

CHALLENGES IN SCHOOL-BASED TEACHER PROFESSIONAL DEVELOPMENT: BUILDING LEARNING COMMUNITIES AND CAPTURING CLASSROOM DIALOGUE

DOI: 10.47677/gluks.v22i2.365

LAGO, Leonardo¹
CAMILLO, Juliano²
MATTOS, Cristiano³

ABSTRACT: Teacher education has a long tradition of prescriptive curriculum-based and skills-centered models that convey simplistic conceptualisations of teacher learning. Only recently, this trend has shifted towards promoting teachers' agency in their own professional development. In this work, we reflected on the challenges faced while building one partnership based on teachers' inquiry during and over the pandemic. The intervention was targeted to promote classroom dialogue and should have employed the use of video recordings to capture and analyze teachers' practice. The main point addressed here was the teachers' tacit rejection of the video recording and the building of a new tool. Moreover, the cordial culture among teachers and researchers did not offer space for critical reflection on practice. Overall, despite the school leadership being willing and committed to the programme, the implementation revealed how the schooling system does not value or create conditions for TPD.

KEY WORDS: Classroom dialogue, Teacher professional development, Peer observation, Agency.

1 Pós-Doutor pelo Programa de Pós-Graduação em Educação Científica e Tecnológica (PPGECT) da Universidade Federal de Santa Catarina (UFSC) e Doutor pela Faculdade de Educação da Universidade de Cambridge. ORCID: <https://orcid.org/0000-0002-3143-1757>. Lattes: <http://lattes.cnpq.br/0571824693004618>. E-mail: lago@alumni.usp.br

2 Professor do Departamento de Ensino e Práticas Culturais da Faculdade de Educação da Universidade Estadual de Campinas (FE/UNICAMP). Docente Permanente do Programa de Pós-Graduação em Educação Científica e Tecnológica da Universidade Federal de Santa Catarina (PPGECT/UFSC). ORCID: <https://orcid.org/0000-0002-3169-0572>. Lattes: <https://lattes.cnpq.br/0786352047518707>. E-mail: jcamillo@unicamp.br

3 Livre docente pelo Instituto de Física da Universidade de São Paulo - USP. Professor do Departamento de Física Aplicada (IFUSP) e do Programa de Pós-Graduação Interunidades em Ensino de Ciências (USP). ORCID: <https://orcid.org/0000-0001-5927-8742>. Lattes: <http://lattes.cnpq.br/2358000738423643>. E-mail: crmattos@usp.br

Introduction: forms of delivering professional development and classroom dialogue

In the past, teacher education was strongly based on prescriptive curriculum-based and skills-based models and consisted of discrete activities such as workshops, lectures and training courses (Clarke & Hollingsworth, 2002; Desimone, 2009; Saviani, 2009), in which simplistic conceptualisations of teacher learning were used (Opfer & Pedder, 2011). For instance, believing in unidirectional and causal effects, many programmes have attempted to change teachers' beliefs in hopes that these changes would transform classroom practices (Clarke & Hollingsworth, 2002). Only recently has this trend shifted towards promoting teachers' agency in their own professional development (PD), although managerialism and control in public policies have also increased (Parr, 2004; Wells, 1999).

Researchers have acknowledged teaching as a complex activity. Accordingly, teacher professional development (TPD) has been viewed as encompassing multidirectional and multicausal processes that involve learning (Opfer & Pedder, 2011). This understanding frames learning as interactive and embedded in social events teachers' professional lives and working conditions (Desimone, 2009; Opfer & Pedder, 2011; Putnam & Borko, 2000). As a result, PD programmes have been considering teachers as active learners that lead their growth through reflective participation (Clarke & Hollingsworth, 2002). However, the implementation of such an approach is far from being easy and unproblematic.

The aim of this work is to consider the challenges faced when implementing a school-based participatory TPD programme for dialogue. Employing cultural-historical activity theory as a theoretical framework for formative interventions, we discuss some of the reasons for the partial failure in changing the ways in which teachers engaged in the programme. For instance, we focus on materiality which is necessary to frame and deeply analyze classroom dialogue as a formative tool.

Features of active and participatory TPD programmes

All effective TPD programmes adhere to the main messages from the literature: the focus on reflective inquiry into teachers' practice (Desimone, 2009; Guzmán & Larrain,

2021). This strategy is partly grounded on Schön's (1983) notion of 'reflective practice', in which teachers become aware of their knowledge and assumptions, carry out collective studies and try new actions while building new understandings (Finlay, 2008). Other programme features are active learning, collective participation, long duration, feedback on class planning and coherence with teachers' contexts (Desimone, 2009; Wilkinson et al., 2017).

Within this context, collaborative action research has become popular. This is an approach for addressing immediate problems in school through context-driven inquiry and generation of knowledge (Clark et al., 1996; Wells, 2011). Mercer (1995) explained that, in such an inquiry process, a teacher "takes on the reflexive role of a researcher of their own practice" (p. 119), gaining critical and theoretical insight and becoming able to act consciously in their actual situation. The process is said to be 'collaborative' when done with other teachers and/or researchers during regular meetings (Frost, 1995; Wells, 2011). When an academic researcher is involved as a facilitator, it may also be labeled a university-school or teacher-researcher partnership (Grau et al., 2015; Nilsson, 2008) or even a research partnership (Hennessy et al., 2011).

While action research is considered authorial and reasonably independent, in more controlled teacher-researcher partnerships, the guidelines for teachers' reflection and action are defined by the external researcher. As such, it is important to recognise the issue of researcher control and differential power exerted by the participants.

In participatory TPD, both practitioners and researchers contribute with their expertise when they jointly frame the problem, analyze recorded data, investigate the issue theoretically, and propose and trial solutions ('formative intervention' in Engeström, 2011). This approach involves analysis of personal practices through self or observer examination that comprise productive learning experiences (Desimone, 2009; Dillon, 1994; Putnam & Borko, 2000). The strength lies mainly in the exchanges of skills and knowledge among participants, in a space where teachers can have opportunities to theorize their teaching while enhancing expert thinking about real classroom practices (Hardman, 2008; Hargreaves et al., 2003). In an open context like that, teachers may think through new ideas, try out new

practices, get feedback, and refine their practice (Smith et al., 2004), while increasing their sense of ownership of the professional development process (Mroz et al., 2000).

