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Teaching Activities that Develop Learning Self-Regulation

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ABSTRACT – Teaching Activities that Develop Learning Self-Regulation. This text addresses a study that aimed to identify the system of teaching-learning activity which best propitiates the development of strategies of self-regulation of learning in two first-year classes of formal literacy in French schools. The research development was carried out according to a qualitative observational perspective, inspired by the mixed conception of ethnographic methodology and activity theory. The results showed that the activities carried out in the *Interdisciplinary Teaching* category provided greater opportunities for the evolution of self-regulation strategies in students, enabling teachers to act as mediators in the process of developing self-regulation of learning.
Keywords: **Self-Regulation. Teaching Activity. Learning.**

RESUMO – Atividades de Ensino que Desenvolvem a Autorregulação da Aprendizagem. Este texto aborda um estudo que objetivou identificar o sistema de atividade de ensino-aprendizagem que melhor propicia o desenvolvimento de estratégias de autorregulação da aprendizagem em duas classes de primeiro ano de alfabetização formal em escolas francesas. O desenvolvimento da pesquisa foi realizado segundo uma perspectiva observacional qualitativa, inspirada pela concepção mista de metodologia etnográfica e da teoria da atividade. Os resultados mostraram que as atividades realizadas na categoria *Ensino Interdisciplinar* proporcionaram maiores oportunidades para a evolução de estratégias de autorregulação nos alunos, possibilitando aos professores atuar como mediadores no processo de desenvolvimento da autorregulação da aprendizagem.
Palavras-chave: **Autorregulação. Atividade de Ensino. Aprendizagem.**

Introduction

All people have a degree of self-regulation, in particular for processes that involve school learning. However, the most successful students are those who can adjust their approaches to certain learning tasks and contexts (Bol; Garner, 2011; Hacker; Bol; Bahbahani, 2008).

In the self-regulated learning theory (Zimmerman, 2008; Zimmerman; Moylan, 2009), strategies of planning, monitoring and evaluation of learning can be influenced by someone's objective (Spruce; Bol, 2015) and, more specifically, by the teacher's work. Self-regulated learning consists of the ability of subjects to organize their own learning projects, progress and strategies to deal with activities and obstacles (Perrenoud, 1999).

According to Pereira (2012), to achieve a good school performance, students need to develop skills that allow monitoring effectiveness of the learning strategies adopted. Some authors (Zimmerman, 2001; Rosário, 2004; Frison; Simão, 2011) have been researching about the self-regulated learning and stress the relevance of this construct for education and for the teaching-learning process, showing that this is a multifaceted phenomenon that plays an important role in the success of school students.

To maximize their academic performance, students need to enhance the ability to learn and control their own learning (Zimmerman, 1994; 2001). Self-regulated learning can be developed through coordination of cognitive, metacognitive and motivational skills. Improving self-regulated learning strategies is possible through teaching activities that encourage students to self-monitor and control their performance. The role of teachers in the development of self-regulated learning strategies is essential (Azevedo et al., 2008; Paris; Paris, 2001; Spruce; Bol, 2015). If teachers can provide an environment where students can have more autonomy and responsibility in their learning process, within the classroom context, thus enabling more enduring skills, students will be more able to self-regulate their skills along the school path (Rosário, 2004).

Teachers can stimulate self-regulated learning through teaching of strategies that allow students to control unexpected situations, modifying their development according to the information acquired over time (Morin, 2001). Therefore, as an educational institution, it is appropriate for the school to provide the development of understanding and autonomy of the students, through a more active learning, encouraging them to optimize the ability to select, build and transfer knowledge (Freire, 2009).

Self-regulated learning can be studied from several angles in the educational area. However, research conducted in school contexts frequented by older students is more numerous, since strategies used and activities taught in class are more evident. There are fewer studies on teaching activities in educational contexts that involve self-regulated

learning of students who are starting the process of formal literacy. In addition, we can distinguish two investigation points: one is more centered on the study of cognitive, metacognitive, motivational and behavioral processes of the students, and another contextual, more centered on beliefs, conceptions and teachers' educational practices. This article aimed to contribute to the research about self-regulated teaching-learning in young students who are starting the learning process, in order to identify contexts and educational activities that most provide the development of self-regulated learning strategies in French classes of the first year of formal literacy (*Cours Preparatoire* – CP, as they are called in France).

