

REFLECTING ON NEW PUBLIC-SCHOOL TEACHERS' PRACTICES IN THE PANDEMIC IN BRAZIL

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Abstract

In 2020, the coronavirus pandemic caused the closure of schools and the suspension of in-person classes. To face the new working conditions, teachers were forced to work remotely, transforming their homes into studios for recording video classes and interacting with their students using their private cell phones and internet. Beginner teachers, who did not have extensive experience in face-to-face teaching and training for distance learning, found themselves in a situation of extreme vulnerability. In this context, a question was raised: how do new teachers conduct teaching in pandemic? To answer the question, a research project was carried out, and this article will present its partial results. To analyze teachers' pedagogical practices, nine Early Childhood and Primary Education novice teachers from public schools in the state of Mato Grosso, produced an audio-video class recording, and this material was examined regarding the rules and types of pedagogic practice based on Bernstein's code theory. The author defends the distinction between pedagogic practice as a cultural transporter, and pedagogic practice in terms of what it leads to. In other words, between pedagogic practice as a social form ("how") and pedagogic practice as a specific content ("what"). The present study sought to analyze the pedagogical practice of beginning teachers and concluded that they tend more towards child-centered practices and cultural production (progressive and transformative) than practices centered on content and cultural reproduction (traditional and conservative).

Keywords: *COVID-19 pandemic, beginner teacher, pedagogic practice, visible and invisible pedagogies.*

1. Introduction

In 2020, the outbreak of the coronavirus pandemic led to a significant change in the world of work, across the globe. To contain the spread of the virus, many countries, including Brazil, closed schools, and advocated online teaching modalities as a solution. In this new situation, the pandemic has completely changed the need for internet connectivity and technological devices across the entire population, especially among children (Ayllón, Holmarsdóttir, & Lado, 2023), including the poorest students living on the outskirts of large cities or in rural areas (Dias & Pinto, 2020).

Assuming full responsibility for adapting to the demands of new teaching conditions, and without any financial, material, technological or pedagogical assistance, teachers were forced to work remotely setting up home studios to record class videos, and interacting with students using their private cell phones and home internet connection. In a poorly adapted workspace, beginner teachers, who did not have extensive experience teaching in public-schools, training for distance learning, nor technological resources or mastery of the use of technology, found themselves in a situation of extreme vulnerability.

In this context, a question was raised: how do beginner teachers conduct teaching during the pandemic? or how do they conduct pedagogic practice? To answer the question, a set of data from the Project "Interrupting inequitable teaching, fostering equitable pedagogies: re-mediating the practices of novice public school teachers" approved in 2020 (PLATAFORMA BRASIL/CAAE/CONEP n. 33715120.2.0000.5690) was analyzed, and partial results will be presented in this article.

2. Theoretical background

Bernstein (1996) states that social relationships between transmitters and acquirers regulate pedagogic practices and generate the shape of the communicative context. He also distinguishes between pedagogic practice as a conductor, a cultural transporter, and pedagogic practice in terms of what it leads to. In other words, between pedagogic practice as a social form ("how") and pedagogic practice as a specific content ("what"). In this way, a pedagogic practice can be understood as "a uniquely human device for both the reproduction and production of culture" (p. 94).

Bernstein further argues that pedagogic practice as a cultural conductor is regulated by hierarchical, sequencing/passing, and criterial rules, which generate modalities of pedagogic practice, visible and invisible. Hierarchical rules were called by Bernstein as regulative rules, and rules of sequencing/pacing and criteria as instructional or discursive rules. If regulative rules and instructional or discursive rules are explicit, he defined as a type of visible pedagogy (conservative or traditional), and if implicit, as a type of invisible pedagogy, that is, progressive or child-centered pedagogy (Bernstein, 1996, p. 94, 103).

According to Domingos, Barradas, Rainha, and Neves (1986), in Bernstein's theory, in an invisible pedagogy, the teacher creates the context that the child will recreate and explore; the mode of transmission encourages the child's manifestation, pedagogical resources tend to be less predetermined in the form of textbooks or teaching routines, and pedagogical discourse emerges in the form of projects, themes, diversity of experiences (Bernstein, 2003). Also, the teacher's control is not explicit, but implicit, and the pedagogical evaluation criteria are multiple and diffuse, therefore, difficult to measure, because the teacher's attention is focused not on the acquirer's product, but as a whole, in its total "does" and "don'ts" (Domingos et al., 1986). When the pedagogy is visible, the regulatory rules are explicit, the relationships between transmitter and acquirer are one of domination/subordination, the emphasis is on the text that the acquirer produces, and the teacher's performance consists of a pedagogic practice that originates a possible correction work (Bernstein, 2003).