Aiming at scalability and autonomy, many TPD approaches have been constructed under the notion of professional learning communities (PLCs). In a few words, these communities are about committed educators who meet regularly at school to work collaboratively with the aim of improving teaching-learning and assessing their practice using formative data (Brown et al., 2018). The term community points to the interpersonal relationships among members as there is the vision of establishing shared power and collective decision making (Nkengbeza & Heystek, 2017). Overall, two main formative processes are addressed during the meetings; collective learning and shared personal practices (Ning et al., 2015). While the former emphasizes teachers' professional advancement targeted at best teaching strategies, the latter offers opportunities for teachers to participate in activities such as peer coaching, classroom observations, inquiry and discussions. Many factors may impact the effectiveness of this approach, such as time and budget limitations, the development of relationships and roles with motivated, open, friendly participants, and ownership and accountability (Elliott, 2005; Grau et al., 2015).

Video recordings as a reflective tool

Much recent research has recommended the use of video recordings of lessons as a means of promoting critical reflection on practice (Borko et al., 2008; Coles, 2013; Gröschner et al., 2015; Hennessy & Davies, 2020; Reznitskaya & Wilkinson, 2020; Smith et al., 2004). Examining videos from a teacher's own lesson has proved itself a powerful tool to promote 'reflection-on-action' (Borko et al., 2008). The analysis of lesson recordings helps teachers notice and interpret classroom interactions by making the indicators and issues accountable (Borko et al., 2008; Wells, 2011).

However, examining video episodes does not always lead directly to gaining new insights on practice -- even when this occurs, it may not result in improved practice (Brophy, 2004 cited in Borko et al., 2008). The ability to notice and interpret events in classroom lessons can be taught to teachers. For instance, teachers can get better at noticing, shifting the

attention from what they were doing to what the students were saying and thinking, and making fewer judgmental comments and more interpretative ones (Sherin & van Es, 2008; van Es & Sherin, 2002).

Depending on design and teacher willingness, reflective and collective analysis can occur exclusively between teacher and researcher during a kind of interview (Sedova et al., 2016) or involving the collaboration of other participants (Kiemer et al., 2014). In both cases, the video clips were collaboratively analyzed, focusing on specific issues. More recently, TPD programmes have proposed that teachers do the video inquiry on their own or through their school team (Calcagni, 2020; Kershner et al., 2020).

Research on classroom dialogue

Nowadays, there is a consolidated research area known as classroom dialogue or dialogic teaching that relates features of discursive interaction that foster learning (Resnick, Asterhan, & Clarke, 2015). For instance, open questions, participating in collective reasoning, and avoiding sharp evaluations are considered productive forms of interaction. This educational research can be traced back to the 1970s, initially employing quantitative methods based on systematic observations and codification. At this time, it was identified that the most common feature in any classroom dialogue is a triadic sequence referred to as initiation, response and feedback or evaluation (IRF or IRE – Mehan, 1979; Sinclair & Coulthard, 1975). Surely, the availability of audio recording and digital technology has boosted the way researchers can collect and analyze discursive data.

Regarding interventionist research, in which teachers are trained to implement new forms of interaction, the results are promising. Many studies have found that teachers can change their communication approach with students towards a more dialogic nature (Gillies, 2015; Lyle, 2008; Sedova, Svaricek, et al., 2014; Wells, 2011). Evidence suggests that dialogic teaching can improve pupil outcomes such as knowledge gains and participation (Howe et al., 2019; Sedova et al., 2019).

Despite not having a systematic characterization of classroom activity in Brazilian schools, it might be said that it still follows a teacher- and content-centered approach. Paulo

Freire (2005) named this monologic form of education as 'banking model', and, since then, many scholars have seconded him in the context of historical studies and critical theory (Leão, 1999; Rosa & Rosa, 2007). Discursively, the teacher's acts are to make 'knowledge deposits' in students' minds, who receive, memorize, and repeat.

In fact, findings obtained from teachers' interviews revealed some details of this scenery. For example, there is a lack of inquiry activities, the curriculum organization is closely tied to pre-established scripts, and the teaching common practice is lecturing to knowledge transmission (Maluf, 2000; Rosa et al., 2007). One may expect that a wide survey on classroom dialogue would find similar results as in Newton et al. (1999); the predominance of teacher exposition and the scarcity of open discussions.

Taking the relevance of productive classroom dialogue in promoting learning, the rationale behind this study is to understand the difficulties (barriers) of implementing a talk-intensive approach to teaching and learning in the Brazilian context. To do so, a TPD programme was conducted and its outcomes in relation to teachers' engagement is the focus of this paper

Methodology

Research context

As said above, this work analyses some aspects of an interventionist project carried out in a municipal public school through a researchers-teachers partnership. The aim was to promote a school-based TPD for dialogue. Teachers were invited to take their own classroom practice as an object of inquiry, focusing on improving classroom dialogue through dialogic strategies. Video recordings of the lessons and collective discussion around them were assumed by the researchers as a central tool. As proposed by Moyles et al., (2003) video-stimulated reflective dialogue is seen as a tool for both professional development strategy and research.

Considering the Brazilian context, in which lesson recording and collective analysis is not a typical activity, the project intended to build a professional learning community that could be sustainable. Thus, the implementation would create a comfortable and respectful

environment for the video analysis to happen, seeking to overcome fear and estrangement due to the video recordings. To build a culture of mutual respect and responsibility, the researchers defined a set of guidelines that should mediate their interactions with teachers: (i) to respect and value teachers' voices while balancing participants' perspectives and priorities; (ii) to guarantee comfort and security for teachers' contributions while offering support and constructive criticism; and (iii) to promote a group discussion in which ideas can emerge, circulate, and align with participants' perspectives (Hennessy et al., 2011).

Theoretical framework

The analysis we develop here is grounded on Cultural-historical Activity Theory (CHAT), which is a fertile framework to approach teacher education and its "persistent challenges and unanswered questions" (Anderson & Stillman, 2013, p. 13). It is worth noting that CHAT does not stand for one single or consensual theory. Rather, emphasis in diverse theoretical and methodological aspects has been given by researchers in order to grasp a myriad of research problems in education, philosophy, psychology, anthropology, social movements among many others. Understanding CHAT as a project in continual development, what comes next is a small part of such theory in which we situate ourselves (and help to develop it) to analyze the complexities of building communities for learning in teacher education.

In a nutshell, CHAT provides tools to conceptualize human actions (and evidently, activities) not individualistically, but as part of a complex system that is concretely situated, historically formed and future-oriented. Subjects are continuously and collaboratively changing the world, relying on cultural tools that become increasingly complex throughout human history (Stetsenko, 2017). Activity, as such a collaborative process "is at the origin and is formative of everything that is human in humans, including their psychological subjective processes and the knowledge produced by them." (Stetsenko, 2008, p. 483).

