

The role of collaboration in the continuing teacher education of teachers for inclusive and collaborative contexts¹

A colaboração na formação continuada de professores para contextos inclusivos e colaborativos

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ABSTRACT

The objective of this work was to present a continuing teacher education method developed in a school in the city of Natal/RN, Brazil. It was a collaborative formation method based on the Cultural-Historical Activity Theory, which had the goal of creating spaces for the sharing and development of knowledge for the organization of a cooperative and inclusive work at school. The work was conducted in two parts, with the first being performed between the months of October and December of 2021 and the second between May and June of 2022. Ten meetings were conducted online. Primary school teachers, earlier and later grades, special education teachers, teachers proficient in Libras (Brazilian sign language), teachers that performed administrative work at the school, in addition to pedagogy scholars and students, a total of 25 participants, attended in the meetings. Each meeting was planned with bearing in mind mediating artefacts to initiate collective reflection about the pedagogic work at the

RESUMO

O texto tem por objetivo apresentar uma formação desenvolvida em uma escola estadual na cidade de Natal/RN. Trata-se de uma formação colaborativa, fundamentada na Teoria Histórico-Cultural da Atividade, que teve como objetivo criar espaços de compartilhamento e construção de aprendizagens para a organização de um trabalho colaborativo e inclusivo na Escola. Ela ocorreu em duas partes, sendo a primeira entre os meses de outubro e dezembro de 2021, e a segunda entre maio e junho de 2022. Foram 10 encontros realizados de modo online; participaram professores dos anos iniciais e dos anos finais do Ensino Fundamental, professores de Educação Especial, professores intérpretes de Libras, professores que estão na gestão escolar, além das pesquisadoras e estudantes de Pedagogia. No total, foram 25 participantes. Cada encontro da formação era planejado com artefatos mediadores para desencadear a reflexão coletiva sobre o trabalho pedagógico na escola; a continuidade das discussões era definida a

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school. The meetings would continue based on the discussed subjects and the interest of the professionals involved in it. Over the course of the meetings, the participants articulated possibilities to promote a collaboration that supported the inclusion of students with SEN, both by developing new tools and by resuming the use of other tools that already existed. It is important to highlight that it was central to have a team to conduct the training. The tutelage of the teachers founded in collaboration was a difficult challenge, however, the results achieved showed that it is in fact possible for teachers to engage and to be protagonists, reflecting about their own practices and collectively proposing much needed changes.

Keywords: Continuing teacher education; Collaboration; Inclusive education; Cultural-Historical Activity Theory.

partir daquilo que emergisse nos encontros e do interesse das pessoas. Ao longo dos encontros, os participantes foram articulando possibilidades para promover a colaboração que desse suporte à inclusão dos estudantes com NEE, tanto desenvolvendo novas ferramentas, quanto buscando retomar outras já existentes na escola. Destaca-se que foi muito importante ter uma equipe na condução da formação. Fazer formação continuada de professores, tendo como base a colaboração, foi um grande desafio, mas os resultados alcançados demonstram que é possível os professores se engajarem e assumirem protagonismo, refletindo sobre as próprias práticas e propondo coletivamente as mudanças que percebem necessárias.

Palavras-chave: Formação continuada de professores; Colaboração; Educação inclusiva; Teoria Histórico-Cultural da Atividade.

1 Introduction

Continuing teacher education has been highly relevant in teaching work nowadays, as it allows teachers a reflexive and transformative practice, and it is has not been different in Rio Grande do Norte (RN), a State in Brazil, where continuing teacher education has been largely used in the area of inclusive education. Inclusive education goes beyond enrolment in regular schools, as it aims at keeping the child at school, participating and learning, which requires special arrangements in the schools to contemplate such challenges (PRIETO, ANDRADE, SOUZA, 2017; CENCI, BASTOS, 2022).

The first author of this study, who is a pedagogue for the RN State (SEEC/RN), perceives the need of the education workers for understanding inclusive education whenever the education department of the RN State offers trainings for different groups of the teachers and individual tutoring. There is the need to support and promote the learning of regular classes' teachers, when they have to organize the teaching to include students with

Special Educational Needs (SEN)⁴, and specialist teachers, who work in regular schools (special education teachers, educational Libras interpreter/translator).

Although continuing teacher education is an individual movement, it is important to highlight the need of promoting the education of the teachers within the context of the school, with teachers dialoguing and searching for strategies that would benefit their school community.

