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Public education in the state of São Paulo: complaints and announcements in dialogue with teachers who teach Mathematics

Abstract: This article is an expansion of the text entitled *Announcements and complaints about pedagogical and curriculum (im)possibilities in the state education network of São Paulo* published in the annals of the 6th National Forum on Mathematics Curriculum. The objective is to understand the impacts and perceptions expressed in two interviews conducted with teachers about curriculum proposals implemented since 2023 in the state network, with emphasis on the Digital Material of the Sala do Futuro Program. We present the main actions of this educational policy, emphasizing the consequences of using slides from the aforementioned Program. Finally, from a Freirean perspective, we analyze the data produced by the collected narratives, identifying complaints and announcements about the current curriculum policy.

Keywords: Mathematics Education. Public Policies. Digital Platforms.

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ARTICLE

La educación pública en el estado de São Paulo: quejas y anuncios en diálogo con profesores que enseñan Matemáticas

Resumen: Este artículo es una ampliación del trabajo titulado *Anuncios y denuncias sobre (im)posibilidades pedagógicas y curriculares en la red educativa estatal de São Paulo* publicado en las actas del VI Foro Nacional de Currículos de Matemáticas. El objetivo de este estudio es comprender los impactos y percepciones expresadas en dos entrevistas realizadas a docentes sobre propuestas curriculares implementadas desde 2023 en la mencionada red estatal, con énfasis en el Material Digital del Programa Sala do Futuro. Presentamos las principales acciones que orientan la materialización de esta política educativa, enfatizando las consecuencias del uso de diapositivas del mencionado Programa. Finalmente, desde una perspectiva freireana, analizamos los datos producidos por las narrativas recolectadas, identificando quejas y anuncios sobre la política curricular actual.

Palabras clave: Educación Matemática. Políticas Públicas. Plataformas Digitales.

Educação pública do estado de São Paulo: denúncias e anúncios em diálogo com professoras que ensinam Matemática

Resumo: Este artigo é uma ampliação do trabalho intitulado *Anúncios e denúncias sobre (im)possibilidades pedagógicas e curriculares na rede estadual de educação de São Paulo* publicado nos anais do 6º Fórum Nacional sobre Currículos de Matemática. O objetivo deste estudo é compreender os impactos e as percepções manifestadas em duas entrevistas realizadas com docentes sobre diversas propostas curriculares implementadas desde 2023 na rede estadual supracitada, com destaque para o Material Digital do Programa Sala do Futuro. Apresentamos as principais ações que orientam a materialização dessa política educacional, enfatizando os desdobramentos da utilização de *slides* do referido Programa. Por fim, sob uma perspectiva freireana, analisamos os dados produzidos pelas narrativas coletadas, identificando denúncias e anúncios sobre a política curricular vigente.

Palavras-chave: Educação Matemática. Políticas Públicas. Plataformas Digitais.

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1 Introduction

"Father, take this cup away from me"
(Chico Buarque e Milton Nascimento)

Amid misinformation and regulations that increasingly point to the platformization of public education in São Paulo, the teacher interviewed states that there seems to be *"an architecture of evil"* that limits the possibilities for teaching. In other contexts, amid rumors and gossip, we hear[1] comparisons between the current situation and a dictatorship. It is not hyperbolic, therefore, to begin this paper with the above excerpt: a manifesto against the repressive and authoritarian system during the dictatorship that ravaged the country between 1964 and 1985. In a game between the biblical and the subversive, to escape repression, *chalice* takes the place of *shut up*, an imperative that still permeates the reality of many female teachers[2]. We want to hear them and, through this paper, amplify and publicize their voices, reporting announcements and complaints present in their accounts of the various changes that have been materializing in the daily life of schools and in the Mathematics curriculum of the São Paulo state school system since 2023.

And so, amid an atmosphere that silently screams *shut up and obey*, teachers in São Paulo state schools are dealing with numerous and significant changes announced and imposed vertically, with little or no public consultation. New educational guidelines are revealed to the São Paulo community, commonly through newspaper headlines and publications on official websites, as can be seen in the images below. Excessive use of digital materials and platforms, use of artificial intelligence to develop teaching materials, and tools for evaluating teachers' work based on the time spent using the platforms and the performance of students in external tests are examples of changes in educational guidelines that directly interfere with everyday school life and the possibilities for the curriculum experienced in the classroom.


Monday, April 24, 2023

São Paulo Education offers new digital materials for teachers; watch the video

Teachers now have access to more than 1,400 classes available for direct application in the classroom or content customization.

Figure 1: Headline about the release of digital materials (São Paulo, 2023)

The headlines linked to the introduction of this text characterize a substantial part of the context and concerns that drive the development of the research, the first part of which is systematized in this text. Figure 1 consists of one of the first disclosures about the digital materials made available to teachers in the São Paulo state school system for conducting pedagogical work or, as we read in the subtitle, "direct application in the classroom".

The text presenting the measures that are part of the *Sala do Futuro* [Room of the Future] Program, launched in March 2023, states that its main objective is to contribute to the

[1] It is important to explain that, as different subjects collaborated in the development of this text, the use of the first person plural is intended to reaffirm collective authorship.
[2] It should be noted that we have opted for the feminine grammatical gender for generalizations in the plural, both because women make up the majority of teachers in Brazil (Brasil, 2024) and to highlight the use of language as a tool for maintaining patriarchy and cisheteronormativity.

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improvement of educational indicators, as well as student attendance and *performance*. However, it did not take long for the first flaws to emerge: serious conceptual errors in the content of all subjects (Figure 2), misconceptions regarding the development of skills by age group, and even the use of videos from the Free Brazil Movement (MBL), the same sponsor of the School Without a Party Movement (Figure 3). Although, as the following headlines show, Seduc management sought to hold those responsible accountable and correct the errors and flaws mentioned, the policy still contains the mistake of attempting to remedy poor teaching conditions by offering digital teaching materials designed by people who are not necessarily familiar with the reality of the state school system.