CHAT is known for its emphasis on the object-oriented nature of human activity. Primarily, in this context, the object of an activity is not simply an entity that exists in reality by itself. On the contrary, objects are uninterruptedly being produced by subjects through joint-activities, pursuing common goals and projects. In this sense, objects might be "sources

of attention, motivation, effort, and meaning” (Engeström, 2008, p. 3) and synthesize toward what activity is directed.

When analyzing teachers' actions within the TPD, it is mandatory to take into account that any training programme is included in a category of courses that carries the potential but also the tensions and contradictions accumulated historically. The action of a teacher within our programme is inevitably beyond this specific course. It is related and constrained to their activity within the school, to the group of teachers in relation to other programmes in which they participated, and to the structure of the school and so on.

Engeström’s (2015) formulation of CHAT introduces a triangular schema to depict ‘what is going on’ in a human activity; that is, the material and social-cultural conditions, the tools and subjects involved in the joint/coordinated actions toward an object/outcome (Figure 1).

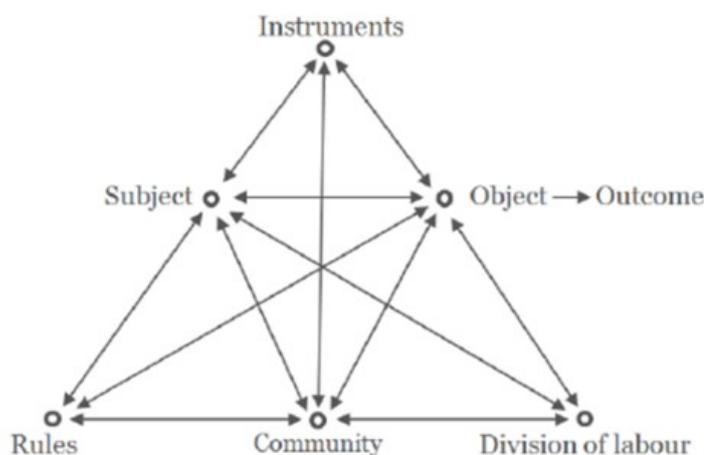


Figure 1: The structure of human activity (Engestrom, 2015).

This model highlights that the relationship between subject-object within a community can only be understood as part of a system permeated by mediating tools (accumulating human experience and becoming means for action); collective traditions, values and rules; and submitted to the division of labor (expressing power relations). Importantly, the triangular schema itself does not coincide with the analysis, nor does it undoubtedly lead to the research conclusion. Quite on the contrary, the schema is significant only to the extent it can operate

the unity of analysis, whose developmental change is an “immanent feature of a system rather than in terms of externally produced cause-effect relations.” (Roth, 2020, p. 20).

No less important, when taking CHAT as framework, the emphasis on the collective nature of human activity should not obfuscate the agentic role of individuals in the transformation of social practices, as “each individual acts from a unique socio-historical position (standpoint) and with a unique commitment (endpoint), though always coordinated and aligned with the social projects/practices to which this commitment contributes.” (Stetsenko, 2013, p. 15). In this perspective, individuals are not merely “situated in the world” (Stetsenko, 2017, p. 247) as passive entities just in the process of adaptation, nor the social (or collectivity) is a mere collection of isolated individuals or ahistorical (given) structure to which individuals must fit in. Individual and collective dimensions are not in rigid opposition: human subjectivity and other human potentials are the “achievement of [...] togetherness.” (Stetsenko, 2020, p. 6). This is particular important when we are intended to build a professional learning community.

From that, considering our purposes here, relaying on CHAT allows us to:

Describe the activity of teacher professional development, as the unity of analysis;

- Identify the interrelationships among multiple subjects and their actions;
- Identify elements from other activities that may affect teachers’ engagement;
- Re-design elements of traditional TPD programmes towards a more participatory, active and reflexive nature;
- Diagnose the agentic role of the participants in the TPD;
- Analyze the outcomes of the implementation of the TPD programme contending “new and unusual” features.

Research design and data

The one-year programme comprised eight meetings led by researchers and held in a countryside public school in Santa Catarina. Having all teachers available for the meetings caused demands for the system; for instance, the students were sent back to their homes, and

parents noticed beforehand. The group of around twenty teachers did not keep constant over time. We started the PD during the pandemic; when five online meetings facilitated the agreement around the agenda and reduced the costs of visits. However, the interpersonal relationships were colder and did not contribute to building a trustworthy community. The other three in-presence meetings were more productive.

The first meetings aimed to establish the grounds of dialogic teaching and presented some strategies to organise and orchestrate whole-class discussions. The main goal was to construct the view that dialogue is a teaching tool that can be operationalised and mastered. As the programme developed, the meetings were intended to be reflective discussions where teachers have opportunities to theorise their teaching, analyse their practice and express their voices. Below, we see that such an expectation was not realised.

The data comes from interviews (three teachers and the school leadership) and the collective discussion in the final TPD meeting when it was proposed to reflect upon the obstacles faced over the intervention.

Results and Discussion

Viewing TPD through the activity system lens

Traditional Teacher Professional Development: prescribed structure and passive learning

Traditional TPD usually employs lectures or short-term workshops held in auditoriums; they are cross-school big and events structured by the secretary of education. Teachers from different schools attend the same training course, which the guidelines, processes and tasks were defined externally. In general, models of teaching that have little relationship with the concrete reality of these teachers or schools are presented and discussed. There is a tendency toward managerialist approaches to professional development, intended to address the needs perceived by bureaucrats including: (i) content and practices that are closely tied to existing student learning outcomes; (ii) an increased (and narrower) focus on “practical matters”; and (iii) the tailoring of programmes to satisfy requirements for greater accountability in teacher learning. (Parr, 2004)

Such a traditional approach to developing teachers’ practices (object) can be framed as an activity system with the following features (Figure 2): teachers (subjects) are submitted to rules controlled by the secretary of education in closed programmes much based on

lecturing, theories, curricular materials and official documents (instruments). Although the community is constituted by the teachers, tutors, school leadership, and municipal managers, the division of labor is hierarchical and vertical, making little room for teachers' agency and voice.