The scenario presented above was the starting point of a project of continuing teacher education planned and proposed to a school in Natal/RN/Brazil. It is a State school (Primary and Secondary education), that also educates adults (EJA – students that had dropped school in their regular years and decided to come back to school), this school has also been receiving several students with SEN. The school has different professionals that give support to the inclusion process, such as teachers specialized in students with Special Needs, educational Libras interpreter/translator, caregivers, regular classes teachers and other school employees.

The concept of collaboration guided the conception and development of the continuing teacher education plan, which was based on the Activity Theory and its expansive learning concept. According to Engeström (2013, 2016) the act of learning is built collectively, and it happens within the processes of analysing the contradictions inherent to the systems, proposing changes and conducting transformations. This learning process does not follow the traditional understanding of learning, being otherwise based on the creation of what needs to be learned, as there are no ready answers when the focus is on how work organizations learn (ENGESTRÖM, 2002).

⁴ According to Resolution 03/2016 CCEB/CEE/RN, article 4º, students with special needs are the ones who have specific educational need due to physical or sensorial disability, communication disability and signage differentiated from others; Autism Spectrum Disorders; Specific Functional Disorders; and High Abilities/Giftedness (RIO GRANDE DO NORTE, Brazil 2016).

This study aims at analysing this continuing education process, which objective was to create spaces that would allow the community to share and built new ways of learning how to work collaboratively and inclusively in this school.

The education process was divided into two moments, the first one between October and November 2021, and the second between May and June 2022. Ten (10) meetings were conducted online (Google Meet). The group was formed by 25 people (attendance variable during the meetings), teachers from the initial and final series of primary school, educational Libras interpreter/translator, teachers in administrative positions, Pedagogy researchers and students who work in an extension project at the school.

The process was established as a collaborative research, where the teacher is considered as a knowledge producer. The research was not about the practice of the teachers, but with the teachers. Ibiapina, Bandeira and Araújo (2016) highlight the fact that in a collaborative research, both researchers and teachers establish a negotiation network that aims at changes in the teaching practice.

2 Continuing teacher education and the Activity Theory

The education process discussed here used as its base line the issues that would mobilize the teachers towards the construction of a collective praxis. Freire (1996) stated that to a critical reflection on teacher work to happen, it is necessary a relationship between theory and practice, as without it the theory is just a series of words without meaning, and the practice become empty activism.

Therefore, Candau (1996) stated that continuing education should happen at the schools, in the place where they work, exchange experiences with their peers, learn and relearn with each other. In our opinion, when the experienced is shared, it allows the mobilization of teaching knowledge, and the chance to think about the positive and negative aspects that need to be reorganized. Socializing their experiences, teachers have the chance to improve their educational practice.

When Oliveira, Fonseca and Reis (2018) studied continuing education, within the perspective of teacher's organization based on their own reality, they said it is necessary to think about teachers' concrete reality in the schools, which allows understanding the historical circumstances and ways of teaching of that place. Just then, we can think about new ways of teaching and new practices related to the teaching-learning process.

The Active Theory, mostly Engeström (1987; 2002; 2013) studies, was used to develop the continuing education process that was based on the everyday problems faced by the school.

Considering the continuing education process, it is important to highlight that, when there is the aim of changing practices, the answers to the questions that rise during the process are not complete or given, they need to be developed by all the participants, evidencing the relevance of the collaboration. Within this perspective, the concept of expansive learning from Engeström (1987) is central, as in this learning activity the individuals involved in the activity are no longer individual learners, and become part of a collective learning process, which aim is to transform the activity performed by them, it is a collective process.

In a collaborative formation – close in meaning to what Engeström (2011) defines as a formative intervention – both the process of identifying the difficulties and contradictions, and the search for the answers need to be developed by all the participants (researchers and professionals of the specific context). What needs to be learned has to be developed by all the participants, there is no *a priori* solution and/or answer. It is a collective process of expansive learning and collective changes (ENGESTRÖM, 1987; 2002).

Based on Vygotsky and Leontiev's concepts of mediation and mediated activity, Engeström discusses collective learning and proposes that a collective learning is possible because there are reflexive discussions, and, therefore, the possibility of production of new knowledge (CENCI; DAMIANI, 2018).

Engeström (1987) defines the collective zone of proximal development as

[...] It is the distance between the present everyday actions of the individuals and the historically new form of the societal activity that can be collectively generated as a solution to the double bind potentially embedded in the everyday actions (ENGESTRÖM, 1987, p.174).

Such definition was based on the original concept of zone of proximal development (ZPD) presented by Vygotsky, which can also be translated as zone of imminent development (ZID) and states that it is

[...] the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (VYGOTSKY, 1978, p.86)

In the concept above, the focus was on the individual and on the relations between learning and development. However, Engeström (1987) enlarges the concept of zone of proximal development, considering the collectiveness, and defines it as the distance between what we can do alone and what we are able of producing when in a group.