Education

SP says it has removed those responsible for 'serious errors' in slides used in class

Figure 2: Headline about errors found in the *slides* made available (Bimbati, 2023)


São Paulo

The São Paulo government used the MBL video in school teaching materials.

In a statement, the secretariat says that the content was removed from the platform and that a "preliminary investigation" was opened to hold those responsible.

Figure 3: Headline about MBL video on platform (Bernardo, 2024)

It should be explained that, according to Paiva (2021, p. 37), the MBL is "a new nucleus of the Right that, through funding, is capable of spreading false news (*fake news*) as absolute and unquestionable truths [...]" contributing to the spread of conservatism in Brazilian society, including in education.

Furthermore, to illustrate more concretely the materials made available under the aforementioned Program, we present images of the slides that were used in the text disseminating the curriculum policy from which we took the first headline of this text. In them, it is possible to understand the structure of the material made available to the state school system's teaching staff, which is subdivided into:

- 1 — Getting Started (context);
- 2 — Focus on Content (in-depth study and practice); and
- 3 — Applying (replication in different contexts).

With this basic structure, the *slides* guide the pedagogical work, although the policy makers emphasize that all material is editable and can be supplemented or altered by teachers.

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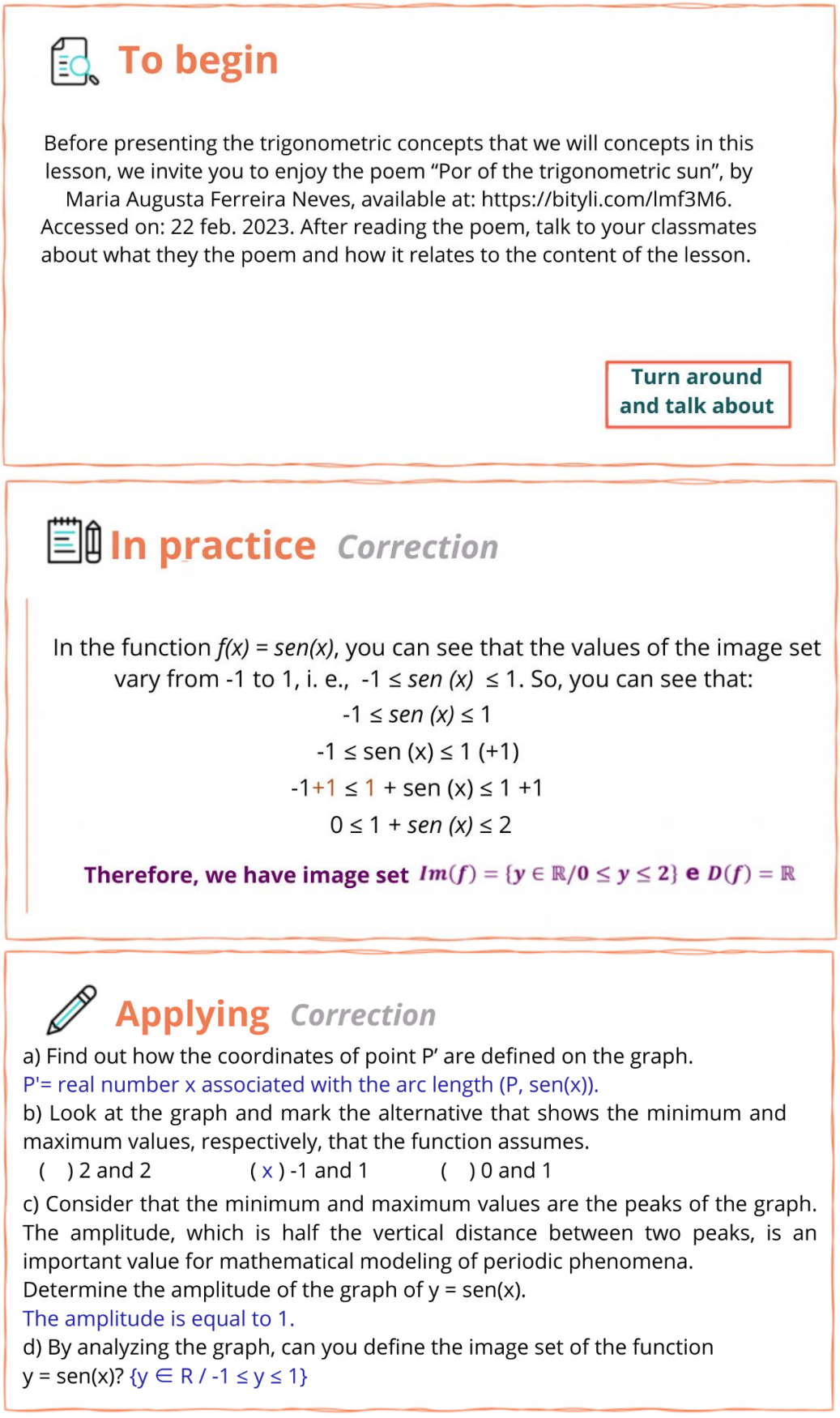

Figure 4: Examples of *slides,* digital material from Seduc (São Paulo, 2023)

To complement this introduction, we also consider it relevant, especially since this aspect will be addressed later, to revisit some of the statements that were made when this