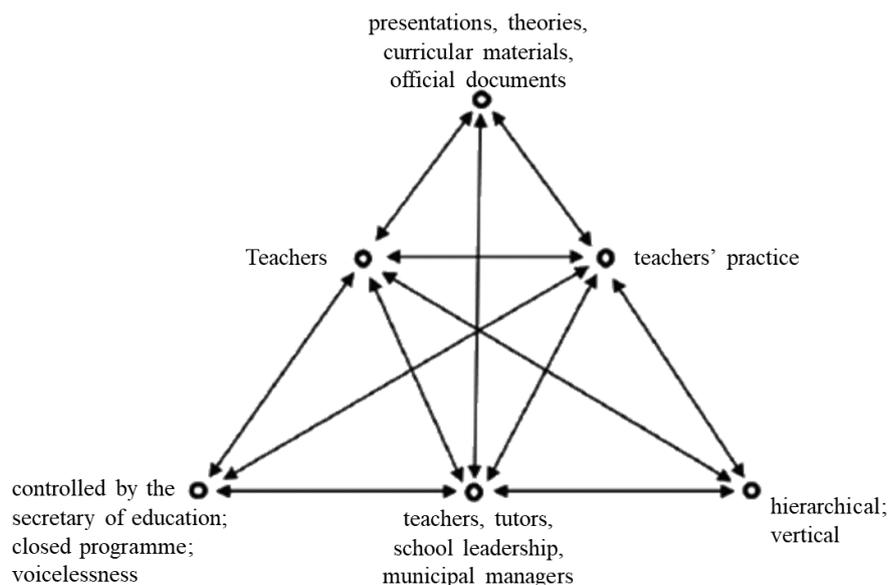


Figure 2: Activity system of traditional TPD.

This approach reinforces passivity, ready-made products to be applied, context-independent solutions, poor theorization and reflection about the implementation of strategies. Teachers are seen as technicians in the service of implementation.

Participatory Teacher Professional Development: reflexive practice based on learning communities

Recent conceptualizations of teacher education have been posing teachers as autonomous and agentic professionals who are encouraged to engage in collaborative forms of teacher-led professional learning (Sachs, 2016). In its turn, a participatory TPD programme based on action research, reflexive practice and learning communities might present different features when framed as an activity system (Figure 3).

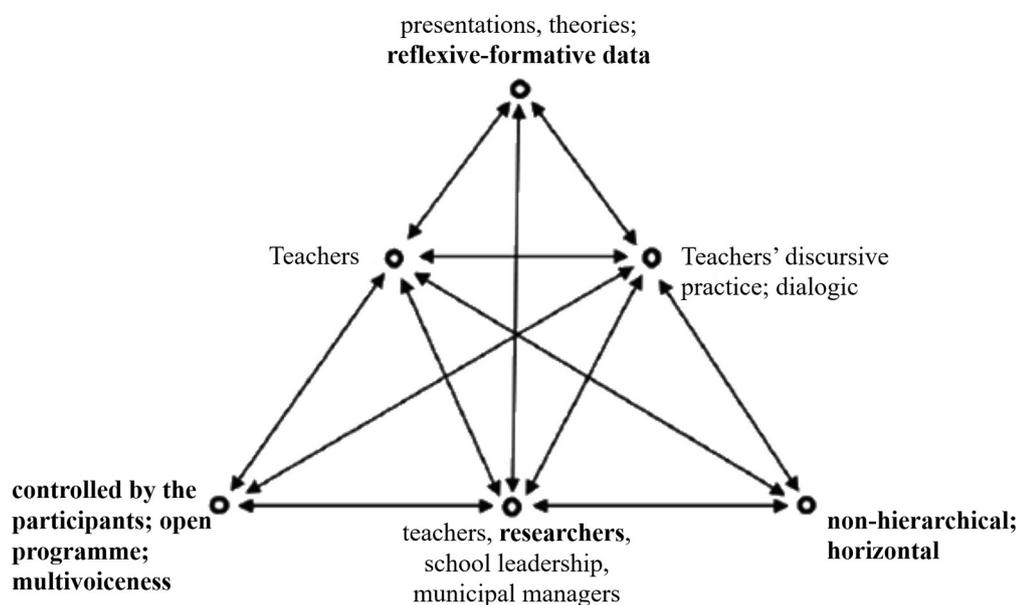


Figure 3: Activity system of participatory TPD.

In this approach, there are some changes in the mediations between teachers (subjects) and their developing discursive practices (object). Firstly, they are submitted to different rules as the programme is open, multivoicedness, and some rules controlled by the participants. The community changes dialectically with the division of labor that is now non-hierarchical and more horizontal, since researchers are no more tutors of the teachers. There is a clear change in the instruments employed. Instead of providing booklets with some educational theories or strategies, the mediating tool to develop teachers' discursive practices would be video lessons recordings and reflexive essays.

As a result in the implementation of the programme, instruments, rules and division of labor were formally addressed and tackled. For example, in the first TPD meeting some guidelines to promote participants' contributions and encourage horizontal interactions were presented and discussed. It was explicitly said that the expectation was the emergence of teachers' voices and decisions based on mutual respect and productive criticism. In the following section, we analyze how the programme took the course.

The activity inertia

Over the first six PD meetings, the teachers did not engage as expected. They did not produce any of the proposed activities based on the programme instruments. They tacitly rejected the video recording as they haven't arranged a date to do so. We say 'tacitly' because there has never been a strong or direct objection. Even an audio recording from their own cell phones was not a solution as only two out of twenty teachers did it. They did not write the reflective essays as well. Moreover, the teachers chose to remain in a silent position, as their voices did not appear and there were no incoming ideas when they were invited to re-elaborate the proposals or discuss the issue and obstacles they were facing. Consequently, and to a large extent, the original activity (in the way it was planned by the researchers, who also imagined it would be fully adopted by the teachers, taking into account the initial discussion on the importance of the video and the rules for the community) was paralyzed.

The use of the term 'paralyzed' is to indicate that the researchers deliberately did not impose structured classroom tasks when the teachers did not offer solutions or alternative forms of collecting evidence from their own practices to nurture the discussion within the community. Neither the traditional nor the participatory approach was realized and therefore we ended up with a activity without a clear or well-framed object. Over the meetings (one per month), we still provided elements of dialogic teaching and productive interaction while discussing their trials in the classrooms. Most of them were able to comment on what they did and how the classroom discussion develop, but the recaps were always very superficial and anecdotal.

The openness of the programme - a novelty for many of them - did not necessarily lead the teachers to take over the production of data and the analysis of their own practices. The lack of prescription and structure may have been contradictory:

I felt like that..., the headteacher asked me 'Didn't you record it, Ed?', 'Well... I don't know... it was open'. If I had been told 'Go there and do it', I would have done it... If you wanted to record my lesson, that was fine! I think that when it's too open, people don't do it. (Ed, teacher).