Theoretical Bases of the Teaching Activity and Self-Regulated Learning Activity

Difficulties for students who are starting Elementary Education are a growing concern of the entire educational community. Many students who begin at school with difficulties go to High School without knowing how to interpret a simple text. By researching studies of recent decades on the self-regulated learning concept, we noticed that this is a constructive and important topic to understand the different teaching-learning processes and school success.

According to Zimmerman (2000), self-regulated learning is the ability of students to develop essential knowledge, strategies and behaviors to increase learning, whether in the school context or daily life experiences. Students regulate themselves when they participate actively in their own learning process, from the metacognitive, motivational and behavioral point of view (Zimmerman, 2000). In this same perspective, Zimmerman, Bonner and Kovach (2000) state that school self-regulation is a set of thoughts, feelings and actions generated by the students to achieve specific educational objectives.

Recent studies (Abrahão; Frison, 2010; Frison; Simão, 2011; Abrahão, 2012; Abrahão; Frison, 2012; Abrahão; Passeggi, 2012; Mottier, 2015; Zimmerman; Schunk, 2011) show that autonomous learners are described as self-regulated students in their learning. Thus, self-regulated learning would aim at the optimization of learning and improvement of the perception students have about their own efficiency and control they have over the learning processes.

Cosnefroy (2013) identifies several characteristics of students' learning that are associated with a tendency of self-regulating learning and the obtention of better results. Research of the aforementioned author shows that learning tends to be more effective when students have a proactive role in this process, for example, when they are supported by a strong motivation and precise objectives to choose an appropriate strategy for their own education. These self-regulated strategies can be taught by literacy teachers, being a way to use a more proactive approach instead of a repairing one.

All students, especially those with low academic performance, can benefit from self-regulated strategies learned in the classroom, through a favorable educational activity context. According to Boruchovitc (2007), students who are starting at school can learn how to amplify resources used in the classroom, learning to monitor understanding during reading time, using memory strategies, planning, controlling negative cognitions, affective and motivational states etc.

Identification of types of educational episodes and understanding the teaching-learning activity system at the beginning of formal education can help comprehend which strategies are used in each work environment and thus provide clues about teaching contexts that produce a further development of self-regulated learning. To manage to describe the different ways to teach how to self-regulate initial learning, we need to use a broad activity model that considers teaching-learning within a social system that connects the subject to the object (Engeström, 1999). Mediation between the subject and the object is performed by the instruments and the subject rarely exists by himself. He is part of a group, of a community.

Engeström (1999; 2001), inspired by the theory by Leontiev (1984), presents a dynamic activity concept, in which its components influence one another in such a way that the system adjusts, adapts and evolves continuously. Engeström's approach contributed to build this study, since it considers the centralization of two aspects: teaching and learning. There are several participants and types of processes in the teaching-learning of reading and writing. Students participate in a community in which other learners and teachers are integrated. The community mediates the learning process by itself and its members and thus, there is a specific work distribution. The clearest distribution is between the teacher's activity and the student's activity, although it can happen among students. In this latter case, there is a more subtle distribution, however remarkable as well when, for example, the student is playing the role of tutor helping his colleagues to complete a task. Work distribution can also be flexible: students may be tutors at a given time and learners at another. There are occasions in which students collaborate with the task by building a common experience that does not refer to a particular subject, but the entire group.

Activity theory helps identifying the strategies used in this important first learning period in the teaching-learning activity system, in order to consider variability of teaching practices and describe the different ways to teach self-regulated learning. Didactic and pedagogical practices play an important role in the self-regulated learning development, and consequently in the school success of students. Therefore, further studies seems to be essential to identify what effectively happens in the classroom, as well as teaching/learning contexts that allow self-regulated learning of students who are at the beginning of the literacy process.

