MONITORING

ACTIVITIES
Monitoring Activities:
Reorganizing classroom activities collaboratively

Cachoeira de Minas
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Cover: building where the school was located during the monitoring project. The school was transferred to a new building in 2013.
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INTRODUCTION

When we teachers talk about an intervention project in a school context in Brazil, one of the first topics that concerns teachers is how those projects are imposed by the higher hierarchical levels, in a top down process. That imposition can come from the Ministry of Education, with the new educational projects, from the Estate and Municipal Secretariat of Education, or even from the management team of the school.

Consequently, the top down imposition of an intervention project to the teachers, who will consequently work with the students, can cause implementation problems, since they do not consider the contextual aspects in which it is being developed. Thus, it is necessary to find other ways for developing an intervention project at schools, considering the different possibilities of collaboration among all the stakeholders.

As an attempt of minimizing the problems on the implementation phase of a research project, we propose to include all the hierarchical levels at schools in the process of developing
and implementing the intervention process. In this specific context, we will discuss how we developed and implemented a research project involving monitoring activities and how the sustainability of it was possible. The project was performed at Escola Estadual Cônego José Eugênio de Faria, a state secondary education school in the south of Minas Gerais, Brazil (F. R. Cunha Jr, 2009; F. R. d. Cunha Jr, 2015; Faria, 2010). School Cônego, as it is known in the city, is the only secondary education school in the municipality and serves around 400 students.

Since we consider different hierarchical levels of the school, we have, as a result, a better engagement of the participants, enabling the creation of collaborative spaces, even among students as between teachers and management team. The collaboration among the subjects of an activity allows the participants to become collaborative agents. This concept has been developed in partnership with Monica Ferreira Lemos\(^1\), from Helsinki University, and will be discussed further, in the following chapters. However, Lemos focuses on the development of collaborative agency in the management team, among teachers and the surrounding community.

According to Freire (1967), education should be made to the subject man, and not to the object man. Thus, all stakeholders of a teaching-learning activity, from students to management team, shall be subjects in the activities. In that sense, it is important that all stakeholders involved in the intervention process have active voice. First, the teachers construct the initial rules for the project;

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\(^1\) Lemos is a PhD candidate at the Center for Research on Activity, Development and Learning, from the University of Helsinki.
second, those rules are presented to the students, who have the right to collaborate by giving suggestions. Those suggestions are then taken to the teachers, who reconstruct them. This process of reconstructing the rules is repeated not only in the developing and implementation stages, but also during the whole project, so that teachers and students reconstruct the rules and objectives of the project many times.

Thus, to enable the implementation of the monitoring project, we performed meetings with both teachers and students. About the students, there was also the need to have separated meetings with groups of monitor students and the groups of non-monitor students.

The work with monitor students was adopted in the school because one of the biggest challenges presented by the students of secondary education is the unevenness of knowledge among the students (F. R. d. Cunha Jr, 2015). In that context, the work with monitor students arises as a possibility for dealing with that question. During all the process of developing and implementing the project, the support of the management team, mainly the school principal, was of extreme importance for the success of the project.

Although all the teachers had been initially invited for participating in the project, only six teachers started using the monitoring activities in their classes. Consequently, with the results presented by the classes that worked with the monitor students, the project influenced other teachers, which will be discussed further in this book.

It is important to highlight that there are two different models of monitoring activities: the first, widely used in undergraduate contexts, deals with students from the subsequent class to work with groups of students in a different school time. The second, as
proposed by Faria (2003, 2010), works with students of the same class, during the activities proposed by the teachers, in small groups from three to four students. In this book, we will use the second monitoring model presented.

The monitoring activities described here are based on the critical-collaborative studies, as described by Magalhães (1998, 2011). In that methodology, all the decisions are made collectively, that is, there are no impositions of rules, but a collective construction process for them. Thus, the monitor students for the classroom activities were chosen both by teachers and by the students themselves, and during the class activities the groups were also organized by the students themselves. Inside the groups, every monitor student is responsible for collaborating with his colleagues, and when it is not possible, he asks for the help of the teacher.

In that classroom organization, that is, in groups with a monitor student, the teachers have more available time to collaborate with students who demand more attention (F. R. Cunha Jr, 2006). Instead of answering questions from 30 students in the class, the teacher can work with a reduced number of students, since the monitors are collaborating with their classmates.

This work with monitoring activities has its theoretical-methodological basis on Cultural Historical Activity Theory (Engeström, 1987; Leontiev, 1978; Vygotsky, 2007), and in the Critical-Collaborative Research (Lemos, 2014; Fernanda Coelho Liberali, 1994; Magalhães, 2011). The specific concepts related to each theory will be discussed latter in this book.

The following chapters of this book describe how the development and implementation process of the monitoring project occurred. We will discuss how the teachers were trained, how the process of student training took place, which is the focus of this book, and the conclusions we drew from that critical-
collaborative process. The chapters are organized independently, with an introduction, theoretical framework, the discussion about the monitoring activities and conclusions about each topic discussed in the chapters.