The transformation of the activity from prescribed to participatory did not happen; at least not in the way it was previously designed. In CHAT terms, researchers and teachers were directed toward different objects. While researchers' object was to provide teachers with the tools to analyze their own practices, teachers' object was to understand and/or find meaning in what they were supposed to do:

So, in my case, I teach in the early years, and I have two classes. Do I have to do the activity with both classes or can I choose one class? Do I have to do the activity with both classes? (Marcia, teacher).

And also to figure out how the recording would fit in their everyday routine, as one more task they should do - recording for its own sake, instead as a tool that would serve to the activity of looking into their own practice:

“We are already very busy..., now I'll have to stop, record and evaluate myself. Recording is another task, I already have so many things to do and now they will evaluate me” (Clare, teacher).

Although the new rules were uttered and written in the slides, and despite the researchers' efforts to provide a glimpse of the new activity (for example, by showing their own videos, recorded when conducting dialogical sessions with students), most of the tacit rules of the established culture guided the participants.

Quite important is the fact that these new rules were under-explored by the researchers; the result is that the simple mention did not promote news modes of participation. Considering that the researchers' object was to provide teachers with the video as a tool, too much attention was given to the uses of the video instead of taking it as an emergent tool for a solution of a specific problem and not as an object in itself. The focus should have been on creating possibilities for the video-recording and not simply assuming that its instrumental nature is universal and would be immediately appropriated by the teachers.

What follows is that the video recording was never tested once the teachers silently opposed it. Besides being taken as a task for its own sake, contrary to the expectations of the researchers, video recording was assumed by the teachers as invasive and responsible for

leading the pupils to behave differently in comparison when there was no camera in the classroom. Moreover, some teachers noted that they do not like to watch and listen to themselves, while others expressed concerns about the use of the video for other purposes than the original.

Power, agency and collaboration in TPD activity

Power relations and traditional top-down hierarchies do not easily go away by simply assuming they vanished when new forms of interactions were locally proposed by the researchers. Such structures are well-established and pervasive in different scales of space and time in our society, meaning that they are historically formed, full of tensions, and permeate many aspects of our lives beyond the school activities. In this sense, many participants have expressed some sort of unveiled pressure to be part of the program, despite the fact that it was, from the very beginning, relatively open and voluntary, and that the headteacher consciously withdrew herself from the meetings in order to make teachers more comfortable.

Equally important, the participatory approach collided with the culture of lack of collaboration that exists in schools. When addressing the collective and collaborative work, one teachers doubted that it would be productive:

it's not possible with everyone, right...? Not everyone has this openness, for some teachers, 'the minimum work, the better; [...] There is no space, there is no structure, there is no sharing moment; It is she on her discipline, it is me on mine. (Marlene, teacher).

Another teacher went through the same reflection when related to the offer and reception of criticism,

if it [classroom practice] was very wrong, I wouldn't say it's wrong, but give suggestions, exchange ideas..., of course, it's a dialogue, but it depends on how the person receives this suggestion, is that person open to suggestions? (Marcia, teacher).

In addition, structural conditions such as the reduction of teachers' salaries, the lack of implications in the career, no time for research, and non-face-to-face meetings during the pandemic might have compromised the engagement as well.

It is hard to provide a comprehensive analysis about teachers' agency, but it is quite relevant to point out that the very same teachers continuously participate in traditional TPD programmes, which means that they attend the meetings and perform the required tasks. It is true that this happens because of the top-down nature of such activities. But in the context of our research, refusing to use the video recording is not necessarily due to the lack of structure or top-down command. It is also the expression that teachers can be agentive: to be silent, to doubt, to tacitly eschew some task is not immediately passivity or lack of motivation, but it is an action that meets some purpose. More importantly, agency is not an inherent property of individuals, nor does it come in a finished form. On the contrary, agency should be developed within collaborative practices (Stetsenko, 2020). This is the objective of a participatory TPD programme: to create spaces for teachers' agency, which appeared in a productive way at the end of the intervention.

The activity rebuilt: the materiality of the discursive interaction

In the seventh meeting, when the researchers addressed the recording issue more straightforwardly; the collective discussion brought up a possible solution for collecting classroom data, the use of peer observation (mentioned by one of the researchers). Of the group of twenty teachers, twelve of them agreed to be arranged in pairs and follow an 4-page observational protocol. It required two other meetings to pilot the new research and formative tool and more than one month for the group and school leadership to organize themselves to run the peer observation.

This strategy allowed the activity to move towards a participatory nature. However, instead of having a large group discussion as planned, the reflexive dialogue based on real classroom data from teachers' practice happened between the pairs. They commented about the kinds of interaction that emerged providing examples and pointed to each other what one could have done differently. While Figure 4 shows qualitative data regarding the teachers' and students' discursive interaction, Figure 5 displays a quantitative approach employing the counts and frequencies of the use of some specific talk moves (Michaels & O'Connor, 2015). Finally, each observer wrote suggestions to the observed teacher, which signals some

reflection .

Interação: circular as ocorrências a cada intervalo de tempo de 2 minutos

	0:00 – 2:00	2:00 – 4:00	4:00 – 6:00
Prof.	Prof. Pergunta Fechada Prof. Pergunta Aberta Prof. Corrige o Aluno	Prof. Pergunta Fechada Prof. Pergunta Aberta Prof. Corrige o Aluno	Prof. Pergunta Fechada Prof. Pergunta Aberta Prof. Corrige o Aluno
Aluno	Aluno Resposta Curta Aluno Resposta Longa Aluno Contribui Aluno Pergunta	Aluno Resposta Curta Aluno Resposta Longa Aluno Contribui Aluno Pergunta	Aluno Resposta Curta Aluno Resposta Longa Aluno Contribui Aluno Pergunta

Exemplos: escrever aproximadamente a fala do professor

Prof. Pergunta Fechada - Professor faz uma *pergunta fechada*, simples, superficial

"Como se fala supermercado em inglês?"

Prof. Pergunta Aberta - Professor faz uma *pergunta aberta*, complexa, profunda

"Quais são algumas das coisas que existem em Can"

Prof. Corrige o Aluno - Professor *corrige* uma resposta do aluno

"Singular é quando temos apenas um sujeito"

Aluno Resposta Curta - Aluno *responde* a uma pergunta de modo *simples* e curto: 3 palavras

"Supermarket"

Aluno Resposta Longa - Aluno *responde* a uma pergunta de modo *longo*: +5 palavras

"Tem supermercado, padaria, escola, igreja, praça"

Aluno Contribui - Aluno *contribui* para a aula sem haver uma pergunta feita pelo professor

"Eu descobri faz pouco tempo que tem até museu."