As a way of planning and analysing institutional learning, Engeström (1987, 2013) developed the cycle of expansive learning. The cycle is composed by different stages (Questioning, Analysis, Modelling the new solution, Examining and testing the new model, Implementing the new model, Reflecting on the process, and Consolidating and generalizing the new practice). It is important to highlight the intentionality towards the collective change when this approach is used in continuing education process.

Magalhães and Ninin (2017) stated that the concept of collaboration originates from a philosophical construct that organizes collective experiences through which individuals constitute and change themselves constantly and, therefore, create and change their action contexts. In this study, the concept of collaboration was understood as a commitment to conduct the project with responsibility and then create an environment of

trust and respect among participants. Within this atmosphere, participants, who shared different points of view, could expand their way of thinking by discussing, questioning, their own and other participants' ideas, explicating their ideas, disagreeing, describing experiences related to theory and practice, and sharing new meanings. Therefore, the authors, based on Vygotsky, state that it is important to establish dialectical relationships among individual and social processes when new knowledge is created among participants in a collaborative practice.

3 The organization of the formation: collaboration through the process

The formation was organized in a collaborative way from the very beginning, days, times, and the themes that would be relevant for the teachers involved in the process (based on their practice) were agreed collectively. The meetings were online due to Covid 19 and the physical distancing need, and took part in the evening (teachers were busy during school hours). The meetings lasted between 1 hour and 30 minutes and two hours, and were recorded with the authorization of the participants⁵.

The Master degree student, the advisor and the three Pedagogy undergraduate students met weekly (Google Meet) and exchanged ideas via WhatsApp when they were planning each of the meetings. This team was the same one that conducted the formative meetings. They would meet immediately after the formative meetings to analyse the points that would need further discussion, and to think together about the strategies for the next meeting. The decisions were always shared with the group from the school, either in the day of the meeting or through WhatsApp, so they would be aware of the process and could position themselves regarding the actions to be taken. All the meetings were planned based on the previous ones.

⁵ The research was registered and approved by the Ethics Committee. Register number 45488121.7.0000.5292. The participants signed the Informed Consent Form and authorized the meetings to be recorded.

Initially, there was the intention of beginning and finishing the formative process within 2021. However, some of the meetings needed to be rescheduled and only 5 could be done in 2021. As the discussion was still pending, the group decided to continue with the discussions in 2022, when 5 other meetings were conducted.

4 The formation: results and reflections

The objective of the formation was to create a space to share and build a pace of collaboration and inclusion in the school. This objective was shared with the teachers in each meeting.

Mediating artefacts were used during the process to trigger collective reflection. According to Vygotsky (1978), artefacts (or tools) enlarge the human action over the environment and ourselves. Sannino (2015) discusses Vygotsky's concept of double bind as a principle in formative interventions, highlighting the use of external stimulus as an interference in some conducts. In this study, double bind was used as artefacts that would cause reflexive thinking to promote pedagogical changes in the school regarding students with SEN. Therefore, the following are some of the artefacts used as mediators: questions, teacher's illustrations, brainstorming, theoretical concepts, schemes and excerpts of speech of the professionals.

Chart 1 presents the mediating artefacts, the objective of each meeting, and the numbers of professionals attending the meetings.

Chart 1 – Summary of the formative meetings

Date of the meetings	Number of participants	Objectives	Mediating artefacts
1 st meeting 29/10/21	09	Present the research and its objectives. Understand the motivation of the participants in the formation.	Cordel ⁶ was created to allow each participant to explicit the reasons for attending the formation. Slides with the organization of the collaborative formation. Question: What to expect?
2 nd meeting 04/11/21	13	Understand how teachers define inclusion and collaboration.	Brainstorming using the word inclusion and collaboration, use of the online platform Mentimeter ⁷
3 rd meeting 18/11/21	12	Think about the concepts of Inclusion and Collaboration elicited in the previous meeting.	Slides presenting the results of the brainstorming and association of them with concrete situations experienced in the classroom and school.
4 th meeting 22/11/21	13	Analyse pedagogical work organization in the classroom and school considering Inclusion and Collaboration.	Slides with drawings of the teachers that should represent the organization within working contexts in school.
5 th meeting 06/12/21	11	Discuss the concepts of Zone of Proximal Development (ZPD), collective ZPD, and expansive learning cycle with the teachers regarding their practices.	Slides with the concepts of Zone of Proximal Development (ZPD), collective ZPD, and expansive learning cycle and some excerpts of the previous meeting.
6 th meeting 12/05/22	13	Revise the first part of the formation and think about the collaborative and inclusive work done at school (what is already done / what should be done).	Jamboard ⁸ to create an answer board to the questions: “What do we do that Works?” “What should we do improve the situation and why?”