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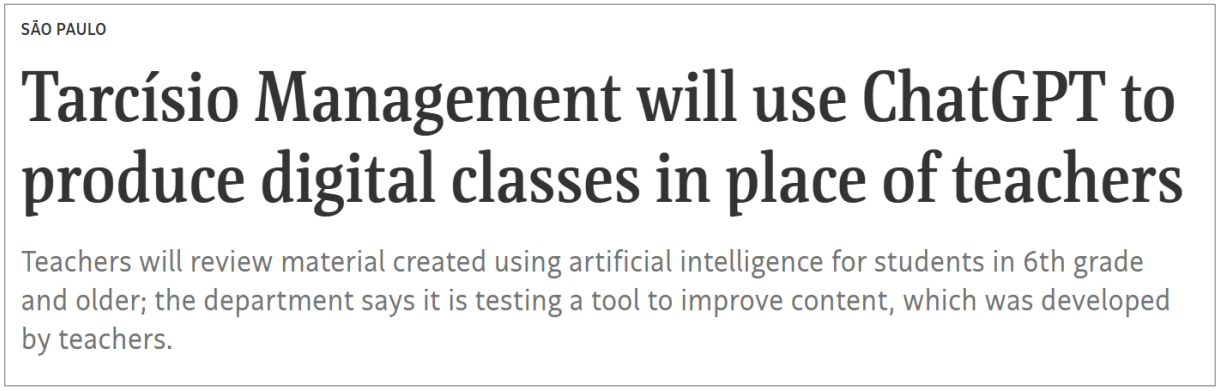
curriculum policy was launched. In this regard, the official Seduc website states that:

> From the student's point of view, the focus of the material is on applying the content, i.e., active learning. For teachers, since the tool is digital, we have created a more effective channel of communication with us, so we can understand any improvements or changes that can be made," reiterates Renato Dias, pedagogical coordinator at Seduc-SP [...].
>
> Starting next bimester, in addition to the exercises included in the material, the proposal is to supplement with extra exercises, so that teachers can offer students a wider repertoire of practice and curriculum alignment. *The goal is for the bimester curriculum to ultimately align with the evaluation of the Prova Paulista* exam. (São Paulo, 2023, s. p., grifos nossos).

We suspect that curriculum alignment does not provide a wider repertoire of practices; on the contrary, it tends to homogenize the curriculum practiced in classrooms in the São Paulo network, favoring a reduction and narrowing of the repertoire of practices that could be available to students in different regions of the state of São Paulo. This point, however, will be revisited later at an appropriate time. The last headline we used to introduce the issue addressed in this text (Figure 5), which is specific to the curriculum management and public education concept of the Seduc administrative management, reveals what appears to be a more developed movement to replace teaching, compromising its creative capacity, which is connected to the dimensions of authority, otherness, and autonomy.


SÃO PAULO

Tarcísio Management will use ChatGPT to produce digital classes in place of teachers

Teachers will review material created using artificial intelligence for students in 6th grade and older; the department says it is testing a tool to improve content, which was developed by teachers.

Figure 5: Headline about the use of ChatGPT (Palhares, 2024)

To explain how this scenario has been understood and how teachers, especially those who teach Mathematics, have been acting in it, we propose to present and analyze the data produced through two interviews conducted with a male teacher and a female teacher from the state school system, in order to capture and interpret, in their own words, the discomforts and possibilities they perceive in this context. Next, we outline the theoretical and methodological guidelines adopted for the development of this article.

2 Theoretical and methodological orientation

In order to organize this theoretical and methodological orientation topic, we will first explain how Paulo Freire's concepts of complaints and announcement (1997, 2012) are constituted in his work and how we intend to mobilize them in the analysis of the data produced in the interviews. Next, we will discuss the interviews in more detail, explain who the participants are, characterize each of them, and present the script of questions that informed the dialogue with them.

It is worth noting that the choice to describe the *theory-methodology* pair in this research

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stems from an understanding of their articulation and inseparability in qualitative research in general. This is not to assert the exclusivity of the articulations woven, but to recognize that they emerged intertwined in the context of this study. In other words, when considering the context in which curriculum policy is immersed in the state of São Paulo, both the interviews, as a way of producing data, and Freire's conceptual, dialectical, complaints-announcement pair occurred to us as possibilities for understanding, based on the voices of teachers in the São Paulo state school system, how they interpret and deal with the guidelines of this policy.

Thus, to introduce the theoretical-methodological orientation adopted, we resort to Freire's statement (1997, p. 671) that

> there is no possibility of thinking about tomorrow, whether near or far, without finding ourselves in a permanent process of "emergence" from today, "wet" from the times we live in, touched by its challenges, instigated by its problems, insecure in the face of the senselessness that heralds disaster, we feel righteous anger in the face of the profound injustices that express, at levels that cause astonishment, the human capacity for ethical transgression. Or we are also encouraged by testimonies of gratuitous love for life, which strengthen in us the necessary, but sometimes shaken, hope.

We chose to introduce this excerpt for two main reasons: first, because we consider it quite illuminating regarding the central purpose of this work, which is to promote reflection on what is currently happening in relation to São Paulo's curriculum policy, considering the "times we live in, touched by its challenges" (Freire, 2015, p. 135). Secondly, because the excerpt also leads us to the pair announcement and complaints. In short, this pair can be understood in its fundamental purpose of "denouncing the dehumanizing structure and announcing the humanizing one" (Freire, 2016, p. 58). However, more needs to be said to conceptually mobilize the ideas of the author, for whom

> when rethinking the concrete data of reality as it is lived, prophetic thinking, which is also utopian, implies denouncing how we are living and announcing how we could live. It is hopeful thinking, for that very reason. It is in this sense that, as I understand it, prophetic thinking not only speaks of what may come, but, speaking of how reality is, denouncing it, announces a better world. [...] I insist that proclamation is not possible without complaint. (Freire, 1997, p. 672).

His insistence on the impossibility of one without the other brings us back to the explanation presented by the author himself that complaint without announcement traps us in a utopian dream of transformation that does not recognize the evils that must be overcome for its realization and implementation (Freire, 1997, 2012). Similarly, complaint without announcement relegates us to the fatalistic immobility that the educator so often criticized as a position of despair, which sees no possibility of change in the face of the unscrupulous force of an unequal and unjust system (Freire, 2016). Thus, we understand that "there can be no announcement without complaint, and neither without the testing of a certain position in the face of what the human being is or has been" (Freire, 1997, p. 672).