The first chapter describes the process of teacher training, how the meetings were organized, and how some rules for the monitoring activities were established. Chapter 2 presents how the student training took place, considering both the monitors and non-monitor students. The third chapter describes how the monitoring activities occurred in class. Finally, we draw our conclusions about monitoring activities.
The process of management team and teacher training for the implementation of a school intervention is essential for the success of any project. However, that process is usually prescriptive and does not allow the teachers the freedom to collaborate for the construction of the project (Huizinga, Handelzalts, Nieveen, & Voogt, 2014). As an attempt of minimizing the effects of prescriptions and impositions, researchers have worked with Teacher Design Teams – TDT (Huizinga et al., 2014; Huizinga, Handelzalts, Nieveen, & Voogt, 2015).

The basic assumption of TDT is that during the development of an intervention project, some teachers participate in the construction of the rules for the project, which will be implemented to other teachers or to other schools. As a consequence, we consider that working in TDT still limits the possibility of collaboration among subjects after the implementation phase of
the project, that is, collaboration among teachers is limited to the implementation phase of the project. That limitation occurs because the design created by the participants constrains the creative possibilities of the teachers in such a way that they have to follow what had been prescribed during the implementation phase in the following stages of the project.

Having that context in mind, it is important to consider the teachers as long-term collaborators, that is, as subjects of the activity, and not only as mere objects of a given work (Freire, 2014). Considering teachers’ collaboration during all phases of the project, we have the possibility of understanding the specific characteristics of the context and construct activities that supply the demands of that specific place.

Besides considering the teachers as subjects, it is important that we have the collaboration of the management team of the school to the implementation of the intervention project. In that specific context, the school principal invited the researchers to develop an intervention project that could reduce the unevenness of knowledge among students, so that the teachers could work the curricular contents in a more effective way in the classroom. After discussing the possibilities of implementing the monitoring activities with the researchers, the school principal convoked all the school staff for a meeting so we could present them the monitoring project.

In this chapter, we discuss how the teacher training process occurred for the work with monitoring activities in classroom and how collaboration among teachers enabled a better engagement of themselves for performing the activities.
The basic assumptions underlying a critical-collaborative work, as described by Magalhães and her colleagues (F. C. Liberali, 2009; Magalhães, 2011; Ninin, 2013), are that all the participants of an intervention project are subject of an activity and have voice during the discussions. By discourse, subjects build collaboratively the rules and define their objectives for the work, in a way that there is no imposition from the researchers or from the management team.

In that context, the researcher is the responsible for conducting the training meetings, as a mediator. By acting as a mediator, he is responsible for deepening the discussions, so that what is being in discussion can be expanded by the other subjects. Being an interaction process, according to Ninin (2006), there are moments of higher or lower engagement of the participants, which can impact directly in the course of the activity.

Thus, it is important to consider the cultural and historical aspects of an activity. As described by Minik,

_Vygotsky states that it is in the social interaction, in the behavior undertaken by more than one subject that the signs first act as psychological tools on behavior. The subject participates in the activity mediated by language, by psychological tools that other use to influence his behavior and to influence the behavior of others. Subsequently, the subject starts to apply to himself the same behavioral ways that were initially applied to him by others (Minik, 2002, p. 32)._  

In that context, language plays an essential role, and by the exchange of the senses every subject presents, there is the construction of new shared meanings, as described by Vygotsky (Vygotsky, 1997). Thus, the process of construction of rules and
objectives for the monitoring activities is a language mediated activity, in which all the participants can questions each other’s senses, so that, from the discussions, they raise new meanings to the activity under debate.

The process of implementing the monitoring activities

Before we started the monitoring activities, we had performed other intervention projects in that school (F. R. Cunha Jr, 2004, 2005, 2006), which involved the English as Foreign Language teacher. Those projects dealt with improving the ability of reading and comprehending texts in English and implementing a textbook according to the contextual needs of the students. The success of those projects served to consolidate a good relationship with the management team of the school.

In that context, one of the main issues concerning the school principal was the unevenness of knowledge of the students who entered secondary education. Since it is the only school in the city of Cachoeira de Minas, a small town in the countryside of Minas Gerais, Brazil, students presented a great variety of socio-cultural backgrounds, which resulted in the unevenness of knowledge among those students.

In an attempt to minimize that problem, the school principal asked me if there would be any idea or solution that I could implement in the school to solve such an issue. Thus, I proposed her to meet my former professor, to talk about a possible implementation of monitoring activities, which had been the focus of her research. After that first meeting, the principal invited all the staff from the school so we could share our initial ideas about the project.
All the teachers and other school employees, like administrative, cleaning and kitchen personnel were present. During the meeting, the basis for the monitoring activities and how the school should be engaged were presented to the participants. The engagement of teachers was not limited to the classroom, but also for periodic training meetings, where they would discuss theory and practical implications about the monitoring activities. The reason to invite all the school employees was to make them aware of what was going to happen in the school, although they could not be directly involved in the activities.

Although all the teachers had been invited to participate in the project, their participation for developing and implementing the monitoring activities was voluntary. This was because the school leaves the teachers free to accept or not to participate in extra-curricular projects.