Methodological Principles and Research Context Characterization

The study was conducted in two schools exposed to different teaching approaches, both located in the metropolitan area of Grenoble, France. Two first grade classes (named *Cours Préparatoire* – CP in France) participated in the research. Population was formed by 43 children (18 from school A and 25 from school B) and two teachers responsible for teaching several fundamental subjects (reading, writing, mathematics etc.), as well as other teachers who occasionally participated in class activities. The mean age of students was 6.1 years for the class A and 6.3 for the class B. The two main teachers of the two classes are graduated by IUFM – Institut Universitaire de Formation des Maitres [University Institute for Teacher Training] in Grenoble, France. Alice, the class A's teacher, was 37 years old and seven years of experience as a teacher, three of them at the CP. Betty, the class B's teacher, was 45 years old and 20 years of experience as a teacher, five of them at the CP. Both teachers have accepted a regular observer in class, providing the teaching material and the class plan with time control in the classroom.

Sociocultural aspects of the students' families were observed by using the classification of professions and socioprofessional categories (PCS), established by the INSEE – *Institut national de la statistique et des études économiques* [National Institute of Statistics and Economic Studies], in order to know better the sociocultural environment of each class. This classification helps to understand heterogeneity of the cultural and social environment of the school. There were three socioprofessional categories: fortunate, medium and unfortunate. We found that the families of class A students mostly belong to the medium socioprofessional category (67%). Fortunate and unfortunate socioprofessional categories sum 20% and 13%, respectively. Medium socioprofessional category is also the most represented in the class B with 53%, followed by the fortunate one with 27% and the unfortunate one with 20%. Therefore, we verified that most children of the two classes belong to the socioprofessional medium category.

The research was developed according to a qualitative perspective, inspired by a mixed conception methodology: ethnographic (Laplantine, 2000; 2001) and sociocultural approach of the activity theory. The operational way used in this study was guided by ethnography questions and includes techniques and procedures that characterize qualitative research. In this perspective, the procedures need to be reformulated and developed in such a way the researcher focuses on the reality of data construction, which are explicitly or implicitly determined by the research questions. In this sense, the research was defined and connected to the study objectives in order to understand the phenomena observed. This choice is consonant with the self-regulated learning research field and with the analysis categories built afterwards.

Ethnographic approach is defined by Laplantine (2000) as the set of empirical methods used for rigorous and continuous observation of human groups. Unlike research lines that highlight large-scale and

experimental studies, the ethnographic approach is interested in daily life experiences of individuals and allows to better analyze the didactic and pedagogical practices that encourage self-regulated learning in the classroom.

The activity theory approach shows that human activity is incorporated into a system of relationships within society. The subject carries out activities according to a continuous process of interaction with the social environment. The activity object is closely linked to the roles played in society, since this activity is what allows the subject to be consolidated in the social environment; as the words by Leontiev (1984, p. 67): "[...] society produces the activity that shapes their individuals."

The regular observation in classes was agreed with the teachers of the two classes at the beginning of the school year, which takes place in September in France. These observations were conducted throughout the school year, but more intensely during October, January and May. Overall, 40 instrumented observations happened in the two schools, being 20 in each of them. This article privileges a perspective that seeks to consolidate the processes studied (Beaud; Weber, 2003) to better observe self-regulated initial learning strategies of reading and writing. This selection of observable points performed through a progressive coherence of the questioning, the situation and the object, can be illustrated by the observation grid (Basso, 2011) used to evoke important aspects that may help identify self-regulated learning strategies in teaching practice. Therefore, one of the data construction techniques used throughout the school year was the instrumentalized observation. With the aid of this grid, three dimensions were observed (teaching, interactions and behavior of students) in the actions of teachers and in the teaching-learning processes.

In the Teaching dimension (Table 1), pedagogical aspects, didactic gestures, tasks proposed and instruments of mediation used in the classroom are observed. The pedagogical aspects are the teacher's behavior, the way he or she acts, the reading and writing methods used, actions and attitudes during the task proposed, finally, the way this teacher regulates and controls tasks. Didactic gestures regard didactic choices, strategies and types of elements used in the reading and writing teaching; the observation is also centered in disciplinary contents and learning processes. This aims to verify how ideas, concepts and principles of the subjects are transformed into content to be taught. The proposed tasks are analyzed through three angles: education, evaluation and coordination of tasks. The mediation instruments are the types of tools (material or symbolic) used during the activity, and they are observed to help understand the role of mediation of these pedagogical instruments.