In the same text, Freire (1997, p. 671) asks us to move away from the idea that the prophet, the one who announces, is an old man with a long white beard, in favor of understanding him, more and more, as someone "who, based on what he lives, what he sees, what he hears, what he perceives, what he understands, the root of the exercise of his epistemological curiosity, attentive to the signs he seeks to understand, supported by his reading

of the world and of words". Bringing together these perspectives on the complaints and announcement addressed by Freire (1997) allows us to characterize a substantial part of the theoretical-methodological orientation. After all, in addition to positioning ourselves in a contextualized manner in the face of a serious problem currently experienced by the state education network in São Paulo, we seek to recognize what teachers who teach in the network itself denounce and announce through interviews.

To characterize this work from a methodological point of view, we refer to the classic texts by Bogdan and Biklen (1999) and Lüdke and André (1986), as well as studies that challenge methodologies in the field of Mathematics Education, such as Fernandes and Garnica (2021). For these authors, every methodology is a path to be followed, in which different methodological procedures are articulated in the daily routine of academic research. Therefore, explaining them as part of an adopted approach does not imply a naive expectation of universal results, but rather seeks to clarify the path taken in this work. We also understand that

> qualitative research is a systematic activity aimed at gaining an in-depth understanding of educational and social phenomena, transforming socio-educational practices and scenarios, making decisions, and discovering and developing an organized body of knowledge (Esteban, 2010, p. 127).

In this particular study, we used semi-structured interviews as the preferred method for data collection. In this regard, we consider the contribution of Ludke and André (1986, p. 34), who state that

> the great advantage of interviews over other techniques is that they allow for the immediate and ongoing collection of desired information, from virtually any type of informant and on a wide variety of topics. A well-conducted interview can allow for the discussion of strictly personal and intimate matters, as well as complex issues and clearly individual choices. It can allow for the deepening of points raised by other more superficial collection techniques, such as questionnaires. And it can also, which makes it particularly useful, reach informants who could not be reached by other means of investigation, such as people with little formal education, for whom the application of a written questionnaire would be unfeasible.

When we opted for this procedure, we drew up a preliminary script consisting of eight questions. As in any semi-structured interview, this script allows questions to be added, altered, or deleted as the interview progresses, allowing for a more natural and complete interaction. Below is the initial list of questions. We emphasize that the participating teachers had access to this list prior to data collection.

1) Teacher, we would like to start our conversation by asking you to introduce yourself and tell us a little about your teaching experience. When did you join the state school system and at which school(s) have you worked?
2) Next, we would like to hear from you about how state regulations regarding teaching have been working. Can you tell us about your routine at school and how these regulations play out in your daily life?
3) We have heard a lot about the use of *slides* and digital applications, and we would like you to tell us how these changes have affected your work.
4) Still on the subject of curriculum devices and their implications for planning and work,

what impacts would you highlight as most significant?

5) In terms of learning assessment and external evaluation, how do you view these recent changes?
6) In your opinion, have there been any gains from the recent changes? If so, what are they? And any losses?
7) Do you see any impact(s) of these changes on your emotional/psychological condition and that of your colleagues? If so, what are they?
8) Knowing that this interview will contribute to a paper presented at the National Forum on Mathematics Curriculum, would you like to leave a message about curriculum management in the state of São Paulo?

The data was produced from interviews with two people who teach in the São Paulo state school system. The first interviewee, a 53-year-old teacher, has been working in the state school system for at least 16 years, 13 of which have been at the school where she currently teaches. To preserve her anonymity, she will be referred to only as *teacher* throughout this text. Her interview was conducted via video call on the *Google Meet* platform and lasted approximately one and a half hours.

The second participant is a twenty-seven-year-old teacher who works in the state school system as a category O teacher, corresponding to a temporary teacher, although he has already passed the most recent civil service exam to become a permanent employee. He has been working in the state school system for three consecutive years. His interview was conducted via WhatsApp, an instant messaging app, with questions sent in writing and his answers collected in audio format. In both cases, it was necessary to supplement the semi-structured interview script we had proposed. To preserve his anonymity, he will be referred to only as *teacher* in this text.

Other relevant aspects for the presentation of the participants involve the region where they work and the characteristics of the schools where they teach. While the teacher works in an urban school in the state capital, the teacher teaches in the interior of São Paulo, in the Vale do Paraíba region, including a school located in the rural area of his municipality. In addition, there is a significant distinction in terms of the type of school: the teacher works at a school that is part of the Programa de Ensino Integral [Full-Time Education Program — PEI], which extends the working hours of the teaching staff and the study hours of the student body. The teacher, on the other hand, teaches at regular state schools with no connection to the PEI.

3 Development

In this section, we will discuss the analysis of the transcribed interviews, guided by an attempt to identify the changes underway in the São Paulo state education system. The aim is to reveal announcements and complaints about the implementation of new public policies and their impact on everyday school life and the Mathematics curriculum. It is worth mentioning that the analysis of the reports from the *female and male teachers* enabled us to identify and highlight some central elements that express the effects of state curriculum updates, namely: career, control, management, student pace, regulations, and insubordination.

Certainly, each teacher interviewed attributed cognitive and affective meanings to these elements, which enable us to understand the (ir)regularities in the assessment of the public policies discussed during the conversations. In the following analyses, we explore the data produced in the interviews, organizing them around each of these central elements. The interpretation takes place from a Freirean perspective, respecting the dialectical relationship between announcement and complaint (Freire, 1997), discussed in the second section of this

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paper.

Thus, when we denote the element *career*, we see that the *female teacher* and the *male teacher* experienced similar realities throughout their careers. Both denounced that the new school configurations bring instability to the teaching career, making them feel insecure or have difficulties staying at the same school.