Thus, six teachers were interested and made themselves available to participate in the following meetings to develop the monitoring activities project. The teachers who participated were teachers of Geography, Portuguese, English as Foreign Language, Mathematics, Physics and Chemistry. All the teachers had a bachelor degree in their respective fields and had been teachers for more than ten years in the public educational system.

During the meetings with the teachers, the monitoring activities project was restructured. During that process of restructuring, the teachers could bring suggestions from the discussions of theoretical texts, so that the work with monitoring could be adapted to the school needs.

One example of restructuring was the periodicity of the meetings: in the beginning there should be a meeting with the teachers every fifteen days, but due to the needs of every teacher the meetings were then rescheduled to every three weeks. It is
important to highlight again that all the process for the construction of the activities was voluntary, and the teachers were free to leave the project at any moment. However, there was no desertion from the teachers who started in the project.

Meetings with the teachers

After the teachers who would work in the project were defined, the researchers started the meetings with the teachers, so they could discuss the rules for the activity, and discuss the theoretical material relative to the monitoring activities. The meetings last from one hour to one hour and a half, and took place in a time chosen by the teachers themselves.

The objective of every meeting was to provide the teachers a theoretical framework to the construction of the rules and objectives of the monitoring project, and to discuss the practical implications of those theories. With a time of at least one week prior to the meetings, the teachers received a copy of the text that should be read for the upcoming meeting. The texts were about different topics, e.g. teaching-learning theories, collaboration and cultural historical activity theory.

Those meetings were mediated by the coordinator of the monitoring project and responsible for the teacher training. Although the coordinator usually started the discussions, it was the teachers’ role to define what should be done in practice. In total, the teachers participated on eight meetings, although we consider only six meetings in this book.

For the first meeting the teachers discussed two chapters of the book *Vygotsky? Quem diria? Em minha sala de aula?* (Vygotsky? Really? In My Classroom?) (Antunes, 2002), which addresses in a general way the concepts developed by Vygotsky. During that
meeting, the focus of the discussion was the relation between the Zone of Proximal Development – ZPD – and the monitoring activity. For the second meeting, the focus of the theoretical discussion was again the concept of ZPD and its relation to the monitoring activity, but this time having a text extracted from the book Vygotsky – Cientista Revolucionário (Vygotsky – Revolutionary Scientist) (Newman & Holzman, 2004).

From the third meeting on, the teachers started discussing more practical issues, while keeping the theoretical discussions as well. They discussed how they should choose the monitor students, how to grade their participation, and how the groups should be formed. Besides, we discussed with the teachers the expectations they had about the real use of monitoring activities with their students. After the third meeting, the teachers started working with monitoring activities with their students. It is important to highlight that the student training took place simultaneously to the teacher training, and will be addressed in the following chapter.

One year after the intervention project started, the teachers had a meeting to discuss how to reorganize the monitoring activities and verify how to include new classes of students to participate in the project. Since the project had been implemented to the students of the first year of secondary education, the teachers needed to define whether they would continue to work the monitoring activities only with the classes that progressed to the second year. They could also decide to work again with students from the first year and continue with the students of the second year as well, so that in three years all the classes in that school would be working with monitoring activities. In the last meeting with the researchers, the teachers discussed new possibilities for the sustainability of the intervention project.
Conclusions

Since the first meeting with the employees of the school, in May 2005, until the last meeting in June 2007, when the researchers left the school, the collaborative process of the discussions among the teachers was of extreme importance for the success of the intervention project involving the monitoring activities.

By collaboratively discussing the theoretical basis for the monitoring activities, there was no imposition of theories to the teachers. The teachers themselves glimpsed the relation between theory and practice and requested the researchers to bring more texts and materials related to the topic of their interest.

As mentioned throughout this chapter, the development and implementation of the monitoring activities was a collaborative process and was restructured many times, taking always as a starting point the practical use of the activity. Teachers themselves had previously defined the parameters for the selection of the monitor students, e.g. the academic achievement and performance on exams. However, teachers realized after some practical activities with the monitor students that such parameters were not enough for choosing the monitors. There were some cases which the monitors had no patience with the groups, since there were very weak students with a very proficient student. Thus, one of the teachers suggested that the groups could also have weaker monitors, so they could effectively collaborate in groups of weaker students.

The criterion for grading the monitor students was defined, at first, that the monitor students could be exempt from one test or even to have two points added to their final bimestrial average grade. On the other hand, the teachers realized it was not
necessary anymore to grade the students, since they started using monitoring activities even when it was not requested by the teachers.

Those examples of teachers’ autonomy to make changes during the project made the teachers to feel themselves as co-authors of the intervention, so that there was a higher engagement of the teachers while the researchers were working with the school and after the researchers left the school as well.

After the first year of the start of the intervention project with the first year students and its success achieved by those activities, the other teachers from the school authorized the students to use monitoring activities in their classes, enabling a general transformation of the school context, so that in three years the whole school was regularly using monitoring activities.
CHAPTER 2 – STUDENT TRAINING FOR MONITORING ACTIVITIES

Recently, many researchers have worked with teacher training in the Brazilian elementary and secondary educational contexts. Besides the growing demand for post-graduation and university extension courses, many projects are developed inside the schools, working directly with teachers and management teams on how to deal with the specific needs of every context (e.g. (Aarão, 2010; Lemos, 2014; F. C. Liberali, 2009; Silveira, 2010). Besides teacher training, schools also have to deal with pressure for implementing new educational projects imposed by the different government levels – Federal, State and Municipal.