Table 1 – Examples of Aspects Observed in the Teaching Dimension

Observation examples of the Teaching Dimension	
Pedagogical Aspects	Teacher's actions (e.g., the teacher uses the student's answers).
Didactic gestures	Didactic choices (e.g., the teacher performs a coordination between the interpretative and the metalinguistic levels). Types of elements used in the reading and writing teaching (e.g., the teacher proposes to discuss and reflect on the stimuli and differences among the words). Types of support for reading and writing strategies (e.g., work with letters, sentences and texts).
Proposed tasks	Educational aspects of the task (e.g., task focuses more on the sense rather than the form). Task evaluation (e.g., formal evaluation through exercises). Coordination of tasks (tasks are simply juxtaposed).
Mediation instruments	Materials instruments (e.g., books, textbooks, computers, board). Symbolic instruments (e.g., language, oral explanation).

Source: Elaborated by the authors.

In the Interaction dimension (Table 2), teacher/students, students/students interactions and types of interaction are investigated. Ways the teacher adapts to different situations, reactions of students and, specifically, interactions among them and different types of interaction are observed.

Table 2 – Examples of Aspects Observed in the Interaction Dimension

Observation examples of the Interaction Dimension	
Teacher/students interaction	Teacher dialogues with students, letting them express their points of view, explore and share their impressions.
Students/students interaction	Interaction in small groups with different tasks.
Types of interaction	Interactions have a visible influence on the work progress.

Source: Elaborated by the authors.

In the Behavior of Students (Table 3), verbal, cognitive and psychological behaviors are investigated. These observations contribute to the analysis of engagement of students during the tasks and cover reactions and motivations of students regarding teaching strategies.

Table 3 – Examples of Aspects Observed in the Behavior Dimension

Observation examples of the Behavior Dimension	
Verbal Behavior	Students communicate orally.
Cognitive Behavior	Students consider the specific rules of each activity.
Psychological Behavior	Students overcome fear of producing something collectively and exposing themselves.

Source: Elaborated by the authors.

The observation was focused on didactic and pedagogical particularities involving teaching of self-regulated learning strategies of each class. The objective was to understand the dynamics of the teaching-learning process through the tasks proposed by the teacher and the interactions between teacher and students and among students.

The grid by Basso (2011) considers the didactic dimension, centered in the content management, structuring and learning of students, and the pedagogical dimension, centered in the communication process, the individuals and their strategies in class. Therefore, it can be used to identify strategies, pedagogical supports, the set of didactic gestures as well as pedagogical aspects involving self-regulated learning.

Informal interviews were conducted during the immersions in the school communities. Within the logic of our methodological approach, the immersion in the school community is necessary to know the reality of the place, the teaching context and the professional team involved. The informal interview is a specific type of interview without a grid or prepared questions; it is a verbal exchange carried out through unstructured discussions about a topic that clarify the observations. This investigation technique was used as a possibility to complement the observation grid. In these interviews, teachers freely expose their professional practices and explain their teaching approaches, which involve self-regulated learning strategies.

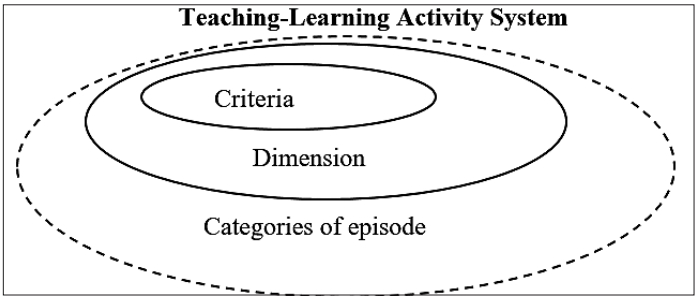
In addition, pedagogical materials used by teachers and students were collected. These materials were analyzed in order to know better the mediation instruments used by the teachers in each case, and which activities were proposed to the students. The different practices are also expressed in the choice of materials and the way they are used. Such supports are important clues to understand the teacher's activity in both classes. The types of materials collected were the following: the textbook, materials produced and built by the teachers for their own use and materials proposed for the students such as extra texts, exercises and evaluations.