The reports are permeated by two dimensions: surveillance and control over the work of female teachers and their increasing allocation to category O — It should be noted that educators in category O are those who were not hired through a public competition and are therefore not permanent and have temporary contracts. In order to elucidate the content of this central element and propose discussions, it is worth highlighting two excerpts from the interviews:

> Teacher: *When the school becomes part of the PEI* [Full-Time Education Program]*, category O is forgotten. They are dismissed. And we were dismissed just like that: "Starting tomorrow, thank you very much, you are no longer part of the school." It's not something that happens in a month, or in 15 days, no! It's starting tomorrow. And that's how the state works. "Starting tomorrow, you are no longer part of the group." And because you are category O and they could only hire permanent staff.*
>
> Teacher: [...] *That's a bit of the reality for category O teachers, especially teachers who have... little time working for the state. It's... we're a bit held hostage by this issue of assignment. So, there's a sense of security because there are almost always classes to be assigned, but we don't have priority in choosing*.

The excerpts above corroborate the information released by Portal G1 (G1, 2024, n.p.) in April, based on data collected by the NGO Todos Pela Educação, which revealed the predominance of temporary contracts in the state education network in São Paulo. The paper highlights the instability of teaching careers under this hiring regime, stating that "In December 2023, almost 10,000 teachers were dismissed. Of this total, 62% were rehired in February".

In addition, in 2024, approximately 40,000 female teachers in category O were not reinstated to their positions, directly impacting the daily life of schools due to their absence. There were also changes in the criteria for assigning classes, which made it difficult for teachers to remain in the same school community from one year to the next (Alesp, 2024). This context reveals the instability that permeates the teaching career, evidenced in the statements of the interviewees in this research, as well as in public and, therefore, political debates.

In the following, we will reflect on the central element called *control*. It is worth explaining that, repeatedly, both interviewees reported situations in which they felt a sense of control, the consequences of which extend beyond their careers, also affecting their classroom practices. In particular, the *teacher* understands control as the feeling of being constantly observed and evaluated, which, according to her, results in a loss of autonomy. She explains that this feeling stems from evaluations of her work and the (non) imposition of the use of *slides*.

For his part, the *teacher* describes control as *"coercion"* practiced by the state over the teaching profession, with the aim of *"stifling"* his work and creating a feeling of insecurity. We can observe these perceptions in the following excerpts:

> Teacher: *But you are monitored in your... in the Teaching Directorate, there wasn't anyone like that before. Today there is someone who controls you [emphasizes]. "Oh, but she controls you to be nice and so that everyone works together and everyone improves education." I don't know,*

> *I'm not there, that may be what they say. I believe that to be the case. But that also holds me back. [...] Of course we change, but I don't like being tied to that, having to justify myself, it bothers me personally.*
>
> Teacher: *And so, there's no internet, obsolete equipment, and an increasing demand for platforms, right? Yeah... well, all of this kind of stifles teaching, because they can monitor everything through this ID card, right? In this ID card, they monitor everything, from access to the platforms, which is a problem, as I said; attendance; it's... tasks that they have an app for called Tarefa São Paulo, but the app doesn't work very well and every time you register the class in the journal, the app automatically assigns a task to the students, right? It's usually a task that is linked to the digital material, forcing several teachers to work with [emphasizes] digital material even in class because they know that the task will be a question from the digital material, and the questions on the Prova Paulista exam are questions from the digital material. So, they do all this to restrict the teacher, you know? [...] there's kind of a... there's coercion, right? on the part of... the state with the teacher in this way. Either it's "You won't get a bonus" or "You won't get any points," so they want to restrict you more and more so that you work on digital material*.

This led us to reflect on digital platforms and the Sala do Futuro [Room of the Future] Program, which have been measures adopted by the São Paulo state school system. The *teacher* suggests that classes designed for the use of platforms *"are not a loss, they are a gain!"*, emphasizing the excellence she believes is associated with these technologies. In her interview, she describes the infrastructure of the school where she works, highlighting the possibility of interactive classes with digital equipment, such as well-equipped computer rooms, and states: *"we have very advanced technology in our school"*. However, this reality is not shared by most state schools in São Paulo. From the conversation with the *teacher*, we noticed how the imposition of the use of digital platforms highlights and transforms differences into inequalities, clarified in this comment: *"It broke, it broke. And so, there is no internet, obsolete equipment, and an increasing demand for platforms, right?*".

Furthermore, although the *teacher* repeatedly expresses satisfaction with the platforms, she highlights her discomfort at having to *"COMPLY [emphasizes]"* with the plan in order to achieve good scores in the *Super BI* assessment, already mentioned by the *teacher* in a previous excerpt. This evaluation is used, in her words, *"so that I can continue in a PEI, to give me a score, to know if I am a good teacher or not"*. It is worth highlighting the monitoring nature of this assessment on the work of the *teacher*, since it investigates *"whether I logged into these platforms, how much I logged in, what my average is, what is the percentage of absences in my class, how they are developing on the platform"*. Therefore, given the complaints from *female teachers* and *male teachers* about the coercive and monitoring nature of these evaluations, especially those related to *Super BI*, we realize that digital platforms are being used to control the work of teachers.