In that sense, most of the projects that are implemented top-down to schools do not consider and important issue: how to train the students so they can deal with such changes. In this chapter, we discuss how student training contributes to the implementation and
sustainability of an intervention project. For doing so we will discuss the development and implementation of a monitoring project, performed in the Escola Estadual Cônego José Eugênio de Faria (EECJEF), a state secondary school in the countryside of Minas Gerais, Brazil.

As previously described, the monitoring project started from the need teachers had to work the curricular contents in a more effective way, taking into account the unevenness of knowledge of the students, so that students could benefit from that. Simultaneously to the teacher training, we started the process of student training, so they could also collaborate to the monitoring project construction.

All the activities developed in the monitoring project were theoretically based on the Cultural Historical Activity Theory – CHAT (Engeström, 1987; van Oers, 2012b; Vygotsky, 1997), and methodologically on the Critical-Collaborative Research – CCR (F. R. d. Cunha Jr, 2015; Magalhães, 1998). The use of CHAT and CCR enable the participants to act and reflect critically during all stages of the work, so that all participants become co-authors of the project.

Considering the two models of monitoring activities, we have one widely used by universities, with students of the subsequent year monitoring students, in a different school time. The other, which is our focus, deals with students of the same class, with a higher knowledge of a specific curricular component, to monitor the classmates during the activities in the classroom (F. R. Cunha Jr, 2009; Faria, 2003, 2010). We adopted the second model of monitoring activities since the secondary educational context can pose some constraints to the use of the first. In our context, there are students who come from rural areas and are dependent of transport offered by the city hall to go to school. Thus, those
students would not be able to participate in such activities. In addition, the monitoring activities out of school time can also have problems with availability of a physical space.

In the following sections of this chapter, we discuss the theoretical framework and how the process of student training happened during and after the construction and implementation phase of the monitoring project.

Sharing meanings: the construction of collaborative agency

As described in the introduction of this chapter, students must be considered as a part of any process of transformation in the school context. However, it is not enough to consider them as part of the process: we need to give them autonomy and responsibility in what is related to the activities of a given project, so they become collaborative agents during the construction process of the activities.

The collaborative process of monitors’ training take place by the exchange of senses and the construction of shared meanings, as described by Vygotsky (1988). During the meetings, the students present their senses, that is, the concepts they have about monitoring activities, and in the process of interacting with the colleagues and the researchers, new meanings arise. Thus, new meanings are shared, and the initial concepts the students have are transformed. In that process of building new meanings, the students have the possibility for becoming critical agents. However, it is not enough if only one student becomes a critical agent: it is mandatory that they act together. In that sense, we understand collaborative agency as the power people have to act together, enabling to expand the initial object of an activity.
This concept of collaborative agency is based in the transformative agency (Miettinen, 2013; Virkkunen, 2006), and in the concept of togetherness (Van Oers & Hännikäinen, 2001), which enables us to break the barriers in the relation oppressor/oppressed, as described by Freire (1970). In this sense, collaborative agency implies not only conscious acting towards something, but also acting together with the peers in order to build a collaborative process, being also responsible for the success or failure of the activity. Considering the monitoring project, by becoming collaborative agents the monitor students share with the teachers the teaching-learning activities, being also responsible for the development of such activities.

In a CCR perspective (Magalhães, 2011), transformations are only possible if the whole community is involved. In the monitoring project, both the teachers and students have their share of responsibility, that is, all people involved participated in a training process, so what is discussed with one group of subjects is taken into account for the construction and reconstruction of the project. This is a very remarkable feature of CCR, since there is no imposition of rules for an activity by the researchers or management team: they are constructed by all the participants.

The process of student training

Together with the teacher training, the monitoring project was presented to the students of the first year of the school by two researchers. That meeting had as main objective to show the students what the monitoring activity was and how it could be used in any curricular component.

During that meeting, after the explanation of the project by the researchers, the students could ask questions. Among those questions, we can relate how the monitor would be chosen, if it
would be mandatory to participate, if it would be graded, among other questions. The answers were given according to what had been previously agreed with the teachers, for example, the teachers had agreed that the students would be chosen by academic performance.

In that meeting, we could observe the first example of collaborative construction of the process: the students asked whether all the good students would be patient with the weak students. Thus, they suggested that the teachers should consider different grade levels, so there could be monitors in different levels.

After the first meeting with the students, the potential monitors were separated in one group and the non-monitors in another, so we could have meetings with the two different groups.

Since the beginning, it was established that all the work with monitoring activities would be voluntary, and the students were also free to leave at any moment. For research purposes, the informed consent was given by the parents of the students.

**Monitor students training**

As described in the introduction of this book, the students were first chosen by the teachers, and after by the students themselves, as defined by the students during the first meeting. In total, we had four meetings with the monitor students: two in the beginning of the school year\(^2\), one in May and the last in November.