Data analysis was based on open exploratory procedures and multiple data readings, which characterize the thematic analysis technique (Braun; Clarke, 2006). From this analysis, four thematic categories were prepared to organize the practices observed. Thus, the strategies observed in both CP classes throughout the school year were described by following the dimensions addressed in the instrument by Basso (2011).

Results and Discussion

The analysis of elements organized showed a set of actions and operations in different episodes that form the teaching-learning activity system (Figure 1). Therefore, the episodes were analyzed in categories, grouped according to the dimensions and predetermined criteria. Therefore, each category was described through dimensions that are intended to report different didactic and pedagogical actions of self-regulation of reading and writing teaching.

Figure 1 – Representation of the Teaching-Learning Activity System



Source: Elaborated by the authors.

Based on categories developed afterwards, we tried to show the diversity of teaching practices that involve self-regulated learning during the first year of formal literacy in both classes observed. These were the categories that came up: Code Teaching, Significant Code Teaching, Interdisciplinary Teaching and Meaning of Reading and Writing Teaching.

The Code Teaching Category encompassed the episodes of reading and writing activities through the exclusive use of the phonographic code, regardless of the meaning. The Significant Code Teaching Category grouped the episodes of reading and writing activities, through the phonographic code use and the phonological awareness, associated with the work of signification and meaning of writing. The Interdisciplinary Teaching Category covered learning focused on interdisciplinarity[1], in which episodes of reading and writing activities were parallelly carried out to the other subjects (Physical Education, Mathematics, Arts etc.), without the direct use of the phonographic code. The Meaning of Reading and Writing Teaching Category included the episodes of reading and writing activities that emphasized the understanding of meaning without the explicit use of the phonographic code. The teaching-learning activity system of each category, based on the system by Engeström (1999; 2001), is presented next in Table 4. The detailed description of each of these categories is presented by Basso (2017), who shows a multifaceted perspective of the different ways of teaching written language.

Table 4 – General Contexts of the Teaching-Learning System in Each Category

Category	Community	Subject	Rules	Work distribution	Object	Instruments
Teaching code	Together in the classroom	Teacher and students	Rules of behavior in the classroom: for example, not speaking during the explanations of the teacher	The teacher explains and students understand and repeat	Phonographic code learning	Oral language, board, textbook reading exercises etc.
Significant code teaching	Together in the classroom	Teacher and students	Rules of behavior in the classroom: for example, asking for permission before speaking	Teacher as a didactic mediator with participation of students	Learning sounds, letters and words through activities that make sense for students	Oral language, orality reflection, discussion, pedagogical games, board, posters etc.
Interdisciplinary teaching	People in the school environment	Teachers of several subjects and students	Customary rules of behavior in the classroom and new rules related to different projects	Teacher as social mediator with active participation of the students, due to motivation	Reading and writing learning, but also other school subjects learning by using reading and writing	According to the objective of the project
Meaning of reading and writing teaching	Gathered in the classroom, library, school environments	Teacher and students	Customary behavior rules in the classroom and coexistence in society	Teacher as a cultural mediator between students and written culture	Reading and writing learning for understanding of the meaning	Texts, children's books, social written texts etc.

Source: Elaborated by the authors.

When we analyzed aspects of self-regulated learning in the teaching process more carefully, we noticed the Interdisciplinary Teaching Category provided more opportunities for the students to develop self-regulation strategies. In that category, teachers could work the students' autonomy by assigning certain responsibilities included in the project. They aimed to establish communication between two or more subjects,

identifying each student's skills and encouraging them to be responsible for their own learning.

This category can be illustrated through an example of collaborative work between the class B teacher and the Physical Education teacher (Chart 1). In this example, both teachers worked reading, writing and spatial orientation in the same activity during the Physical Education class.