⁵ The cordel “Cordelando the reason”. Cordel is a kind of poetry and it was used to allow teachers to create rhyme explicating their reasons for being there and invite others to speak about theirs.

⁶ Mentimeter is an online platform that allows the creation of interactive presentations. More information: <https://www.mentimeter.com/>.

⁷ Jamboard is an online platform that creates an interactive board. Access: <https://jamboard.google.com/>.

7 th meeting 19/05/22	15	Think about school actions, and how teachers can collaborate to improve the results of these actions.	Slides with guiding sentences that would allow teachers to express themselves regarding collaborative and inclusive work: I have difficulties regarding... I may help with...
8 th meeting 26/05/22	13	Discussion regarding planning collaborative work to create inclusion in school.	Slides with the sentences: “ORGANIZATION + COMUNICACION = COLLABORATIVE WORK?” and the questions: “1- How do we currently plan?” 2- What is the ideal planning? 3- Which strategies/tools do we need to reach collaborative planning?” Then the Jamboard was used to produce an organizational chart.
9 th meeting 02/06/22	11	Discussion of the organizational chart with the aim of understanding how the existing tools at school may improve collaborative work.	Slides with the organizational chart produced by the teachers. The Jamboard was used to understand organize the difficulties and facilities of using tools when planning schoolwork.
10 th meeting 09/06/22	09	Think about the tools the school already has and uses, and how they can be used and improved to collaborative work.	Slide with the guiding question: Which strategies should be developed to incorporate the use of tools the school already has to the planning of collaborative work?

Source: Elaborated by the researchers.

In the first meeting, in 29th October 2021, the objectives, theoretical background, and the collaborative character of the formation were presented, and days and times of the meetings were arranged. Sharing the principles of the formation was an important action as it aimed at creating individual responsibility toward the formation.

The Cordel was also an important tool to understand the expectations that mobilized teachers to take part in the formation. A short sample of this work is presented here

Alexandrita⁹ [...]

The rhyme is built to ask

Everybody here

What you were thinking

When you joined us

In this inclusion and

Healthy collaboration and group

That is not aimed at teaching

Otherwise learning

How we can think together

Turmalina said she would come

And here she is

To include and collaborate

In this formation

Remandinha Remandinha is asking

Slowly

What is your motivation?

Turmalina: My motivation? I want to learn more, share, weave new experiences.

Alexandrita: Who would you like to ask next? Jade? Safira... ops Aventurina is off, now we only have Jade and Safira... and us, right?

Turmalina: Jade!

Alexandrira: let's see Jade, Turmalina will read what Jade wrote, right?

Turmalina: Right!

Jade is also in the group

And we want to listen to her

Everybody is relevant

And it is good to give an opinion

But... Remandinha, Remandinha wants to listen from you

What brought you to the group

Jade: my motivation to be here is the fact that I want new strategies, new knowledge, and I also want to share my experience with you and, together elaborate new strategies, new ways to improve our work with our students and ourselves.

(First meeting, 29th October 2021)

In general, the answers showed participants wanted to learn new ways of working and share their own experience. We understood that the formation should take these two objectives as the reason for the activity that, according to Leontiev (1978) becomes the object of the activity, which corresponds to its necessity. Here, the object was the collaboration for inclusive work – which was explicit in each meeting and towards which participants engaged.

⁹ Fictional names were used to preserve the identity of the participants. They received the names of precious stones.

In the second meeting, 4th November 2021, new participants joined us. A brainstorming exercise was proposed using Mentimeter, an online platform, where each participant included three words they understood were related to inclusion and collaboration. Therefore, in the first meeting the reasons for being there were shared, and in the second one we tried to understand their perceptions regarding these two concepts. Picture 1 shows the result of the brainstorming.

Picture 1 - Print of the brainstorming produced in Mentimeter platform from the meanings of Inclusion and Collaboration.



Source: Elaborated by the participants. Second meeting (4th November 2021).

Respect, dialogue, reception and empathy were the words used the most. They are present in the speech of the teachers and school management, pedagogical coordinators, who called the attention to the relevance of the dialogue to a good work environment; an harmonic organization based on respect to individuals diversity; and a warm reception to the proposition of a collaborative work and the possibility of creating a collaborative culture.

The third meeting was conducted in 18th November 2021 and the discussions raised by the brainstorming activity continued to echo.