\(^2\) The school year in Brazil starts in February and ends in December.
With the prominent monitors, the researchers conducted another meeting. That meeting took place during a class break, and last for 15 minutes. The better moment to have the meetings with the students was discussed with the school principal, and we decided to conduct the meetings during the class breaks so the students from the rural area could also participate. Thus, it was possible to all the monitor students to participate in the meetings.

In this meeting, the researchers made a list of the initial senses of the monitor students towards the monitoring activity. Since it was the first meeting with the monitors, the researchers conducted the meeting in an informal way, so the students could also fell well in the presence of people from outside the school.

The strongest senses presented by the students were that the monitors should help or assist the colleagues. The sense of help/assist shows the cultural-historical context of the students, also demonstrating a traditional view of schools, in which one teachers and the other learns. However, the role of the researchers is of extreme importance in such a meeting: by questioning the students, and at the same time allowing freedom for the students’ answers, it is possible to make students raise new senses for monitoring: organizing and collaborating. The students concluded that monitoring activities would serve as a new way of organizing the classroom activities, in such a way it would only be possible with the collaboration among the students.

Having the critical-collaborative background for an intervention, those meetings with the students enables all the participants to be heard and to express their opinions. However, acting collaboratively does not mean that all the topics raised will be accepted or implemented in the activity: the meeting mediator, whether a researcher or a teacher, shall act as an inquisitor. Through questioning, the mediator can make the students aware of other
perspectives connected to the activity. Thus, the mediator brings what had been previously discussed with the teachers and works together with the students to perform possible changes in the activity.

In the following meeting, the researchers discussed with the students what characteristics should a good monitor present. From the characteristics raised by the students, the good monitor should be: patient, responsible, intelligent, and use an easier language with the colleagues. This kind of discussions with the students also made them feel co-authors or the project, which according to Penuel and his colleagues (2011), the authorship of a project makes the participants to be more effectively engaged in the implementation of new activities.

After the two meetings with the researchers, the monitor students could experience the monitoring activities in practice, which will be discussed in the next chapter in more details. For the first classes using monitoring activities, the researchers asked the students to observe how the senses and meanings about the monitoring activity were worked with their colleagues, and to observe if the characteristics raised by them were used in practice. Four months after the two first meetings, the researchers invited the monitor students for another meeting.

The objective of that meeting was to discuss with the students if the shared meanings the group raised in the previous meeting were kept or if there were any changes. Due to the socio-historical-cultural of the students, the sense of help was still present in the students’ discourse. On the other hand, new senses were introduced by the monitors: monitoring as a way to make the other think and as a way of motivating the interests of others.

In the first case, we can observe the creation of a critical-collaborative relation, as described by Magalhães (2011). Acting in a
critical-collaborative way, the monitor does not give the solution of a given problem to the colleagues, but makes them to reflect about the issue, through questioning, so they can elaborate a satisfactory answer to the question. However, the monitors reported that they still had difficulties on how to make such a questioning to the students, without giving them the answers directly.

In the second case, the students shown that monitoring could be an alternative to motivate the colleagues on learning a new content. Contrary to that, another student raised the question: “monitoring can make the non-monitors more interested in the topic, but you can explain ten times, if he is not interested, he will not learn anything!” Although this student raised this issue, by discussing and reflecting, the students concluded that monitoring could be a way of really motivating the colleagues.

After the discussions about those two topics, the researchers worked with the monitors on how to make questions to the other students during the monitoring activities. There was a tendency on the students to ask Yes/No questions. To have a better connection with the critical-collaborative process of the monitoring project, the researchers suggested the monitors to ask questions that enabled an open answer, usually started by specific markers, such as how, where, which, why, what.

In relation to the characteristics of how to be a good monitor, the monitor students did not observe any changes, and kept the senses described during the first meeting. Since the monitors were not the same in all the curricular components, there were cases, for example, that one student was monitor in Physics and not in

3 Yes/No questions are questions which the answer can be yes or no.
Portuguese. That exchange of roles in the monitoring activity enabled the students to observe both sides of the activity, so they could reflect on their posture as monitor, and while observing the other colleague being his monitor, they assumed the posture of collaborative agents.

Following that discussion, the researchers requested, again, the students to observe critically how they would act with the colleagues in the classroom, and that the students observed more the monitors while being in the position of non-monitor.

After that meeting, the students continued with the monitoring activities with their colleagues, according to the specific needs of every curricular component. By the end of November, the researchers met the monitors again so they could point their final remarks about the project. It is important to highlight that the monitoring project was a long-term project for the school, and the activities would continue in the following years.

Being a critical-collaborative project, enabling all the participants to act on the activities, during the year new monitor students were included to the list of monitor students, while some monitor students left the position of monitors. This exchange in the role of the students was made in a consensus with the teachers and students. However, those monitors did not participate in the meetings, so the training of those students occurred in practice, by observing the other monitor students. In that moment we could observe the collaborative agency among the students, since they could become monitors by exchanging their experiences with the colleagues.