With this in mind, it is worth discussing the central element called *regulations*, present in the teacher's discourse. In particular, he observes that the various and constant regulations issued by Seduc interfere with the teaching and learning process of the student body, generating, in his understanding, a feeling of insecurity regarding the purposes of these guidelines. In addition, the *teacher* perceives a lack of preparation on the part of school management to deal with these implementations. It is worth noting that access to these regulations is difficult, which prevents them from being consulted in their entirety. Furthermore, the *teacher* mentions that:

> Teacher: *The current situation, what I feel as a teacher is... every day, right? Regulations are issued by Seduc and this has a huge impact on the school routine, on school management and on the work of teachers, you know? Usually, there are some regulations that we don't really*

> *understand, so we end up asking each other, right? Even the management. I've even seen supervisors who don't really understand what the regulations mean, you know? So, it comes from the top down, it's totally hierarchical, right? Seduc releases something, and sometimes I feel like it's irresponsible, and the school has to figure it out for itself... to change its... its pedagogical functioning there.*

The above comment reveals instability in the school routine due to changes resulting from the implementation of regulations issued by Seduc. At the same time, another aspect comes to light with this exposure: the confusion that such rules produce. Who benefits from the lack of comprehensibility of these regulations, if not an education system that seeks to instill fear in teachers in the classroom or, in other words, alienate them? After all, if teachers' work is monitored daily by Super BI, through the use of digital platforms, compliance with *online* goals and tasks, and these indicators determine whether or not they remain at the school, uncertainty about how one can/should work influences the limitation of possible teaching practices in the classroom. Who would risk insubordination when their job is at stake?

In addition, another highly relevant issue in the discussion of this central element is the use of slides that make up the digital material. Although there is no legal requirement, duly published in the Official Gazette of the state of São Paulo, regarding the use of these materials, our interviewee's report shows that there are coercive measures to ensure that they are used. As an example, we can mention the bonuses promised for good performance by classes in the Prova Paulista (São Paulo State Test), an external assessment, whose questions, according to the *teacher*, are the same as the "*questions in the digital material*". On this point, we can also quote the following excerpt:

> Teacher: *Now, for the dynamics of the classroom, I think the slides got in the way. Why did the slides get in the way? Because now teachers' classes ARE [emphasizes] the slides; for many teachers, the classes are the slides, right? So, I think that before, he had to have some kind of creativity there, right? Now, several teachers only use the slides. And in another way, they tie the slides to external evaluations and link that to bonuses, right? So all of that is... a combination of things that... that... is a project! It's well designed, you know? It's really evil architecture, you know? They tie up all the loose ends.* [...] There is such a gap between those who propose and those who implement that it doesn't work. But what's really bad is that it could be more dialogical and we could be more efficient in the teaching and learning process, but it's not. Often, management is trying to respond to bureaucracy, and that ties up the whole process.

Furthermore, the *teacher* comments on the implementation of digital materials: "*there are many teachers who just show slides and ask students to copy them. I think they have lost sight of quality, right? [...] in general, the classroom dynamics have worsened [...]"*. Thus, it is possible to note that the *teacher* denounces that the use of these materials can contribute to the permanence of a Banking Education (Freire, 2012) in the classroom routine. At the same time, he announces the need for dialogic pedagogical practices that challenge the technicist educational perspective instituted in Mathematics teaching in Brazil (Rocha, 2001).

Furthermore, based on the central element referred to as *student rhythm*, it can be observed from the teacher's report that the digital materials do not take into account the different learning rhythms present in the classroom. According to her, there is a clear incompatibility and mismatch between the demands of these resources and the reality experienced in everyday school life, which ultimately leads to a feeling of disappointment with the tools provided by the state education network. In this regard, the following stands out:

> Teacher: *I think that everything is very dense now, and there are some skills that children*

> *sometimes haven't acquired, and then you have to quickly teach them so that they can achieve what the government wants. Or what the government requires. Or... or the path they're directing us down, right? [...] And to give you a concrete example, today I went to work on the MatiFic platform and there were already some... lessons, and as soon as the child opened it, they were given things that I hadn't worked on, for example, I hadn't worked on prisms, I hadn't worked on pyramids, for a child in their first year, for example. [...] they already uploaded it as if I had taught on Monday, Tuesday, and Wednesday, they already uploaded it for the children... the material on geometric solids. And in fact, we are in recovery, so I'm not teaching any of that. What am I teaching? I'm reviewing the numerical sequence for those who still had difficulty, for those who did not achieve the skill. I'm at a different stage, which is what I said yesterday, that sometimes the class isn't at the stage that the state is asking me to reach those goals that week. So, today exactly what we were talking about happened. So it changed, it changed a lot. And I think it needs to be reviewed thoroughly* [emphasizes].

It is worth noting that the mismatch between the reality of the classroom and the material provided by the state appears several times in the *teacher's* statements, as exemplified in the excerpt above. She announces her intention to respect the children's development and shows concern about the difficulties faced in the current scenario. However, she finds flexibility and alignment with the management of the school where she works, which allows her not to follow the state curriculum guidelines uncritically. When making selections and adaptations to the digital material and the use of platforms, she hears from management: "*Don't worry, everything is okay*". Even so, despite this support, our interviewee reveals her fear of subverting the system: "*No, I don't believe it... The government is very strict, you have to follow the rules step by step*".

In this regard, it is useful to discuss the central element of *management*. For the *teacher*, good school management ensures a good working environment. In particular, she highlights feelings of satisfaction and communion with the people responsible for managing the school today. In addition, she suggests that alignment with managers "*makes a difference*," giving teachers more autonomy to act and "*intervene*" in the classroom, especially regarding the use or disuse of *slides* planned by the state. This is evident in this excerpt:

> Teacher: *So, we are very much on the same page, and that makes all the difference. So, I had no problem advancing slides, omitting or not showing a slide, or not going into something and playing my games, making my interventions in the classroom, because the coordination team is watching, they know what I do based on reports and what we agreed upon. [...] The dynamics they sent me, the structure they sent me initially bothered me, I modified it, I had support, and it worked, because I didn't think it was the right time.*

From the above report, there is a complaint about the mismatch between digital material and the reality of the classroom — also pointed out by the *teacher*, as we will see below — at the same time that the *teacher* announces the effectiveness of good management to ensure respect for different learning rhythms and support her in taking a creatively rebellious stance, in the words of D'Ambrosio and Lopes (2015), in the face of current curriculum impositions. It should be explained that, for these authors, creative insubordination is an act of responsible subversion, "legitimized by focusing on professional practices grounded in ethical foundations" (D'Ambrosio and Lopes, 2015, p. 3). Thus, in the face of curriculum guidelines that disrespect the learning pace of the student body, "daring to create and take risks in teaching stems from the desire to promote learning in which students attribute meaning to mathematical knowledge" (D'Ambrosio and Lopes, 2015, p. 2) and, therefore, constitutes an act of creative insubordination.