Participants tried to associate the concepts that were being studied with their practice in the school. Two examples:

Turquesa: every year the school... teachers from Special Education take part, we always try to have a day in the Pedagogical formation for continuing education. Special Education teachers have been with us for years during continuing education, we have an administrative agenda, a pedagogical agenda, and there is always a moment when the teachers from Special Education bring this subject, they also take part in the continuing education program [...] (3rd meeting, 18th November 2021)

Ônix: Well, I'll talk about my class, I have three autistic students in my 7th year C [...]. They were received in the same way as other students, I didn't feel it should have been different, students accepted them well. When we returned to presential classes I prepared a *PowerPoint* presentation where I explained we would have students with special needs in the class, explained what autism was, one of the autistic student was present, and everything went well... I don't know if it helped, but I feel teachers react well to it... I don't see... I don't know... everything is so natural in that group, so normal! (3rd meeting, 18th November 2021)

Both statements, from the coordinator and Special Education teacher, respectively, highlight positive aspects regarding the work developed by the school. The lack of negative aspects or difficulties called the attention, as a more critical approach was necessary to advance the discussion and focus on what was necessary to improve.

The fourth meeting (22nd November 2021) was then conceived to bring some critics, and it was planned according to what Engeström (2013) calls current empirical analysis action. Such approach tries to understand the context and its contradictions building an image from its inside – the author calls it “systemic relations”. Therefore, at the end of the last meeting, teachers were asked to draw their spaces of work at school and the way they were organized. Teachers were asked to draw the way their classroom is organized, how they perceive the space, how they perceive themselves in this space, and the space occupied by the students; managers were asked to draw how they perceive the organization of the school and the perception of themselves within this space.

Therefore, as teachers presented their drawings and discussed their ideas, they began to think about the relations within these contexts. The difficulties began to emerge and the drawings worked well as mediating artefacts. Picture 2 shows one of the drawings and just after we transcribed the explanation given by the coordinator.

Picture 2 – Drawing presented by Turquesa (coordinator).



Source: Drawing from one of the participants (4th meeting – 22nd November 2021).

Turquesa: [...] Well, I am this person at the door of the school [...] and the other pictures represent the families and children. On my left there is a male picture that represents the teacher. On my right there are two children, one is in wheelchair. The others that are not showing in the picture are inside school, after the gate. Why did I use puzzle pieces? The puzzle gives me the idea of the whole [...] I understand that each piece will put families, teachers, all the others, and I inside school together. So, why did I think in this whole? Because I saw myself as a piece that does not belong, a piece that doesn't have a place [...]. At school, some pieces fit well together [...], teachers fit well [...]. Teachers from the resources room fit well together as well. But, there will always be some pieces that don't belong. Then, those pieces that don't belong, what do they represent? While some are working well together, some are still trying to reach out for help, like that piece in the puzzle. Then, this is the way I see the school [...], where each part is important to complete the puzzle. (4th meeting, 22nd November 2021).

The drawing and excerpt above are examples of their perception that the school has a consolidated work towards including students with SEN and, at the same time, they also show there are difficulties that may be faced collectively.

The fifth meeting, 6th December 2021, was the last one from the first part of the continuing education project. This meeting was used to resume the previous discussions and theoretical concepts presented during this first stage. The main idea was to share the analysis of their own process with the group, explaining the contradictions they have brought to allow them to move on.

Some of the studies and concepts of Vygotsky and Engeström were used to introduce the theory to the group, mainly the ones of Zone of Proximal Development, Expansive Learning, and the Expansive Learning Cycle.

The following excerpts show how teacher articulated the concepts with the practice.

Pedra de Cristo (researcher): well, in meeting 3 Jade (teacher) said the following... I'll keep talking and then later we go back to contextualize, "[...] the teacher realized I was insecure and then I said: "Tell me something, how do you work with him?". Then the teacher said: "Who works is the teacher from Special Education". Gave the name of the colleague: Calcedônia. "Who works with him is Calcedônia; He does the intervention". And then, at that moment I felt sad, that was not the answer I was expecting. However, at the same time, I felt some insecurity regarding on how to deal with that [...]"
[...]

Jade: Actually, it was a different context. The teacher (Calcedônia) was not in class that day and I was designated to help the student, but I really don't know how it works on a daily base, it was my feeling at that moment. The feeling that I, as a special education teacher, did not have enough knowledge to give the student the support he needed, as the teacher of the class, and the regent teacher also finds difficult to teach this particular student. So, the ideal would be to share the planning, thinking together what would be ideal to give support to that student, taking into consideration my need of learning about that specific subject, and the teacher's need of learning how to present this content to that specific student during the classes. I don't know if this is what you were expecting from me, but this is what I could think, now [...]