In short, invisible pedagogies emphasize acquisition-competence, and visible pedagogies emphasize transmission-performance.

3. Methodology and results

This article presents partial results of a qualitative and exploratory broader study carried out from 2019 to 2022 on the teaching practices of new public-school teachers during the COVID-19 pandemic in Brazil. In this study, beginner teachers, new teachers, or novice teachers refer to teachers in the first three years of the career in public school, considering this period as a probationary internship. Under the terms of the Brazilian Constitution, the selection of public servants takes place through a public competition, and if selected and at the end of the probationary period is approved, they occupy permanent position in the public administration, and have the right to job stability, except in cases of serious misconduct or other circumstances provided by law. Moreover, beginner teachers are university graduates (Pedagogy course), and some of them have previous teaching experience as hired temporary assistant in public or in private schools (Romanowski & Martins, 2013).

To analyze novice public schoolteachers' practices, in this study, audio-video class specifically about a teaching activity (or a form of transmission, according to Bernstein) were provided by nine beginner Early Childhood and Primary Education from public schools in the state of Mato Grosso. The material provided by the participating teachers was examined to identify regulative and discursive rules and visible and invisible pedagogies based on Bernstein's code theory. Importantly, participating teachers did not receive any instruction or intervention from the researchers on how to create them.

Given our attention to the location of this study, Mato Grosso is a large state located in the central-western region of Brazil. It is the third largest state in the country, and predominantly rural. It has 141 municipalities and the predominant economy is cattle raising and agriculture. In this study, the teachers are from seven different municipalities, one is located more than 100 km from the capital Cuiabá, four are more than 200 km away, and one of them almost 1,000 km away.

To briefly describe the study subjects, most of them were over 30 years old ($N = 7$), although they were beginners in public administration; also, they had little ($N = 4$) or no experience ($N = 4$) in public education, specifically with young children. Some were recent graduates (3 to 5 years) ($N = 5$), while others had completed the teacher education course more than five years ago ($N = 4$).

Regarding to the class videos, two teachers (CCA; CCV) recorded a video for Early Childhood Education students aged 4 and 5, one teacher (POR) prepared a class video for 2nd year students, two teachers (BMC, MVV) for 3rd year students, three teachers (TSD, PLR, BMR) for 5th graders, and one teacher (CBA) for 6th graders. The video classes recorded covered knowledge areas of Mathematics (origin of numbers, equivalence, polygons, decimal number system), Portuguese Language (production of texts – stories, literacy) and Social Studies (free fairs, indigenous and African dances), and all these contents were selected by the teachers from the National Common Curricular Base.

To illustrate the recorded videos, we will present a summary of each of them. CCA created an animated and colorful video telling the story of the origin of numbers; CBA created a video to explain Equivalence using a picture of a weight scale with three equal spheres on each side; after the explanation, she showed how to carry out an Equivalence in equalities exercise; BMC provided a video showing her telling a story from a storybook; after, she explained each part of a story, instructed how to create it and

asked the children to produce a new one; TSD recorded a video to explain simple (convex and concave) and complex polygons, and to ask students to solve the exercises; BMR recorded a video to teach the composition and decomposition of numbers, and the absolute and relative value of the digit, using a whiteboard fixed to the wall of the house; afterwards she performed an example exercise to show how to do the homework; PLR recorded a simulation of a face-to-face class and the theme was free fair. First, he asked questions about the topic of the class, then he gave information about a school feeding law, sang a song, asked the students to walk around the classroom to see the pictures about fairs from different regions of the country displayed on the mural; then, he invited students to talk about the figures, and asked them to produce a text on the topic; POR recorded a video to explain the exercises on pages 6, 7 and 8 of the textbook about the vowels (a, e, i, o, u); MVV recorded a video to explain how to perform exercises on indigenous or African dances, using the Jambord tool; CCV recorded a video to explain to parents and children the objectives of each exercise and how to perform them.

All the videos analyzed in this study were homemade and amateur audiovisual productions, made by the teachers themselves using programs and tutorials available on the internet. Some videos contain animations and a background soundtrack, but in all of them, there were images projected on slides. The teachers were the only speakers in all recordings, and the narrations vary between *on* and *off*. The videos were recorded at the teachers' homes or at the school where they work; the lighting is natural or residential electrical, and the framing is fixed, without camera movements.

Each video was analyzed regarding the communicative context of transmission (whether the pedagogic discourse emerges from projects, themes, experiences or is pre-determined in the form of textbooks), control (whether the relationship between teacher and students is one of domination/subordination or whether children are encouraged to express themselves) and the evaluation criteria (whether the emphasis is on the acquirer's product or on the production process, and whether the criteria are measurable and easy to correct or are multiple, diffuse and difficult to measure).

