that help us survive, to conduct our planning in this new scenario".	
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Source: Prepared by the authors (2024).

DISCUSSION

In 2017, three years before the COVID-19 pandemic, Dell *Technologies* issued a report on the impact that technologies would have on the world in 2023. This study allowed, based on a projection of what already existed, to recognize the probable implications of this technological future in all areas of human life. For the educational field, this report presented the expectation of a greater number of educational innovations stimulated by technological advances and greater possibilities of learning through *e-learning* and pointed out the need to modernize evaluation systems and teaching methodologies for this future context.

The study also pointed out the need for the school institution to include teachers within technological updating programs urgently, in training and continuing education programs in digital technologies for pedagogical use, so that they can keep up with the exponential advance and the novelties of the system and digital technologies. According to Sandel (2007, p. 14), it is necessary to "put digital media at the service of education, allowing us to reflect on them, to analyze in the collective what means are useful or not to the school and to what extent they can contribute".

In the middle of 2020, most of the faculty of an Application College of a federal educational institution did not even know Google Classroom, imagine methodologies such as *Flipped Classroom* or Learning by *m-learning* and videoconferencing.

The excerpts from the semi-structured interviews expressed the enormous challenges faced by teachers in managing the "new" teaching platforms, considering that there was no time allocated to training for the use of these technologies. What happened, in fact, was the need for teachers to change the blackboard for the digital screen, without their pedagogical strategies having undergone a process of innovation (PÉREZ, 2020).

On this aspect, Lino *et al.* (2020) considers it necessary for public education systems to immediately and systematically set up plans to reconduct curricular projects and teacher training to adapt to the needs of the post-pandemic context, so that children, adolescents and young people have the right to education guaranteed and that they have not "confiscated" the right to recompose their learning.

Regarding the recomposition of learning, as indicated in the statements of the teachers interviewed, the literacy and literacy process was greatly affected in the pandemic period (2020 and 2021), and it is necessary to implement programs for the recomposition of learning (reinforcement) for children with difficulties in recognizing letters, sounds and decoding.

The pandemic has highlighted the need for educational innovation in the school as a whole, encouraging the exploration of new teaching methods such as blended learning and *online* learning to ensure the continuity of teaching-learning even at a distance (IBÁÑEZ, 2020). In addition, peer communication, collaboration among teachers, the exchange of ideas, and joint problem-solving were essential to overcome challenges.

School management must be adaptable and sensitive to changes in the needs of students, society and the global environment. It plays a critical role in ensuring that education is effective, equitable, and able to meet emerging challenges. Regular evaluation of management and planning processes are important to identify areas of improvement and adjust strategies as needed.

CONCLUSION

Developing this research within the scope of the Application College meant meeting collectively to share experiences and knowledge; an experience of contact with the other and of collective creation, in which we were able to share processes and results, experience and define concepts inserted in new paradigms that reflected the current and necessary problems for the school. In this sense, the relationships established, the pedagogical practices involved, interactions, power relations, subjectivities, affectivities, culture, sensibilities, institutional norms, memory, knowledge, etc., all of this is Basic Education, it is doing quality education.

Thus, the concepts and conceptions presented in this research and the categories of analysis, in addition to helping us to find answers to the various questions established and to better understand our object of study, reinforced the premise that the school as a learning

organization is one that generates knowledge about itself, considering its specificities and realities. Above all, it is a school that conducts itself in a reflective and learning way, aiming at its autonomy, being able to develop and carry out innovative actions (VELLENICH *et al.*, 2017).

Through semi-structured interviews, carried out with teachers and representation of the technical-pedagogical team, we were able to know and describe the different pedagogical strategies used by EEBAS/UFPB teachers in conducting synchronous and asynchronous classes during the period of remote teaching and identify the strengths and weaknesses of the process of implementing remote teaching models in the EEBAS territory /UFPB, considering the learning processes in this learning organization.

Thus, it was evident, in all the statements of the interviewees, whether implicitly or explicitly, that education, obviously, should not be dissociated from the conception of digital school and from the fact that students are already digital citizens and that they live in this new society of knowledge. The pandemic has revealed the need for rigid and rapid changes in relation to the time and spatial arrangement of educational organizations as we knew them.