Aluno Pergunta - Aluno faz uma *pergunta*

"Ter em inglês não era "have"?"

Figura 4: Observational protocol filled in by a participating teacher (qualitative).

Observação para formação – **Bloco 3: 6 minutos**

Objetivo do bloco 3: conhecer quais são os movimentos dialógicos mais utilizados; aqui nos interessa saber a quantidade/frequência em que os movimentos ocorrem.

Movimentos dialógicos: focar a atenção no(a) professor(a)

1. Ampliar: ajudar o aluno a **esclarecer** suas próprias ideias.
Você pode falar mais sobre isso? O que você quer dizer com isso? Pode dar um exemplo?

2. Explicar (por que?): ajudar o aluno a **desenvolver/aprofundar** suas próprias ideias.
Por que você pensa isso? Como você chegou a essa conclusão? Existe outra alternativa?

3. Repetir: ajudar os alunos a **ouvirem** uns aos outros atentamente.
Quem pode repetir o que o ele(a) disse?

4. Coordenar: ajudar os alunos a **pensarem** uns com os outros.
Você concorda? Quem pode explicar o que ele(a) disse? O que você acha da ideia dele(a)?

#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1. Ampliar																									
2. Explicar	/	/	/	/	/	/																			
3. Repetir	/	/																							
4. Coordenar																									

Figura 5: Observational protocol filled in by a participating teacher.

Methodologically, the lack of materiality caused by the absence of classroom data paralyzed the activity. In fact, classroom dialogue is very ephemeral in order to be reconstructed by memory. Moreover, fine-grained analysis needs material data to be deepened. This materiality was obtained to some extent from the observational protocol, which allowed one to capture and register the discursive interaction and reflect later on collectively together with a peer. “Materiality enables and constrains the constitutive-ity of discourse, and that over time discourse shapes material conditions, settings, and embodied human order.” (Foot & Groleau, 2011). As the observations occurred at the very end of the academic year, we had not had the opportunity to bring the reflection to the large group.

Conclusion

From a CHAT perspective, it might be said that the new activity (rules, instruments and division of labor), proposed at the beginning of the intervention and conceived by the researchers, was not fully established. One reason is that new rules and division of labor were under-explored by the researchers. Researchers assumed the absoluteness of the instrumental nature of the video recording instead of creating real conditions for this tool to emerge as a solution for the problem of analyzing real classroom practices. As a result, there was a disconnection of actions between researchers and teachers and the new activity did not move on.

Moreover, the dialectic relationship between the new rules for the programme and the division of labour did not directly lead to a new mode of participation. Even with the openness of the programme, rules and tools, the participating teachers did not act with autonomy and creativity. In fact, it is well known that culture is hard to change; taking almost the entire programme to find a way to have a co-inquiry based on classroom data. To some extent, we might say that such a mode of participation was not readily available in the group. Surely, it is not a matter of the singular subjects involved in the research, but mainly of the poor professional conditions offered by the system that does not value teachers' development.

Given the pervasive nature of top-down structures, the vacuum of power and structure was contradictory and provided no ground to build on. As a result, the teachers directly aligned themselves in a traditional vein of TPD and deliberately refused to participate with their own voices. Such a phenomenon has been identified by Segal and Lefstein (2015) who found 'exuberant, voiceless participation'.

Overall, the intervention showed that the process of building a school-based professional learning community in Brazil might be a complex and challenging process. Complex due to the limited concrete conditions for teachers to act, mainly a reserved time for professional development; and challenging because of lack of collaborative culture and data-driven reflection on practice. However, considering that human agency (as any other human potential) should be collaboratively developed, a participatory TPD always provides spaces for teachers' agency.

References

- ANDERSON, L., & STILLMAN, J. Making Learning the Object: Using Cultural Historical Activity Theory to Analyze and Organize Student Teaching in Urban High-Needs Schools. *Teachers College Record*, 36, 2013.
- BORKO, H., JACOBS, J., EITELJORG, E., & PITTMAN, M. E Video as a tool for fostering productive discussions in mathematics professional development. *Teaching and Teacher Education*, 24(2), 417–436, 2008. <https://doi.org/10.1016/j.tate.2006.11.012>
- BROPHY, J. Using video in teacher education (Vol. 10). *Elsevier*, 2004.
- BROWN, B. D., HORN, R. S., & KING, G. The Effective Implementation of Professional Learning Communities. *Alabama Journal of Educational Leadership*, 5, 53–59, 2018.
- CLARK, C., MOSS, P. A., GOERING, S., HERTER, R. J., LAMAR, B., LEONARD, D., ROBBINS, S., RUSSELL, M., TEMPLIN, M., & WASCHA, K. Collaboration as dialogue: Teachers and researchers engaged in conversation and professional development. *American Educational Research Journal*, 33(1), 193–231, 1996. <https://doi.org/10.3102/00028312033001193>
- CLARKE, D., & HOLLINGSWORTH, H. Elaborating a model of teacher professional growth. *Teaching and Teacher Education*, 18(8), 947–967, 2002. [https://doi.org/10.1016/S0742-051X\(02\)00053-7](https://doi.org/10.1016/S0742-051X(02)00053-7)
- COLES, A. Using video for professional development: The role of the discussion facilitator. *Journal of Mathematics Teacher Education*, 16(3), 165–184, 2013. <https://doi.org/10.1007/s10857-012-9225-0>
- DESIMONE, L. M. Improving Impact Studies of Teachers' Professional Development: Toward Better Conceptualizations and Measures. *Educational Researcher*, 38(3), 181–199, 2009. <https://doi.org/10.3102/0013189X08331140>
- DILLON, J. *Using discussion in classrooms*. Open University Press: Buckingham, 1994.
- ELLIOTT, J. Using research to improve practice: The notion of evidence-based practice. In C. Day & J. Sachs (Eds.), *International Handbook on the continuing professional development of teachers* (pp. 264–290). Open University Press: Buckingham, 2005.
- ENGESTRÖM, Y. The Future of Activity: A Rough Draft. Paper presented at the *International Society for Cultural and Activity Research (ISCAR)*, San Diego, 2008.
- ENGESTRÖM, Y. From design experiments to formative interventions. *Theory & Psychology*, 21(5), 598–628, 2011. <https://doi.org/10.1177/0959354311419252>

ENGESTRÖM, Y. *Learning by Expanding: An Activity-Theoretical Approach to Developmental Research*. Cambridge University Press: Cambridge, 2015.