To illustrate what was mentioned above, we will present some examples. Firstly, we will describe some examples of the **communicative context** of a visible pedagogy and an invisible pedagogy.

Visible Pedagogy

Example 1: *"Today we will have that guidance for families and children... that we have every month, that we deliver our planning... our theme for the month of November will be "Taking care of our Pantanal". And then, in our theme, we have our activities. What will be our activity here, our first activity? Our first activity consists of helping the child to reason, getting them to complete the numerical sequence [...] In activity number 2, we must fill in the missing vowels. What vowels are missing here?"* [CCV]

Example 2: *"This is the first activity. Here we have the map of Brazil, each color corresponds to a region, and previously in the video that the "pro" sent to you, each dance is typical of a region in Brazil. However, we have five dances here. What are you going to do? For example, Catira, click on Catira. Did you click? Then you can drag it, do you remember which region it is from? Look, Catira is from the central-west region, this is the region that is in red. So, you are going to take the Catira there. So, right? And then you will remember where Carimbó is, click on Carimbó and drag it to its region. And you will do this with Frevo, Samba and Pau de Fita. If you did not remember, go back to the video you have on your WhatsApp that the "pro" already sent and look at the video again so you can clear your doubt. All good? Once this activity is complete, click on the next arrow. Here you will write interrogative and declarative sentences. So, there are at least two sentences."* [TVV]

Invisible Pedagogy

Example 1: *"Do you remember that yesterday, children, in our geography class, we worked on rural areas? We saw the characteristics, right? How these rural spaces are constituted, and the people who live there, in these spaces. What they do. We saw all of this yesterday in geography class, okay? And we also saw that most products that are sold in the city come from rural areas, from rural areas, where producers plant their products and sell them to the cities. And there is something interesting that I do not think you know yet. Did you know that there is a law, a federal law, exactly, it is a federal law, which is the law of the National School Lunch Program, which you are part of because you are the beneficiaries. Don't you have the lunch you eat at school? what snack is served? So, in this law it says that thirty percent of school meals, children, must come from family farming. Exactly. Thirty percent, children, of what we consume at our school must be acquired from family farming. Considering the importance of this topic, today we are going to talk about the fair in the classroom."* [PLR]

Example 2: *"I came here today to tell you a super interesting story. Has anyone ever stopped to wonder where the numbers came from? Hmm... this is a question you have had with us for a long time, right? And today, we are going to find out about this together, okay?"* [CCA]

Next, we will describe some examples of the **control** of a visible pedagogy and an invisible pedagogy.

Visible Pedagogy

Example 1: *"I do not want you to cross the line. It is to write exactly as it is here, within this line, okay? If not, you will have to delete it and do it again later. So, let us do it very calmly, you have four hours of class with me to make it well done and beautiful, okay?"* [POR]

Example 2: *"Hello. Good afternoon, class. In this first Mathematics class, we will work on the content of the Decimal Number System. Content that is not new for the class, you have already known this decimal number system since the third year, or second year, right, when you started from units to tens. So, today, we are going to clarify a little more, a little more about this system. Why what is the objective of studying the decimal system? It is so that you can learn to read better, classify, write, and order numbers. Why? We must know how to place a unit, a ten, a hundred and a thousand, because we use these numbers in everything in our lives, from studying Mathematics, to an economic factor, to a calculation that I need to build, or to manufacture something, then it involves numbers. So, we must know how to classify, order, and also write, which is the number in full. Let us go. Starting."* [BMR]

Invisible Pedagogy

Example 1: *"The next day, they would open the bag and check if there were still the same number of animals outside and, if so, they would know that none of the animals were missing. And if there was not, yikes, it was a real problem. If it had not been, some animal would have disappeared. And so, they started to have this control, and every day they improved... perfected themselves... as time went by, they reached what we know as numbers today. And look, how much time has passed, right? And to this day, numbers are extremely important to us. Imagine! How would we live if we did not have numerals, right? So, for you to see how important the number is in our lives, and how long it has existed. Did you see how interesting it was? And that was today's story. I hope you enjoyed."* [CCA]

Example 2: *"Good morning. Today, what is our first activity? The reading. But today will be different. I will read it for you, then I will explain it better so you can create a new story, ok? [...] Hello students, shall we continue? So, after reading the title Tatu Balão, now it is your turn! You will create a new story where you will be, who? The writer and the illustrator, ok?"* [BMC]

Finally, we will describe some examples of **evaluation criteria** for a visible pedagogy and an invisible pedagogy.