Diamante: There isn't an expected answer, there is no right answer [...]

Jade: yes, that's it. You mentioned it last meeting when you asked if it was possible to share the student, so this is good to think about, how could we articulate it? How could we try to solve this issues and offer tools and possibilities to our students reach learning? (5th meeting, 6th December 2021).

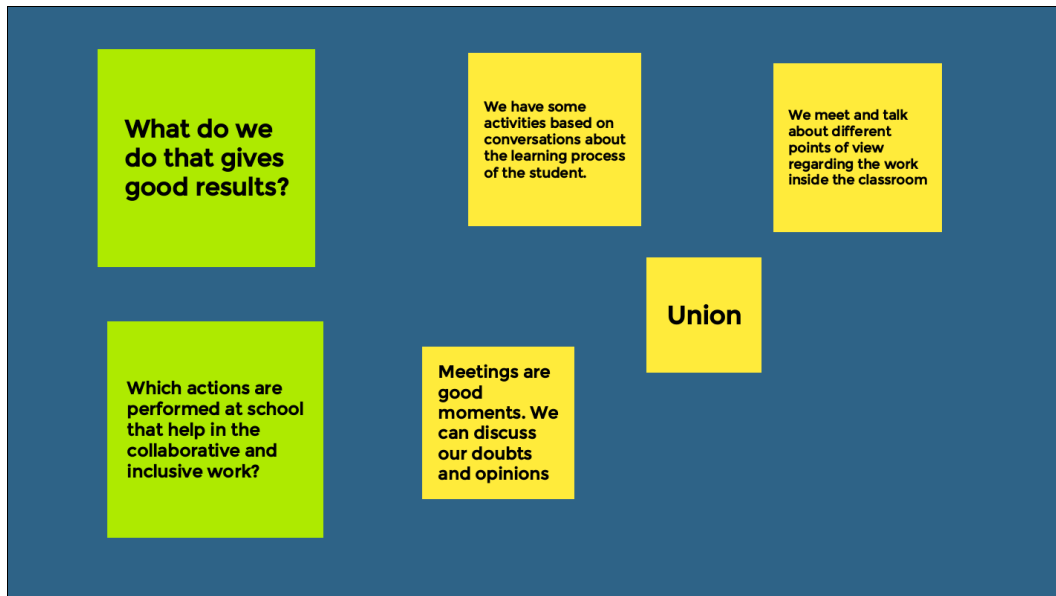
Collaborative work was mentioned above as a possibility to overcome the difficulties faced by the Special Education teacher regarding school subjects and the difficulties of the teacher regarding the strategies he would need to use with the Special Needs student. Therefore, share the student mean to plan and act together.

The purpose of resuming the previous meetings was the one of instigate them and promote thinking, discussion, in an attempt oh having them facing reality and trying to find ways to change what they believed was necessary.

The second stage of the formation began in the 12th May 2022, and new participants joined the group, which was understood as a repercussion in the school of the first meetings. Teachers and research group introduced themselves again, and the objective of the meeting was to think about the collaborative and inclusive work at school, highlighting what had already been done and what should be done in the future. If we consider the Cycle of Expansive Learning (ENGESTRÖM, 2002, 2013), we would resume the empirical analysis (what had already been done), and advance in the modelling of new solutions (what should we do to advance).

The Jamboard program was used to produce a chart with the answers given to the questions used to promote reflexive thinking. Two questions were asked, “What do we do that gives good results?”, and “What shall we do to improve? Why?”. Pictures 3 and 4 show the results.

Picture 3 – Slide produced by the participants in the 6th meeting



Source: Elaborated by the participants. Sixth meeting (12th May 2022).

Picture 4 – Slide produced by the participants in the 6th meeting.



Source: Elaborated by the participants. Sixth meeting (12th May 2022)

Answers were debated and it was agreed to continue the discussion in the next meeting. The intention was that the exchange of ideas would give them subsidies to overcome their difficulties.

The 7th meeting occurred in 16th May 2022. The slides were presented again, and the discussion went on regarding which tools are already used in the school that could be improved to help collaborative work? Two tools were mentioned, WhatsApp and a file in Drive (Google Drive). The group agreed to use these tools during the following week to see how it would work. It is important to understand that some aspects that emerged during the discussions would not be transformed into action if the researchers made the proposition. In a collaborative formation, the participants define the directions of the propositions, and it is not possible to the researchers to define the endpoint.

In a second moment in this meeting, teachers were directed to think about their own difficulties and how the colleagues could help them. Two sentences were used, “I have difficulties in...”, and “I can help with...”, to guide their thoughts.