The new reality after the pandemic requires the more daily use of digital technologies, implementation of teacher training policies aimed at digital literacy (MIGUEL, 2023; FLEER, 2016) and active teaching methodologies, always mediated by digital technologies. In addition, the great challenge is not only to adopt digital technologies in the daily life of the school, but to promote human interaction, sociability and collaboration in order to create innovative educational scenarios.

And what will the school be used for in society in the post-pandemic? We are facing the opportunity to modify practices and redefine our curricular proposals, given the need to reinvent our teaching career. The new teachers come from digital generations, overcoming a preferential transmissible teaching requires both the transformation of a teacher who will have to incorporate digital skills into the teaching work, as well as motivation and creativity, as well as the implementation of innovative collective educational projects that move towards new ways of teaching, learning and evaluating (CASTAÑEDA, SALINAS and ADELL, 2020).

REFERENCES

1. Angrosino, M. (2012). *Etnografía y observación participante en investigación cualitativa*. Madrid: Morata.
2. Bartolomé, A., García-Ruiz, R., & Aguaded, I. (2018). Blended learning: panorama y perspectivas. *RIED. Revista Iberoamericana de Educación a Distancia*, 21(1), 33-56. Available at: <https://doi.org/10.5944/ried.21.1.18842>. Accessed on June 13, 2021.
3. Brasil. (2020a). Portaria nº 343/2020. Substituição das aulas presenciais por aulas em meio digitais enquanto durar a situação de pandemia do Novo Coronavírus-COVID-19. MEC: Brasília. Available at: <https://bit.ly/3kdLCFd>. Accessed on April 14, 2021.
4. Castañeda, L., Salinas, J., & Adell, J. (n.d.). Hacia una visión contemporánea de la Tecnología Educativa. *Digital Education Review*, 37, 240-268. Available at: <https://revistes.ub.edu/index.php/der/%20article/view/30136>. Accessed on August 24, 2022.
5. Denzin, N. K., & Lincoln, Y. S. (2012). *Manual de investigación cualitativa*. Barcelona: Gedisa.
6. Fardoun, H., González, C., Collazos, C. A., & Yousef, M. (2020). Estudio exploratorio en Iberoamérica sobre procesos de enseñanza-aprendizaje y propuesta de evaluación en tiempos de pandemia. *Ediciones Universidad de Salamanca*, 21. Available at: <https://dialnet.unirioja.es/servlet/articulo?codigo=7492330>. Accessed on October, 2020.
7. Fleer, M. (2016). *Technologies for children*. Cambridge: Cambridge University Press.
8. Fullan, M., & Hargreaves, A. (2000). *A escola como organização aprendente: buscando uma educação de qualidade* (2nd ed.). Porto Alegre: Editora ARTMED.
9. García-Peñalvo, F. J., et al. (2020). La evaluación online en la educación superior en tiempos de la COVID-19. *Education in the Knowledge Society*. Available at: <https://dialnet.unirioja.es/servlet/articulo?codigo=7403962>. Accessed on November, 2020.
10. Garvin, D. (2000). Crear una organización que aprende. In J. Anderson et al. (Eds.), *Harvard Business Review: Gestión del conocimiento* (pp. 150-178). Bilbao: Deusto.
11. Ibáñez, J. S. (2020). Educação em tempos de pandemia: tecnologias digitais na melhoria dos processos educacionais. *Revista Innovaciones Educativas*, 22(Especial).
12. Krippendorff, K. (1997). *Metodología de análisis de contenido: teoría y práctica*. Barcelona: Paidós Comunicación.
13. Krippendorff, K. (2004). Reliability in content analysis. Some common misconceptions and recommendations. *Human Communication Research*, 30(3), 411-433. <https://doi.org/10.1111/j.1468-2958.2004.tb00738.x>
14. Libâneo, J. C., Oliveira, J. F., & Thoschi, M. S. (2012). *Educação escolar: Políticas, estrutura e organização* (10th ed.). São Paulo: Cortez.
15. Lima, J. F. L. (2011). A escola como organização aprendente e o processo de gestão na educação básica. In *X Congresso Nacional de Educação-EDUCERE*. PUCPR. Available at: https://educere.bruc.com.br/CD2011/pdf/4193_3829.pdf. Accessed on December, 2020.
16. Mello, S. A., & Farias, M. A. (2010). A escola como lugar da cultura mais elaborada. *Revista Educação, Revista do Centro de Educação UFSM*, 35(1), 53-67. Available at: <https://www.redalyc.org/articulo.oa?id=117116990005>. Accessed on June 23, 2021.
17. Miguel, C. C. (2023). Tecnologia na Educação Infantil: Letramento Digital e Computação desplugada. *Caderno CEDES*. <https://doi.org/10.1590/CC271211>. Accessed on July 4, 2023.