FINLAY, L. Reflecting on 'Reflective practice.' *PBLB Paper*, 52, 2008. <http://www.sencer.net/Symposia/SSI2015/documents/Finlay-2008-Reflecting-on-reflective-practice-PBPL-paper-52.pdf>

FOOT, K., & GROLEAU, C. Contradictions, transitions, and materiality in organizing processes: An activity theory perspective. *First Monday*, 16(6), 2011. <https://doi.org/10.5210/fm.v16i6.3479>

FROST, D. Integrating systematic enquiry into everyday professional practice: Towards some principles of procedure. *British Educational Research Journal*, 21(3), 307–321, 1995. <https://doi.org/10.1080/0141192950210305>

GRAU, V., CALCAGNI, E., PREISS, D. D., & ORTIZ, D. Teachers' professional development through university–school partnerships: Theoretical standpoints and evidence from two pilot studies in Chile. *Cambridge Journal of Education*, 1–18, 2015. <https://doi.org/10.1080/0305764X.2015.1102867>

GRÖSCHNER, A., SEIDEL, T., KIEMER, K., & PEHMER, A.-K. Through the lens of teacher professional development components: The 'Dialogic Video Cycle' as an innovative program to foster classroom dialogue. *Professional Development in Education*, 41(4), 729–756, 2015. <https://doi.org/10.1080/19415257.2014.939692>

GUZMÁN, V., & LARRAIN, A. The transformation of pedagogical practices into dialogic teaching: Towards a dialogic notion of teacher learning. *Professional Development in Education*, 1–14, 2021. <https://doi.org/10.1080/19415257.2021.1902837>

HARDMAN, F. Teachers' use of feedback in whole-class and group-based talk. In N. Mercer & S. Hodgkinson (Eds.), *Exploring talk in school* (pp. 131–150). Sage Publications, 2008. <https://doi.org/10.4135/9781446279526.n8>

HARGREAVES, L., MOYLES, J., MERRY, R., PATERSON, F., PELL, A., & ESARTE-SARRIES, V. How do primary school teachers define and implement "interactive teaching" in the National Literacy Strategy in England? *Research Papers in Education*, 18(3), 217–236, 2003. <https://doi.org/10.1080/0267152032000107301>

HENNESSY, S., & DAVIES, M. Teacher professional development to support classroom dialogue: Challenges and promises. In MERCER, N.; WEGERIF, R.; MAJOR, L. (Eds.), *The Routledge International Handbook of Research on Dialogic Education* (1st ed., pp. 238–253), Routledge, 2020. <https://doi.org/10.4324/9780429441677-21>

- HENNESSY, S., MERCER, N., & WARWICK, P. A dialogic inquiry approach to working with teachers in developing classroom dialogue. *Teachers College Record*, 113(9), 1906–1959, 2011.
- HOWE, C., HENNESSY, S., MERCER, N., VRIKKI, M., & WHEATLEY, L.. Teacher–Student Dialogue During Classroom Teaching: Does It Really Impact on Student Outcomes? *Journal of the Learning Sciences*, 1–51, 2019. <https://doi.org/10.1080/10508406.2019.1573730>
- KERSHNER, R., DOWDALL, K., HENNESSY, S., OWEN, H., & CALCAGNI, E. Teachers as ‘natural experimenters’: Using T-SEDA to develop classroom dialogue. In HARGREAVES, E; ROLLS, L. (Eds.), *Reimagining Professional Development in Schools* (1st ed., pp. 102–122). Routledge., 2020. <https://doi.org/10.4324/9780429293337-8>
- KIEMER, K., GRÖSCHNER, A., PEHMER, A.-K., & SEIDEL, T. Teacher learning and student outcomes in the context of classroom discourse. Findings from a video-based teacher professional development programme. *Form@re*, 14(2), 51–62, 2014. <https://doi.org/10.13128/formare-15124>
- LEONTYEV, A.N. *Activity and consciousness*. Marxists Internet Archive, 2009a. Available at: <https://www.marxists.org/archive/leontev/works/activity-consciousness.pdf>
- LEONTYEV, A.N. *The Development of Mind: Selected Works of Aleksei Nikolaevich Leontyev*. Marxists Internet Archive, 2009b. <https://www.marxists.org/admin/books/activity-theory/leontyev/development-mind.pdf>
- MATILLA-SANTANDER N., AHONEN E., ALBIN M., et al. COVID-19 and Precarious Employment: Consequences of the Evolving Crisis. *International Journal of Health Services*, 51(2), 226–228, 2021. <https://doi.org/10.1177/0020731420986694>
- MATTOS, C.R. *Racionalidades na educação científica*. [Rationalities in science education] Associate Professorship Thesis; University of São Paulo: São Paulo, 2019.
- MERCER, N. *The guided construction of knowledge: Talk amongst teachers and learners*. Multilingual Matters: Clevedon, England, 1995.
- MICHAELS, S.; O’CONNOR, C. Conceptualizing talk moves as tools: Professional development approaches for academically productive discussion. In RESNICK, L; ASTERHAN, .C; CLARKE, S. (Eds.), *Socializing intelligence through talk and dialogue*. (pp. 333–347). American Educational Research Association, 2015.
- MROZ, M., SMITH, F., & HARDMAN, F. The discourse of the literacy hour. *Cambridge Journal of Education*, 30(3), 379–390, 2000. <https://doi.org/10.1080/03057640020004513>