Visible Pedagogy

Example 1: *"Now, I am going to leave you, sixth year B, a probing exercise, so I can check what you understood from this explanation. So, look there. Observe the image below. We have an equality where the terms on one side are: an orange, plus a number 6, plus a number 5, which is equal to the number 3, plus the number 2, plus an orange, plus another orange. So, this is our equality. So, you will look at this image that is posted in this exercise, and you will think about how you can, you know, organize, and solve this exercise, to find the value of each orange, okay? So that is what Profe wants to know. What is the value of each orange? And then, by solving this exercise, you will mark the correct answer. [...] So, given this tip from the teacher and the explanation, I want you to now solve this exercise in your notebook. And as soon as you solve this exercise, the Teacher wants you to take a photo of the solution in your notebook, and send it to the teacher's group. That the teacher will check who is thinking straight, who is able to solve it, who is still in doubt, okay? It is okay if you do not know how to solve it. This is just a first step, it is just our introduction, and Profe will work together with you, okay? You do not need to be afraid if you cannot solve this exercise, okay?"* [CBA]

Example 2: *"So, on the next slide we will have activities on the subject. Good luck! This slide, guys, is the first exercise you will have to solve, okay? Here it asks that you will have to analyze the figures below and answer whether they are convex or not, okay? So, very carefully, you can review the previous slides, and I am absolutely sure that you will be able to solve this exercise number 1, okay? So, a lot of attention, dedication, everything will work out. [...] Ah, in exercise number 2, guys, there are five questions for you to answer. There are subjective questions and objective questions, all related, all related to the subject that was studied in class number one. So, I completely believe that you will be able to respond calmly, ok? A lot of attention, determination, that everything will work out. Big hug, success."* [TSD]

Invisible Pedagogy

Example 1: *"Every story happens around the main character, okay? I thought about the characters, then. I must think about the environment where this story will take place. It could be in a forest, it could be in a city, or in a field. You will choose an environment where this story will take place. [...] And do not forget to put your name at the end. The name of the writer and the illustrator, ok? Good activity, see you later!"* [BMC]

Example 2: *"Now, you have already circulated around the room, you have observed, you have seen, you have talked, you have debated, now there is a really cool activity for you to do. You will now produce a text. That's it! A text production, where you will report, in this text production, your experience with the fair, right? What are your customs, your habits, why do you go to the fair, what day do you go to the fair, right? Who do you go to the fair with, what do you like to buy at the fair and the importance of a fair within the municipality."* [PLR]

The present study sought to analyze the pedagogic practice of beginner teachers, looking for the tendencies between a practice as a cultural transporter and a practice as a specific content, and the analysis of the teachers' forms of transmission showed that POR, MVV and CCV tend to a context of communication, control, and evaluation criteria, which are highly explicit, and in this way, his pedagogical practice tends towards a visible pedagogy, while CCA, BMC, PLR present a tendency towards communication contexts, control, and evaluation criteria strongly implicit, and therefore, an invisible pedagogy. BMR and TSD presented an implicit communication context, but explicit control and evaluation criteria, thus defining a tendency towards a visible pedagogy. And CBA presented an implicit communication and control context, and explicit evaluation criteria, revealing a tendency towards an invisible pedagogy. Thus, our study finds that new public schoolteachers tend, although there are some variations, toward pedagogical practices that emphasize social form and acquisition competence (invisible pedagogy) rather than content and transmission performance (visible pedagogy).

In summary, they tend to a child-centered and cultural production practices (progressive and transformative) more than content-centered and cultural re-production practices (traditional and conservative). This study did not examine the full choreography of interactions in the classroom context due to limited research conditions, but the results unveiled the relevance of the findings. Research carried out during the pandemic revealed that the new teachers' instructional obstacle is not technological, but the internal logic of their practice, which is the fundamental grammar of a pedagogic practice (Bernstein).

4. Conclusion

Our study highlights that some new teachers understand what a teaching activity is, however, others do not distinguish between a teaching activity and an activity for fixing or evaluating learning. Some teachers organize creative and appropriate instructional practice, while others present confusing instructional discourse that is difficult for children to understand, demonstrating a gap in teachers' knowledge of the subject matter to be taught. Some teachers organize an instructional discourse based on a theme, and follow a step-by-step didactic sequence, interconnecting the parts, while others organize an instructional discourse around a theme, but the parts are disconnected and the components have different purposes (numerical sequence, vowels, motor coordination, etc.). Some teachers, even in a non-interaction context, seek children's participation, but others, although are not aggressive or authoritarian, maintain a subtle relationship of dominance/subordination, providing instructions, orders, and limits to the child's behavior. Some teachers plan a creative and interesting sequencing/passing, but at the end of the transmission the assessment of learning is made using criteria focused on the product, right or wrong, or the exact answer. In conclusion, it is important to recognize that this investigation offered new ways of thinking for new teachers who still promote cultural reproduction in public education, based on an unfair pedagogy, disregarding that their students are children of the poorest families in society, dependent on (re)action of teachers to transform this social injustice.

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