In the last meeting, the researchers discussed the senses and meanings about monitoring with the students. The focus of that discussion was to establish collaboratively how the monitors should work in the following years. Although the work help was still
present in the students’ discourse, there was a significant change of the students towards critical collaboration. The monitors were aware that the help was a way of doing together with the colleagues, and not simply giving an answer. Besides the collaborative posture, the monitors felt themselves as a teacher, as the one who can teach something to the colleagues. That way, the students takes more responsibility while being monitors.

As a result of the training meetings, the students established the following conditions for a monitor:

- Be patient and responsible
- Know the curricular component
- Be flexible for expressing himself with the colleagues
- To understand the difference between collaborating and helping
- Do not give direct answers to the question
- To question the non-monitors in a collaborative way

Again, for being a critical-collaborative intervention project, the researchers were not allowed to make any impositions to the monitors. Otherwise, the monitors themselves established the rules for the activity and the criteria to be a monitor. By having voice in the training process, the participants become more engaged in the activities, and the probability for a successful implementation is higher. After the training process, the students worked with the monitoring project for more two years, that is, for the secondary education period. Consequently, in the following years, the students worked autonomously, that is, without the interference of the researchers.
**Non-monitor students training**

The meetings with the non-monitor students were organized in a similar way to the monitor students. However, the researchers had only two meetings with the non-monitor students, one in March and the other in November. The objectives of the meetings were to understand the non-monitor students’ perspectives on the monitoring activities and how they perceived the monitors’ role during the activities.

For the non-monitor students, the monitor should work as a facilitator, and that they could better understand the topics when a monitor student was explaining than when the teacher was. Thus, the non-monitor students perceived the monitor as the one who could “translate” what the teacher explained to an easier language. For the non-monitor students, there were not too many expectations about the monitoring activities, since most of them considered themselves as weak students.

Instead of trying to establish rules for the monitoring activities, the meetings with the non-monitor students were used as feedback on the work of the monitor students, so that the researchers could discuss with them during their meetings. In that sense, the meetings with the two groups – monitors and non-monitors – enabled us to contrast the information provided by each of the two groups. Although the non-monitor students did not have a direct influence in the process of monitor students training, the non-monitor students felt themselves proud for being invited to express their opinions about the monitoring project, and thus being also part of the construction of the intervention.
Conclusions

Constructing and implementing an intervention project in a school context is a delicate task and involve all people from the school. To be successful, the training for all people involved seems to be a fundamental factor to the progression of the work. In our case, with the monitoring project, there was the involvement of all people from the school. First, the school principal allowed us to talk to the teachers. Second, the teacher training enabled homogeneity of practices among the teachers. Third, the involvement of the students during the project construction enabled a work within the needs and expectations the students had, and not only the needs and expectations from the school principal or from the teachers.

It is important to highlight that we should not understand student or teacher training as knowledge transmission, but as a process in which the subjects construct their concepts about the activity. Thus, the students training, even though it was carried on for only six meetings, was seen by the students as a way of stimulating their participation during the implementation of the project. Therefore, the process of collective training of all the participants proved to be a key characteristic to the implementation process of the monitoring activities in that school.

By raising their senses and sharing new meanings for the monitoring activities, students could experience the process of implementations of an innovation in the school context, so that the result of this process is the collaborative agency among the students, that is, not only one student acting in the context, but all the students act together in order to create a new context and to transform their school.
Working with monitoring activities with students from the same class seems to be very simple: we put a monitor student with a group of students and he is supposed to help his colleagues to perform the activities. However, the first issue students need to be aware of is the difference between cooperation and collaboration.

For the monitoring activities, the monitors have to act in a critical way, trying to stimulate his colleagues to solve the problems proposed by the teachers, without giving a direct response, that is, collaboratively. The biggest problem that a monitoring activity can face is to become an ordinary group activity, in which every student performs a fraction of the given work, and in the end they put everything together, that is, they cooperate.

In order to avoid that problem, during the student training, we discussed with them the role of the monitor student, so it could be
clear for them what was expected from both monitor and non-monitor students. After the roles are clear, we can expect, for example, that during one monitoring activity, instead of making questions to the monitor, the non-monitor student can be questioned by the monitor instead of simply receiving an answer.

In the previous chapter we presented how we conducted the student training. In this chapter we will present how the students acted during the monitoring activities, how they used the fundamental concepts about the monitoring project and how they were able to transpose those concepts to other curricular components.

As described throughout this book, this work is based on the Cultural Historical Activity Theory – CHAT (Engeström, 1987; Vygotsky, 1997), and methodologically on the Critical Collaborative Research (Magalhães, 2011). Considering that theoretical-methodological background, two concepts are central in this chapter: the Zone of Proximal Development – ZDP (Vygotsky, 1997), and Collaborative agency.

This chapter uses examples of monitoring activities from Mathematics and Geography classes. Although the classes presented distinct interactional patterns, that is, different discursive patterns, as described by Kerbrat-Orecchioni (2006), it is possible to establish relations to both areas. In the following sections we will describe the supporting theory, and how the students organized the monitoring activities in the classroom.