Next, we present another moment in which the *teacher* denounces the consequences of the implementation of a pre-planned school calendar with standardized content for the entire

state of São Paulo. These pre-planned classes disregard the particularities of each region of São Paulo and the individualities and complexities of the school community, both in relation to people and to school units. Dialectically, the *teacher* announces what she has been doing in the face of the daily contradictions she experiences.

> Teacher: *Okay, I'll do what they want. I'll open the slide here, right? I'm here on the date they want, more or less. Because I imagine you've already seen how the platform works, right? Lesson 1, Lesson 2, Lesson 3... what do you do? You follow the sequence of dates and then continue. So, that lesson that should have been the first, I don't know, was the fifteenth, seventeenth. So, has that lesson already been taught? It has, okay, I'll do it again in a different way.*

Given this, we can focus the discussion on statements and complaints related to the central element of *insubordination*. As the interviews are presented and analyzed, it becomes clear that the interviewees express themselves as subversive and creatively insubordinate in relation to state curriculum requirements. Furthermore, we can highlight another statement by the *teacher*: *"Man, that's not what I believe in pedagogically, I'm not going to work with these materials that are... that often have conceptual errors, made in a hurry, right? Or in a way that is disconnected from the reality of the school"*. We can attribute feelings of revolt, pride, and self-confidence to this statement, associated with the complaint of the questionable quality of digital materials and the resulting pedagogical disagreement. With this, a new announcement is made: in view of the current education system in the São Paulo state school system, which does not offer adequate curriculum conditions to deal with the specific realities and needs of each school, the act of creative insubordination is imperative and necessary.

4 Nevertheless, where is the Mathematics in all of this?

It is possible to observe that teachers of any subject in the São Paulo state school curriculum may question the allegations and announcements we present, as they interfere in everyday educational practice, dictate what content will be discussed, and impose a standardized learning pace on the entire student body in the state of São Paulo, in addition to associating the use of digital tools with performance indicators. Thus, we recognize that research on this state context, impacted by public curriculum policies, is of interest to Mathematics Education and other areas of study, both in the state of São Paulo and in other Brazilian states, to teachers and others involved in school activities or the school community. Admitting and validating the collective interest, which, for this very reason, also becomes individual, we must ask ourselves: what about complaints and announcements directly related to the Mathematics curriculum?

For Corazza (2010), curriculum affect and are affected by, produce and are produced by networks of power, and are therefore loaded with intentionalities. Given this, we ask: who is interested in implementing the curriculum changes that have occurred in the state school system in São Paulo? More than that, it is pertinent to investigate the interference of such updates in the Mathematics curriculum. We use here the capital letter and the singular form of Mathematics to refer to that discipline, which is still Eurocentric and the only one legitimized by the Brazilian education system. Based on the analysis of the interviews presented in the previous section, it can be observed that the use of current digital material, for example, can provide experiences in traditional Mathematics teaching, that which approaches the subject in a technical manner and lacks critical thinking.

Furthermore, in digital materials, we observe a teaching of Mathematics that does not keep pace with the reality of schools and is out of step with the learning rhythm experienced in

practice. The time allocated for discussions about Mathematics, as defined by the Seduc digital material, does not contribute to the development of mathematical discoveries or to the mitigation of difficulties occasionally encountered in the school trajectory, as they are part of the process of discovery inherent in the acts of learning and teaching.

This brings to mind the report on page 12, in which the *teacher* complains about being required to teach geometric solids, a new topic that was part of a Matific assignment, even though many students had not yet achieved the expected skills in numerical sequences, the previous content that needed to be completed. What is being said through the digital platform, that is, what is being imposed in practice, is that there is a state schedule to be followed, that what matters is the amount of content dictated and recorded as taught, and that one should not be concerned with the quality and particularities of the teaching and learning process. This contradicts a reflective and critical stance, which occurs in a non-linear manner because it arises from processes that influence social interactions (Oliveira and Pereira, 2020).

We cannot fail to mention the complaint made by the *teacher* about screen time, an issue that affects the entire student body in the state school system. To this end, she announces something fundamental: making classes playful, in order to bring Mathematics closer and more appealing to people, so that they develop a taste for mathematical studies.

> Teacher: *So, [think] I think that math is... it's very complex, right? And I don't like to see children who... say, like in our generation, "Oh, I don't like math. Oh, I don't understand math." From the moment math becomes playful, from the moment you have recreational math, where you have to see this new concept of math, I think it changes the classroom.* [...] So, I think that in terms of the curriculum, we have to think about more activities, that are more playful and all tied together. I'm not saying that we should get rid of screens or books. No. Because they all have their place, they need to exist, because they are part of everyday life. So, I think it's worth thinking about the playful aspect, especially in Mathematics.

As for the recreational activities and recreational Mathematics mentioned by the *teacher*, we understand that these pedagogical experiences result from a teaching approach that aims to

> encourage relationships, especially emotional and social ones, as well as promoting critical thinking, mediating between students and knowledge. Without a doubt, the use of playfulness in the classroom, whether in Mathematics or any other subject, is an interesting possibility.[...] (Silva, Souza and Cruz, 2020, p. 5).

In this regard, in the last excerpt from the interview with the *teacher*, she announces opportunities for pedagogical activities related to recreational activities as a counterbalance to digital activities, which necessarily result in visual exposure to electronic device screens. As a consequence, she denounces that the more time spent reading *slides* and performing *online* tasks, the greater the exposure.