18. Mondlane, A. M., & Liasse, O. D. S. (2017). A qualidade na educação: desafio das organizações aprendentes. *Revista Ensino de Ciências e Humanidades – Cidadania, Diversidade e Bem Estar-RECH*, 1(1), 89-105. Available at: <https://bit.ly/3EFFcJ3>. Accessed on November 13, 2021.
19. Pérez, C. E. (2020). El gran test de las clases “online”. *La Tercera*. Available at: <https://encurtador.com.br/elqzV>. Accessed on May 21, 2023.
20. Sampieri, R. H., Collado, C. F., & Baptista-Lucio, P. (2015). *Metodologia da pesquisa* (5th ed.). México: Mc Graw Hill.
21. Sandel, M. (2007). *Contra la perfección*. Marbot Ediciones.
22. Santos, B. S. (2020). *A cruel pedagogia do vírus*. Coimbra: Edições Almedina.
23. Saviani, D., & Galvão, A. C. (2021). *Educação na pandemia: a falácia do ensino remoto*. Brasília: Universidade e Sociedade.
24. Senge, P. (1992). *La quinta disciplina*. Ed. Granica: Barcelona.
25. Sousa, A. C., Melo, C. T. P., & Carvalho, M. E. P. (2022). O pleno direito à educação e os desafios docentes em tempos de pandemia no Brasil. *Brazilian Journal of Development*, 8(8), 56662–56678. <https://doi.org/10.34117/bjdv8n8-120>. Accessed on October 13, 2022.
26. Souza, E. (2020). Educação em tempos de pandemia: desafios e possibilidades. *Cadernos de Ciências Sociais Aplicadas*, 17(30), 110-118. July-December. <https://doi.org/10.22481/ccsa.v17i30.7127>. Accessed on November 23, 2021.
27. Tonucci, F. (2020). ¿Puede un virus favorecer una escuela mejor? Los cinco puntos. *Aula de innovación educativa*, 297, 21-26. Available at: <https://bit.ly/3grxqWa>. Accessed on November 25, 2021.
28. Trujillo, F., Fernández, M., Segura, A., & Jiménez, M. (2020). Escenarios de evaluación en el contexto de la pandemia por la COVID-19: la opinión del profesorado. *Santillana LAB*. 37p. Available at: https://www.observatoriodelainfancia.es/oia/esp/documentos_ficha.aspx?id=7074. Accessed on December 14, 2021.
29. UNESCO. (2020). How many children and young people have internet access at home? Estimating digital connectivity during the COVID-19 pandemic. Available at: <https://bit.ly/3tAkQtr>. Accessed on December 14, 2021.
30. UNICEF, Save The Children, INEE, PLAN, H&I, FCA. (2020). *Learning must go on. Recommendations for keeping children safe and learning, during and after the COVID-19 crisis*. Available at: <https://bit.ly/3jl0O0Y>. Accessed on November 23, 2021.
31. Vellenich, A. M., Ferreira, A., Marcondes, N., & Castro, M. (2017). Comunidade aprendente: a escola como locus de formação e desenvolvimento do professor. *EccoS Revista Científica*, 42, 161-176. <https://doi.org/10.5585/eccos.n42.3942>. Accessed on December 4, 2021.