Chart 1 – Class B Observation Note

Cette activité est réalisée en équipe dans un parc à côté de l'école. Les enfants reçoivent des instructions par écrit afin de les aider à chercher des dessins des animaux ou des objets cachés dans le parc. Chaque équipe doit lire les instructions qui l'amènent à trouver les dessins. Ces instructions donnent des pistes sur la position dans le parc (fond, droite, gauche, proche du portail, etc.) et sur la description de l'objet. Lorsque les enfants trouvent l'objet, ils écrivent son nom sur une feuille numérotée. La lecture et l'écriture servent de base aux travaux d'orientation spatiale et physique[2].

Source: Extracted from the observation notes of the data collections.

The activity shown in Chart 1 exemplifies the teaching strategies that facilitate self-regulated learning of the students. In this context, divided into groups, the students were encouraged to plan and organize the steps of the task in an autonomous way to achieve the objective. This example includes the three basic metacognitive strategies described by Blakey and Spence (1990) that involves self-regulated learning: 1) Connecting new information to the existing ones; 2) Planning, monitoring and evaluating the thinking processes and; 3) Selecting thinking strategies with a purpose. Besides involving such metacognitive strategies, this activity also puts the student in a proactive position of the process, offering the required motivation for the choice of necessary strategies to achieve the objectives.

Therefore, the tasks proposed in the Interdisciplinary Teaching Category always have a specific aim that leads the student to join the purpose of the project. In general, in these activity episodes, the progress evaluation is performed through the observation of the implication and the effort of students or even through self-evaluation. Mediation instruments are many and thought considering the objective of the project or task. This category also revealed that teacher/student interactions were frequent and numerous, the work pace was stimulating and favored the group work.

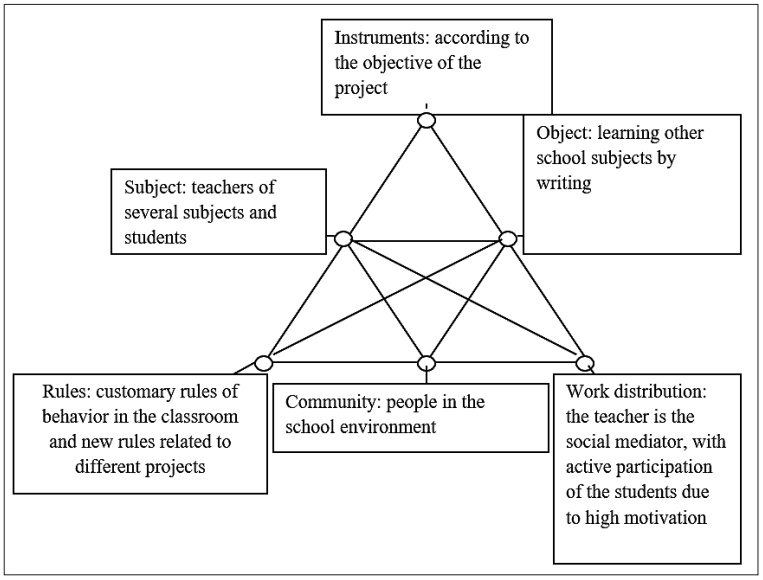
These characteristics facilitated the communication initiative among the students, which implies interest and motivation of students to learn. Motivation is the engine for effective learning; many researches showed that motivation in the school environment leads to positive results for students' learning, making them more engaged and persistent in the long term (Deci; Ryan, 2008; Niemiec; Ryan, 2009).

Activities of the Interdisciplinary Teaching Category allowed creating learning environments that improved learning abilities, through the selective use of metacognitive and motivational strategies. According to Zimmermam (2001), using these types of teaching strategies al-

lows the development of self-regulated learning in the students. Thus, the activities of this category favored a working environment with everybody's participation by using learning strategies such as effort regulation, learning with peers and autonomy encouraged by the teacher. These were the strategies most related with motivational aspects in the study by Ulstad et al. (2016), and were responsible for the best educational performance of students in Physical Education.

Regarding the general context of the activity system, more specifically the self-regulation taught by the teacher, we noticed that the working sessions in which reading and writing teaching is associated with other school subjects, such as Physical Education, Mathematics, Arts etc., allow thinking about the task content by solving problems. Engeström's diagram can be used to characterize the self-regulation activity in this category.