- NILSSON, M. E. University–school collaboration based on complementary needs. *Journal of Educational Change*, 9(4), 349–356, 2008. <https://doi.org/10.1007/s10833-008-9082-x>
- NING, H. K.; LEE, D.; LEE, W. O. Relationships between teacher value orientations, collegiality, and collaboration in school professional learning communities. *Social Psychology of Education*, 18(2), 337–354, 2015. <https://doi.org/10.1007/s11218-015-9294-x>
- NKENGBEZA, D.; HEYSTEK, J. Professional Learning Communities: A Comparative Study of Three Educational Areas in the North West Province of South Africa. *Open Journal of Social Sciences*, 05(04), 98–119, 2017. <https://doi.org/10.4236/jss.2017.54010>
- OPFER, V. D.; PEDDER, D. Conceptualizing teacher professional learning. *Review of Educational Research*, 81(3), 376–407, 2011. <https://doi.org/10.3102/0034654311413609>
- PARR, G. Professional learning, professional knowledge and professional identity: A bleak view, but oh the possibilities.. *English Teaching: Practice and Critique*, 3(2), 21–47, 2004. <https://edlinked.soe.waikato.ac.nz/research/files/etpc/files/2004v3n2art2.pdf>
- PUTNAM, R. T.; BORKO, H. What Do New Views of Knowledge and Thinking Have to Say about Research on Teacher Learning? *Educational Researcher*, 29(1), 4, 2000. <https://doi.org/10.2307/1176586>
- REZNITSKAYA, A.; WILKINSON, I. Designing professional development to support teachers' facilitation of argumentation. In MERCER, N; WEGERIF, R; MAJOR, L. (Eds.), *The Routledge International Handbook of Research on Dialogic Education* (1st ed., pp. 254–268). Routledge, 2020. <https://doi.org/10.4324/9780429441677>
- ROTH, W.-M. Activity Theory in Mathematics Education. In LERMAN, S. (Ed.), *Encyclopedia of Mathematics Education* (pp. 20–23). Springer International Publishing, 2020. https://doi.org/10.1007/978-3-030-15789-0_4
- SACHS, J. Teacher professionalism: why are we still talking about it? *Teachers and teaching: theory and practice*, 22(4), 413–425, 2016. <https://doi.org/10.1080/13540602.2015.1082732>
- SANNINO, A. Activity theory as an activist and interventionist theory. *Theory & Psychology*, 21(5), 571–597, 2011. <https://doi.org/10.1177/0959354311417485>
- SANNINO, A.; ENGSTRÖM, Y.; LEMOS, M. Formative Interventions for Expansive Learning and Transformative Agency. *Journal of the Learning Sciences*, 25(4), 599–633, 2016. <https://doi.org/10.1080/10508406.2016.1204547>

SAVIANI, D. Formação de professores: Aspectos históricos e teóricos do problema no contexto brasileiro. *Revista Brasileira de Educação*, 14(40), 143, 2009. <https://doi.org/10.1590/s1413-24782009000100012>

SCHÖN, D. A. *The reflective practitioner: How professionals think in action*. Temple Smith, 1983.

SEDOVA, K.; SEDLACEK, M.; SVARICEK, R. Teacher professional development as a means of transforming student classroom talk. *Teaching and Teacher Education*, 57, 14–25, 2016. <https://doi.org/10.1016/j.tate.2016.03.005>

SEDOVA, K.; SEDLACEK, M.; SVARICEK, R.; MAJCIK, M.; NAVRATILOVA, J.; DREXLEROVA, A.; KYCHLER, J.; SALAMOUNOVA, Z. Do those who talk more learn more? The relationship between student classroom talk and student achievement. *Learning and Instruction*, 63, 101217, 2019. <https://doi.org/10.1016/j.learninstruc.2019.101217>

SEGAL, A.; LEFSTEIN, A. EXUBERANT, Voiceless Participation: Dialogic sensibilities in the Israel primary classroom. *Working Papers in Urban Language and Literacies*. Kings College London, 156, 1–19, 2015.

SHERIN, M. G.; VAN ES, E. A. Effects of Video Club Participation on Teachers' Professional Vision. *Journal of Teacher Education*, 60(1), 20–37, 2008. <https://doi.org/10.1177/0022487108328155>

SMITH, F.; HARDMAN, F.; WALL, K.; MROZ, M. Interactive Whole Class Teaching in the National Literacy and Numeracy Strategies. *British Educational Research Journal*, 30(3), 395–411, 2004. <https://doi.org/10.1080/01411920410001689706>

STETSENKO, A. From relational ontology to transformative activist stance on development and learning: Expanding Vygotsky's (CHAT) project. *Cultural Studies of Science Education*, 3(2), 471–491, 2008. <https://doi.org/10.1007/s11422-008-9111-3>

STETSENKO, A. The Challenge of Individuality in Cultural-Historical Activity Theory: "Collectividal" Dialectics from a Transformative Activist Stance. *Outlines. Critical Practice Studies*, 14(2), 7–28, 2013.

STETSENKO, A. *The Transformative Mind*. Cambridge University Press: Cambridge, 2017. <https://doi.org/10.1017/9780511843044>

VAN ES, E.; SHERIN, M.G. Learning to Notice: Scaffolding New Teachers' Interpretations of Classroom Interactions. *Journal of Technology and Teacher Education*, 10(4), 571-596. Norfolk, VA: Society for Information Technology & Teacher Education, 2002. Retrieved April 15, 2022. <https://www.learntechlib.org/primary/p/9171/>

WELLS, G. *Dialogic inquiry: Towards a sociocultural practice and theory of education*. Cambridge University Press: Cambridge, 1999.

WELLS, G. Integrating CHAT and Action Research. *Mind, Culture, and Activity*, 18(2), 161–180, 2011. <https://doi.org/10.1080/10749039.2010.493594>

WILKINSON, I., REZNITSKAYA, A., BOURDAGE, K., OYLER, J., GLINA, M., DREWRY, R., KIM, M.-Y., & NELSON, K. Toward a more dialogic pedagogy: Changing teachers' beliefs and practices through professional development in language arts classrooms. *Language and Education*, 31(1), 65–82, 2017. <https://doi.org/10.1080/09500782.2016.1230129>

DESAFIOS NA FORMAÇÃO CONTINUADA DE PROFESSORES NA ESCOLA: A CONSTRUÇÃO DE COMUNIDADES DE APRENDIZAGEM E O REGISTRO DO DIÁLOGO EM SALA DE AULA

RESUMO: A formação de professores tem uma longa tradição de modelos prescritivos baseados em currículos e centrados em habilidades que transmitem conceituações *simplistas* de aprendizagem de professores. Apenas mais recentemente essa tendência mudou no sentido de promover a agência dos professores em relação ao seu próprio desenvolvimento profissional. Neste trabalho, refletimos sobre os desafios enfrentados na construção de uma comunidade de aprendizagem de professores sediada na escola durante e após a pandemia. A intervenção foi direcionada para promover o diálogo em sala de aula e deveria ter empregado o uso de gravações de vídeo para capturar e analisar a prática dos professores. O principal ponto aqui abordado foi a rejeição tácita dos professores à gravação do vídeo e a construção de uma nova ferramenta de pesquisa e formação: a observação de pares. No geral, apesar da liderança da escola estar disposta e comprometida com o programa, a implementação revelou como o sistema de ensino não valoriza ou cria condições para a formação de professores. Além disso, identificou-se que a cultura cordial entre professores e pesquisadores não desenvolveu um espaço para a reflexão crítica sobre a prática.

PALAVRAS-CHAVE: Diálogo em sala de aula, Formação de professores, Observação de pares, Agência.