**Zone of Proximal Development (ZPD) for Collaborative Agency**

One of the key concepts of Vygotsky is the Zone of Proximal Development (ZPD). In this chapter, we understand ZDP as an
imitation process, as described by van Oers (2012a). Imitation, as we adopt here, is not only the mechanical act of reproducing a task, but the act of appropriating and reconstructing an activity with the collaboration of others. This process is called imitation since it considers the reconstruction of culturally pre-established activities.

During the monitoring activities the students imitate the teachers in their groups, so that the discourse used in each different curricular component is similar to its respective teacher’s discourse. However, the monitor student is free to create his own version of the activity, making the adaptations he considers necessary. The same process occurs with the non-monitor students, who imitate the monitors, so that in this imitation process they can perform activities they would not be able to perform alone.

By performing activities in a collaborative environment, that is, by creating ZPD, students tend to develop collaborative agency. According to Miettinen (2013), collaborative agency emerges when two or more people from different areas work together in order to create a new product or to solve a problem they could not solve by themselves.

However, in this work the concept of collaborative agency goes in a different way as proposed by Miettinen. In order to go beyond the initial parameters and apply the activity to other contexts, we need collaboration and involvement of all subjects of an activity, and the involvement of people indirectly involved as well. Thus, besides having a strong and active group, the group needs to persuade or convince the other subjects that one activity is useful for the given community.

In the following sections we discuss how the students used the concept of collaborative agency and how they expanded the boundaries of the monitoring activity.
Monitoring activities in classroom

After the initial process of student training, the teachers started working with monitoring activities with their students. For doing so, they needed to reorganize their school routine, for both teachers and students.

The first step for the monitoring activities is the previous preparation of the monitor students, that is, the monitors should, at least, have an idea of what will be discussed in the following class. Then, the teachers inform the monitors the content to be worked, so they can have some time to prepare themselves to the class. Thus, the monitor students need to have a previous contact with the theme of the next class. That communication can be made during one class, with a note on the black board or as the teacher considers the most suitable option. In that context, the teacher would introduce and explain a topic in one class, and work with monitoring activities in the other class.

However, communicating to the students what will be discussed on the next class does not replace the explanation of the contents by the teachers in the classroom. The teacher explains and/or introduces new topics in the same way he does before using monitoring activities. It is important to highlight that the monitoring activities are used only during the practical exercises, after the teacher explains the content. The monitor students should know the content previously in order to think about possible questions he would make to the teacher before working with his group.

In the beginning of the monitoring activities, the use of monitoring was scheduled beforehand by the teachers. This organization was necessary since the classroom organization needed to be changed, so the students could work in groups.
In the scheduled day, the students organized the room in groups. For doing so, the students had around five minutes in the beginning and also five minutes by the end, so the next teacher could receive the reorganized room. After the students organized the groups, the teacher would give instructions for the tasks and leave the monitors responsible for each group.

Every group of students was formed by one monitor and two or three non-monitor students. During the activities, the monitors were responsible for collaborating with his colleagues. This work in the groups is constructed based on the ZPD, that is, the non-monitor students start performing an activity they could not perform by themselves by imitating the monitors.

This classroom organization is groups enabled the teachers a bigger time to collaborate with the students with more difficulties. In this way, the help from the teacher would be asked when the monitor students could not collaborate with the colleagues. Thus, instead of answering questions from 30 students, the teacher needed to attend to only eight monitors, who would collaborate directly with the other colleagues. The work with monitors, besides making the process to answering questions faster, leaves the teacher with more freedom in the classroom.

Due to the time spent to organize and reorganize the classroom, in the beginning of the project the monitoring activities occurred in a frequency of one class of monitoring activities for every six classes of the teacher. That is, in the case of the Mathematics teacher, who had six weekly classes, she would have monitoring activities once a week; for the Geography teacher, who had only two classes a week, the monitoring activities would occur every three weeks.

However, that frequency did not obligate the teachers to use monitoring activities. The teacher was free to choose the best
moment for the activities. For instance, the Mathematics teacher had two classes in the same day. She could use the two classes with monitoring and stay two weeks without using it. It could also be the case that the teacher could work with monitoring twice a week. It is important, though, highlight that those changes at schools need to be gradual, as described by Parrilla (2004), so the changes do not cause problems to the school routine.

The interaction process in the Mathematics and Geography classes with monitoring

The interaction patterns of the students can be very different in every curricular component. The way those themes are discussed with the students has a direct impact on the way the monitor students act with their groups. For instance, the Mathematics classes present a more rigid content, so it is more difficult to the monitors to find other ways of explaining those contents to the non-monitors. For the Geography classes, the students are freer to discuss the themes, enabling the use of more previous knowledge to the discussions. According to Bakhtin (1952), some knowledge areas have a standard discourse, which makes them more difficult to be paraphrased by the students. Thus, the students tend to reproduce the teacher’s discourse during the monitoring activities.

In that discursive process, the students imitate the teachers in their groups, as described by van Oers (2012c). Although the student imitates the teacher, he is still free to change it. Considering the Mathematics classes, the students tend to use more verbs in the imperative, while in the Geography classes their discourse is more flexible.