Regarding their difficulties in collaborative actions, participants stated that the main difficulties were “put on paper what I have planned”; “wait for the other”; “it is difficult to understand the time of the other”; “work overload, I don’t say “no”; and “it’s difficult to say no/ work overload”.

After discussing about their difficulties, the discussion changed towards how they could overcome them. Participants suggested draw up an “organizational chart” and an “Essentialism book. They felt the need of establishing priorities for the work at school, which would also help to reorganize/change the inclusion process – Where to start? What are the priorities?

The objective of the 8th meeting (26th May 2022) was to discuss how planning collaborative work could help inclusion at school. Planning seem to be a point of difficult solution, it seems to join people together, but it also hinders the work, as it is not done in group.

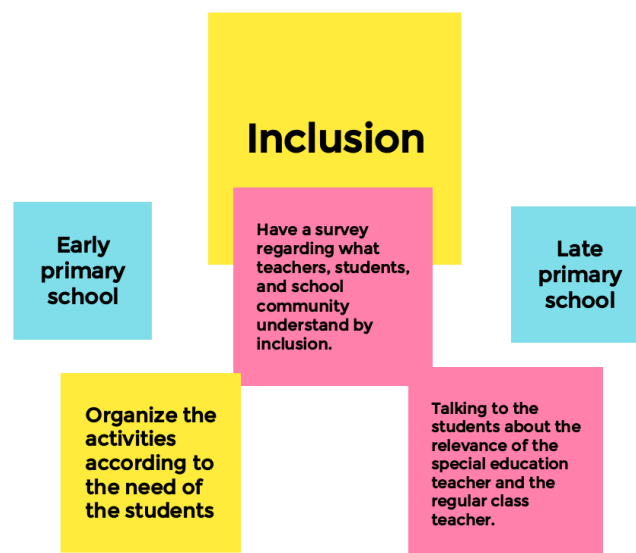
The discussions focused again on the organizational chart, and how it could be used to guide the professionals' actions at school.

Madrepérola: Well, maybe the organizational chart, as Cristal is trying to say, she may explain it better later..., it will be like a guide, right? We will define what we will do, how will do it, and the others can look and see what each one can do, one collaborating with the other. That's how I understand it, I don't see it as hierarchy, we cannot define who is the leader of the work, who is going to do what [...]

Cristal: That's exactly it, the organizational chart will help to decide what is priority, it's a guide, the first square, what is the priority? Is it the inclusion of all the students? From this starting point, strategies, actions, pedagogical practices are developed to meet the objective [...] (8th meeting, 26th May 2022).

The organizational chart was created and we can see the result in Picture 5.

Picture 5 - Slide produced by the participants in the platform Jamboard (8th meeting)



Source: Elaborated by the participants. Eighth meeting (26th May 2022).

The group proposed thinking about inclusion taking into consideration the specificities of each of the students' stage at school, Early Primary school and Late Primary School. After some discussion, the group agreed that the inclusion

process is not specific for each of the stages, and it would be better to think about it as a whole. Bearing in mind the collaborative work, the group decided it would be important to conduct a survey regarding what teachers, students, and school community understand by inclusion; talk with the students about the relevance of the special education teacher and the regular class teacher; and, finally, proposed the organization of activities according to the specificities of the students (Picture 5).

The organizational chart was thought as a tool to define priorities, choices, and further actions in the institution, and we observed the emergence of a new solution.

It is important to think about the scope of what was proposed. The discussion did not focused only on articulating the professionals of the regular classes and Special Education, otherwise, it reveals a concern with the pedagogical organization of the institution, the collaboration of the whole community.

The organizational chart was subject of discussion again in the 9th meeting (2nd June 2022). The group began a discussion about a new organization, but it did not advance. The Drive also emerges in the discussion as a possibility to support collaborative work.

Pedra de Cristo (researcher): It's interesting to see how the ideas began to fit in the puzzle. We thought about the organizational chart, how to develop the tools that would allow the development of new skills, it was a collaborative work that allowed the organization of the processes. Then, the discussion about the Drive emerged, what is the idea? Some teachers have already said that didn't know the Drive. So, what can we do? [...] Let's try to organize our planning based on the Drive, as it can facilitate our communication, as it is difficult for us to meet and socialize. Each of us have our own planning moment and the school routine is very though too [...]

Ônix: I believe it is possible, I'm very excited with the Drive, I like this idea very much.

Espinélio: I agree, and I also believe this idea should be extended to the other teachers, the ones that are not here, as it will make the lives of everybody easier! (9th meeting, 2nd June 2022).