Figure 2 – Interdisciplinary Teaching Category Represented by the Engeström's diagram (1999, 2001)



Source: Elaborated by the authors based on Engeström's diagram (1999; 2001).

Figure 2 represents the activity system in the classes during this type of episode. The six elements that compose the Engeström's diagram are characterized as follows.

Community. In this category, the community is represented by people from the school environment, who share the classroom, the music room, the schoolyard during recreation, libraries, parks and all the spaces the school uses to develop different types of learning for students.

Subjects are all the teachers involved and the different school subjects, people from outside who participate in the activities with the

students, the students of the CP class and other classes who occasionally participate in several activities. The teachers stimulate interactions among the students in order to favor the autonomy of the students equally. There are visible influences of the interactions on the students' work progress, due to the pleasure they demonstrate by interacting with their peers.

The rules are not imposed. Those customary rules, such as mutual respect, listening to each other and cooperation, are implicit and valued by the teachers. Certain rules are applied and related to the ongoing project.

Work distribution is characterized by exchanges between teachers and students. Teachers have a role of social mediators and facilitate students' initiative and communication among them.

The *object* of class work is to learn other school subjects by reading and writing. The teachers propose an interdisciplinary activity to develop many types of learning. Reading and writing have a secondary role in the activity performed, even though, at the same time, this type of work allows an advance in the learning of such competences.

The *instruments* used are very diversified, because they are always related to the activity proposed and its objectives. They are also intended to incite the desire to participate and learn in the students, and they are chosen to favor dialogue and communication among students and between them and the teachers. Oral and written languages are used as well as other different instruments such as games, songs, physical and sports activities.

This self-regulated activity context in CP demonstrates that to offer a self-regulated environment since the first learning experiences, teaching the best strategies is not enough. The teacher must engage students behaviorally, intellectually and emotionally in the activity (Fredricks; Blumenfeld; Paris, 2004; Järvelä et al., 2016). The activities performed in this interdisciplinary category represented in the diagram, seem to favor engagement in task. According to Järvelä et al. (2016) and Sinatra, Heddy and Lombardi (2015), students who participate in this type of collaborative activity seem to have more interest and motivation, which results in more engagement in the task and consequently influences the success of reading and writing learning.

Lots of research (Lodewyk et al., 2009) shows that self-regulated learning can be facilitated or limited according to the nature of the activity proposed in the classroom. The study by Malmberg et al. (2014) demonstrated that the activity characteristics and the type of structure influence in an elementary way how students regulate themselves. These aspects evidenced that the activities of the interdisciplinary category, which assumes collaboration among students and a bigger challenge through the interactions, promote interest and positive engagement. This context is characterized by a teaching-learning activity system that contributes to develop students' self-regulation.

Conclusion

For two centuries, students' self-education has been discussed and encouraged by teachers (Zimmerman, 1994), in order to encourage students to be increasingly responsible for their educational process. This need to develop autonomy and sense of responsibility for their own learning begins right when they start school, when the teacher, in his or her teaching activity, uses strategies and organizes contexts to develop self-regulated learning of students.

The results of this study showed that since the beginning of formal literacy, the teachers used teaching strategies that aimed at the self-regulated learning development, as observed in certain activities grouped into the interdisciplinary category. This is important since research have been showing (Puustinen, 2005) that the students of the first grade of Elementary Education have a self-regulation level that varies according to the stimulus from family, but also according to teachers' educational practices, which reinforces the teaching strategies that develop self-regulated learning.

The teaching practices used in the *Interdisciplinary Teaching Category* created a context of teaching activities in such a way that the teachers of both classes could act as mediators in the development process of self-regulated learning.

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Notes

1 The term interdisciplinarity is understood here as a mobilization or interrelationship among the subjects, even if the interest of each one is preserved.

2 Free translation: This activity is carried out in teams in a park next to the school. Children receive written instructions to help them find drawings of animals and objects hidden in the park. Each team must read the instructions to find the drawings and objects. These instructions present traces and clues about the position in the park (inferior part, right, left, near the door etc.) and the description of what they should be looking for. When the children find the object, they write its name on a numbered sheet. Reading and writing provide the basis for a physical and space orientation activity.

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