By imitating the teachers, the monitor students feel themselves as teachers of the non-monitors. It is interesting to highlight here that the non-monitor students expect that behavior from the
monitors, so they can collaborate immediately when they have doubts or questions during the activities. This immediate assistance from the monitors serves as a stimulus to the non-monitor students, avoiding they become less interested for the topic discussed, raising their engagement in the activities (F. R. d. Cunha Jr, 2015).

Due to the different classroom organization, that is, in student groups, the monitoring activities can be noisier than the traditional classes. During the monitoring activities it is expected that the students talk more with each other. However, the monitor student is responsible for keeping the focus of the dialogue during the tasks.

It is important to remind the students that the monitoring activity is a collaborative activity. The monitor does not give the answers. He tries to conduct the colleague to deepen his answer and to present a support for his argument. Thus, the monitor is the one who acts critically, enabling the questioning, so they can expand the knowledge of the colleagues.

**Transformations in the monitoring activities: students as collaborative agents**

After some time using monitoring activities, the students were getting used to the new classroom organization, so that the time spent for organizing the groups, either in the beginning or in the end of the class, was reduced. That enabled the teachers to use monitoring activities with a higher frequency.

As a result of this higher frequency, the students decided they would use monitoring activities even when the teacher had not requested. This is the first example of collaborative agency developed by the students. They transcend the organization proposed by the teacher and reorganize the activity so it could
supply their demands. According to Vygotsky (1997), the students appropriated of the instrument, so they can use it for other situations that are different from the initial situation they were used to use it. Thus, the students did not depend on the teacher to schedule the monitoring activity: every task proposed by the teacher could be performed with the monitoring groups.

The next movement from the students was to expand the use of monitoring activities to other teachers or the school who did not worked in the monitoring project. Therefore, instead of the six initial curricular components, the students started working with the ten components. This expansion process can be also explained by the collaborative agency. The students agreed that the monitoring activities would be good for all of them, thus they decided to implement by themselves the monitoring activities to the other teachers. Then, the students used the criteria stablished by them (see chapter two) to choose the new monitors for the other curricular components.

As a result of that expansion, the classroom organization was kept in the form of groups. The classroom was only reorganized in lines when requested by the teachers, for instance, in days of tests of individual exams.

Another issue raised by the students is the greater engagement of the class. According to the monitors, the non-monitor students were more active, and did not want simply to copy the answers from the colleagues. This was also noticed by the non-monitors themselves, who also agreed they were producing more in the classes, so that they could even improve their final grades.

With the greater engagement of the students, ordinary problems of the classroom, like chatting or doing other tasks, decreased drastically. The non-monitor students reported that the
monitor students give them no time to think about other things, and also that the classes’ quality improved significantly.

Conclusions

After three years of the beginning of the monitoring activities in the classroom, the results obtained by the students suggest that the implementation of the project was successful. We could observe improvement in the final grades, greater engagement of the students and an effective transformation of the classroom routine. Those changes were only possible due to the high level of involvement of the participants, that is, all people from the school were involved in the implementation process. That involvement conducted the participants do develop collaborative agency, so they could involve new subjects into the activity, resulting in the whole school working with monitoring.

In the process of implementation, the researchers collaborated both with teachers and students, so they could work independently after the researchers leave the school. Thus, the monitoring activities continued to be used by the teachers, so that every first year class starting in the school would use monitoring activities. However, the teachers would now be the responsible for training the students. In three years, all the classrooms of the school were working with monitoring activities.

To express the efficiency of the monitoring activities, the Mathematic teacher reported in one teachers’ meeting: they do not need me anymore! They are doing all by themselves! What do I do now? Naturally, the students still needed the teachers. Consequently, the use of monitoring activities reveals another issue: how the teachers are overloaded during the classes. The use of monitor students can be also a tool to solve that issue and to improve the teaching-learning process.
FINAL REMARKS

All processes of transformation of a school context require a huge amount of work from the participants to obtain significant results. The project with monitoring activities involved a considerable number of people from the school and mobilized all the teachers by the end of three years. This movement was only possible due to the critical-collaborative nature of the project, enabling all the participants to become collaborative agents for the activity construction.

With that new way of organizing an intervention project, we leave behind the dominant hierarchical structure present in most of the schools and started recognizing the importance of every stakeholder for the activities. Thus, we have two distinct models for the school organization, as described by Figures 1 and 2.

Figure 1 - Traditional hierarchical school organization
From a traditional viewpoint of school organization, we have the management team providing the guidance for the teachers, who in turn apply them to the students. In a critical-collaborative perspective, we understand that every hierarchical level still has its importance, but it is also necessary that all of them have the opportunity to talk and interact, so the transformations can take place.

Considering that new hierarchical structure as a new organization of the school context, the participants have the possibility of becoming subjects of the teaching-learning process, since there are no barriers between the hierarchical levels anymore.

However, this new way of understanding the school context does not mean that there is anarchy or that one student is not supposed to solve his issues first with the teachers before involving
the management team. The key issue here is that all people in the school should be heard before any intervention proposal is implemented. Both teachers and students have their share to collaborate, and without the effective participation and involvement of all stakeholders, the intervention project starts doomed to failure.
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