Drive is a tool that was already used at the school, but mainly by the management team. It was used to organize official documents (school calendar, timetable, Pedagogical Project of the School, Internal Regulation, evaluations, Legislation, curricular structure, among others). The group then proposed that teachers' planning should also be shared there, enlarging the function of the app – from a management tool to a pedagogical tool.

The last meeting took part in the 9th June 2022, the discussion about the tools that could contribute with collaborative work to the inclusion process continued. The synchronized use of the school Drive and WhatsApp among all the school professionals was explored. The coordination team assumed the responsibility of presenting the Drive to the teachers, as it was a tool that many professionals were not familiar with. Further, the organization of the collaborative work would be conducted with this tool, highlighting the importance of its use to share the planning of the lessons.

The group expressed their wish of continuing with the formation. Other formative moments should take place with the help of the extension programs of the university and the school.

5 Final considerations: what the researchers have learned

The planning and development of a collaborative formation was a challenge, but it could not be different as the central discussion about inclusion of special students shows the relevance of collaboration. The coherence between what was discussed and the way the formation was conducted may have contributed to the engagement of the participants in the process.

The interest of the school and professionals was the first step into the construction of the formation. However, it was the behaviour of the participants, who embraced the proposition of collaboration, which allowed the advance of the discussions.

Each meeting was planned with mediating artefacts that would allow a collective and reflexive discussion regarding the pedagogical work at school;

the direction of the discussions was defined by what would emerge in each meeting. Therefore, as the teachers understood the school better, issues regarding inclusion and its difficulties, they could propose, collectively, changes and strategies to improve their work.

The formative meeting aimed at the expansive learning in the development of collaborative work for inclusion; however, at the end of the process, we did not observe the emergence of new practices. Otherwise, we observed movements of questioning, analysing, attempts of modelling the pedagogical work at school, and modelling of tools to promote collaboration that could give support to the inclusion of Students with Special Needs.

It is important to bear in mind that the context of the formation was a difficult one, as we were in the middle of covid-19 pandemic, with the work at school being reorganized to attend the health security protocols. The meetings were also online, at night, after a long day of work. Facing these difficulties demanded a team of researchers and undergraduate students, without their work it would be impossible to conduct a collaborative formation alone, in an online context subject to unforeseen events.

The theory background and the objective of the research were the base to conduct the meeting, but the discussions took place depending from what emerged in each of the meetings. This definition, which depended on the collectiveness, generated distress.

Therefore, conduct a continuing teacher formation based on collaboration is a great challenge, but a possible one. The process presented here showed that the professionals from the school may be the protagonists of their own practises and propose, collectively, the changes they see as necessary.

The space created for the dialogue in the formation was important to begin the organization of the collaborative work for inclusion. Further results will emerge in the consolidation of this dialogue in the school daily life.

Colaboração en la formación continua del profesorado para contextos inclusivos y colaborativos

RESUMEN

El texto tiene como objetivo presentar la formación desarrollada en una escuela pública de la ciudad de Natal/RN. Se trata de una formación colaborativa, basada en la Teoría de la Actividad Histórico-Cultural, que tuvo como objetivo crear espacios de intercambio y construcción de aprendizajes con el fin de organizar el trabajo colaborativo e inclusivo en la escuela. Se desarrolló en dos partes, la primera entre octubre y diciembre de 2021, y la segunda entre mayo y junio de 2022. Fueron 10 reuniones en línea, participaron profesores de los años iniciales y finales de la educación primaria, profesores de educación especial, profesores intérpretes de libras, docentes que se encuentran en la gestión escolar, además de los investigadores y estudiantes de pedagogía. En total hubo 25 participantes. Cada reunión de formación se planificó con artefactos mediadores para desencadenar una reflexión colectiva sobre el trabajo pedagógico en la escuela; la continuidad de los debates se definió en función de lo que surgía en las reuniones y del interés de las personas. A lo largo de los encuentros, los participantes articularon posibilidades para promover la colaboración que apoyara la inclusión de estudiantes con NEE, tanto mediante el desarrollo de nuevas herramientas como buscando retomar otras que ya existían en la escuela. Cabe destacar que fue muy importante contar con un equipo que impartiera la formación. Ofrecer una formación continua del profesorado basada en la colaboración, fue un gran reto, pero los resultados obtenidos demuestran que es posible que los profesores se comprometan y asuman un rol protagónico, reflexionando sobre sus propias prácticas y proponiendo colectivamente los cambios que perciben necesarios.

Palabras claves: Formación continua del profesorado; Colaboración; Educación inclusiva; Teoría de la Actividad Histórico-Cultural

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