In this vein, the voices of students present at the meeting between Seduc coordination teams and principals and students from state schools, who are part of a program called Gabinete 3D, add to this complaint. At this meeting, which took place from August 26 to September 4 this year in Campinas, a student, when asked by Secretary of Education Renato Feder if the digital platform helps her in her learning or if they only use it to raise the school's assessment scores, citing the Super BI panels, replied that there is *"a lot of pressure on us students"* (Giannazi, 2024, s. p.) and cites several digital platforms that are part of her and her classmates'

daily school life. She concludes by reporting fatigue and lack of time to breathe and rest, denouncing that this pressure even invades her home space due to the excessive amount of digital demands.

It is clear that these guidelines limit teacher autonomy, as the imposing routine of pre-programmed *slides* for each class leaves no time for issues specific to that community to emerge in everyday school life; it does not allow time to stimulate creativity, questioning, and the process of discovering knowledge. There is no time for criticism of social issues that permeate and shape relationships and that often manifest themselves in the daily life of the classroom. These are issues that Mathematics Education can and should address.

Furthermore, with the aim of systematizing the dialectical pair of complaint-announcement for each central element identified and reiterating the impossibility of one existing without the other, we have prepared Table 1 below.

Table 1: Analysis of the central elements based on the complaint-advertisement pair

Element analyzed	Identified complaints	Advertisements identified
Career	Instability, predominance of Category O contracts, which culminate in a scenario of teacher shortages, changes in class assignment criteria, and difficulty in remaining at the same school from one school year to the next.	Urgent need to hire permanent teachers and change the criteria for assigning classes.
Control	Constant monitoring and evaluation of teaching work and student access to digital platforms, which highlight and transform differences into inequalities and limit pedagogical experiences.	It is necessary to respect and provide, in practice, autonomy for the teaching profession.
Regulations	Instability in the school routine due to numerous regulations that interfere with daily life, management unpreparedness to deal with these implementations, perpetuation of a banking model of education (Freire, 2012).	Need for dialogic teaching practices that challenge the technical perspective on education.
Student pace	Incompatibility and mismatch between digital materials and platforms and the reality of the classroom, damage to the teaching and learning process due to the materialization, through slides, of a calendar with unified content for the entire state of São Paulo.	It is necessary to respect the development of the student body and expand experiences and recreational activities.
Management	There are different approaches among school management teams. Some agree with changes to digital materials and curriculum guidelines, provided they are pedagogically justified, while others recommend the uncritical implementation of guidelines.	There is a need for alignment between the school management team and the teaching staff.
Insubordination	There are subversive and creatively insubordinate agents (D'Ambrosio; Lopes, 2015) in relation to curriculum impositions due to pedagogical disagreements regarding the materials made available.	The act of creative insubordination is imperative and necessary!

Source: Research data

5 (In)conclusions and (dis)appointments

The universalization of teaching methods amplifies the inequalities intrinsic to the historical construction of (Mathematical) Education. It is important to remember that "teaching and learning are not universal or neutral endeavors [...]" (Gutiérrez; 2018, p. 1), which makes it essential for Mathematical Education to be concerned with the contexts in which it will be practiced. Furthermore, Gutiérrez (2018) argues that there are different ways of doing Mathematics, linked to individual realities, although schooling tends to nullify those that distance themselves from universalized Mathematics in order to homogenize what is legitimized as Mathematics. This process operates through dehumanizing practices, as it hurts the identities of students and teachers by attempting to establish a single and exclusive conception of Mathematics.

Congruently, D'Ambrosio (2011) observes that this universalization, in fact, represses the individualities of the cultural spaces in which Mathematics is inserted, concentrating it as an instrument imbued with power, ensuring the exercise of a domain, according to which:

> The historicity of both the dominated individual and their culture is eliminated. Their reality is replaced by a situation that is idealized to satisfy the objectives of the dominator. Students have their cultural roots, which are part of their identity, eliminated. This elimination produces the excluded. (D'Ambrosio, 2011, p. 211)

Based on the results of this study, complaints and reports from teachers in the São Paulo state school system reveal Seduc's lack of concern for the territorial and individualized realities of schools and students. The Mathematics curriculum is constantly being reformulated with new implementations, without considering local specificities. Thus, it is urgent to rethink the regulations that guide Mathematics teaching, aiming to mitigate inequalities in educational processes. This research highlights the importance of listening to those who experience the classroom — teachers, students, and other members of the school community — to critically evaluate the impacts of educational policies, especially in the curriculum, where issues related to Mathematics stand out.

Similarly, other states have adopted curriculum policies that incorporate various digital tools into their routine, aligning themselves with a business vision of education. The state calendar of pre-planned lessons for all subjects, for example, limits teachers' ability to expand on the content presented in the slides. This calendar is part of the daily routine in the state school system, contrasting with a calendar that allows for teacher autonomy and respects different learning rhythms, as well as the processes of subjectivation in the subjects.

Furthermore, the numerous changes have influenced the instability of the teaching career, imposing control and coercion on pedagogical practice. However, attitudes of creative insubordination have been proposed, announced, and practiced by our interlocutors and emerge as resistance and manifestation of disagreement with some of the guidelines imposed by Seduc. There is also an urgent need for effective school management support for the teaching staff's concerns regarding the new curriculum requirements. Thus, we can say that we are witnessing the continuation of a project that destabilizes public education by widening social gaps.

Furthermore, we point out that the complaints regarding the control exercised over the work of teachers point to the need for further studies that examine the recent changes in curriculum and educational policies in Brazil, specifically the Super BI, in the case of São Paulo, in order to understand its planning and implementation, as well as its effects on teaching work and everyday school life.

Conflicts of Interest

The authors declare that there are no conflicts of interest that could influence the results of the research presented in the article.

Data Availability Statement

The data produced and analyzed in the article will be made available upon request to the authors.

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