

The collective, creation and compensatory processes in inclusion

O coletivo, a criação e os processos compensatórios na inclusão

Fabiana Luzia de Rezende Mendonça¹; Daniele Nunes Henrique Silva²;
Kátia Oliveira da Silva³; Pedro Henrique Mendonça de Souza⁴

DOI: 10.51207/2179-4057.20240002

Summary

This article, based on Cultural-Historical Theory, discusses the inclusive classroom context and collective pedagogical work as a promoter of new developmental cycles. This conceptual premise is analyzed based on qualitative research carried out in a public school in the Federal District, Brazil, with the participation of five teachers. The data gathered, based on microgenetic analysis, highlights that collective work involves creative activities and compensatory processes that are important for the formation of new developmental cycles. The study's conclusion points to pedagogical mediations that need to be directed towards creation, providing students with unconventional experiences in the classroom, promoting new inter-functional connections, compensatory processes and the reorganization of the psychic functional system. This conclusion is not a mere detail, but a signpost for the demands of a new praxis in the context of effective inclusion.

Keywords: Creative Processes. Collective Pedagogical Work. Compensation. Development. Disability. Inclusion.

Resumo

Este artigo, baseado na Teoria Histórico-Cultural, discute o contexto de sala de aula inclusiva e o trabalho pedagógico coletivo como promotor de novos ciclos desenvolvimentais. Essa premissa conceitual é analisada a partir de uma pesquisa qualitativa, realizada em uma escola pública do DF, com a participação de 5 professoras. Os dados construídos, a partir de análise microgenética, destacam que o trabalho coletivo, quando envolve atividades criadoras, mobiliza processos compensatórios importantes para a formação de novos ciclos de desenvolvimento. A conclusão do estudo orienta o olhar às mediações pedagógicas que precisam ser direcionadas pelo viés da criação, proporcionando aos alunos vivências não convencionais na sala de aula, promovendo novas conexões interfuncionais, processos compensatórios e a reorganização do sistema funcional psíquico. Essa conclusão não é um mero detalhe, mas um sinalizador sobre as exigências de uma nova práxis no contexto da efetiva inclusão.

Unitermos: Processos Criadores. Trabalho Pedagógico Coletivo. Compensação. Desenvolvimento. Deficiência. Inclusão.

Work carried out at State Department of Education of the Federal District, Brasília, DF, Brazil.

Conflict of interest: The authors declare none.

1. Fabiana Luzia de Rezende Mendonça - State Department of Education of the Federal District, Brasília, DF, Brazil. **2.** Daniele Nunes Henrique Silva - University of Brasília (UnB), Brasília, DF, Brazil. **3.** Kátia Oliveira da Silva - State Department of Education of the Federal District, Brasília, DF, Brazil. **4.** Pedro Henrique Mendonça de Souza - University of Brasília (UnB), Brasília, DF, Brazil.

Introduction

Lev S. Vigotski (1896-1934), one of the great educational and psychological theorists of the 20th century, contributed a revolutionary legacy to the studies in Defectology area. In 1924, when he was working as a Director for the social and legal protection of disabled children (Gomel), he published two essays that became references for teachers and scholars working with children with disabilities at that time. The first entitled: “Principles of the education of children with physical defects” (1924/2019) and the second “The psychology and pedagogy of children with disabilities” (1924/2019). In these two texts, Vigotski inaugurated principles on the conception of disability, problematizing the relation between biological limits and the cultural possibilities that emerge in development. These postulates ran throughout his academic career and impacted the field of education and psychology to this day.

The author already questioned, in these first texts, the fact that children with disabilities should be understood and evaluated with a focus on their organic defect: the limiting aspect of their development. For Vigotski (2019), there is no difference “[...] neither in the educational approach of the child with defects and the normal child, nor in the psychological organization of their personality” (p. 96), as both develop from the same general laws of development.

The Belarusian author emphasized that disability is not restricted to a biological condition, but to the process engendered in cultural relationships. For him: “the child, whose development has been complicated by a defect, is not simply less developed than his normal contemporaries; he is a child, but developed in another way” (Vigotski, 2019, p. 31). In this way, physical, sensory and/or intellectual limitations cannot be seen in isolation, but rather within a broader context, encompassing the child’s social and historical relations. The fact is that the child’s *developmental* possibilities emerge from cultural dynamics. Outside of culture, its biological limitations guide its life, obliging its psychic functioning to the most elementary conditions of psychological

development. The answer to breaking with this primacy of the biologizing view over ontogeny lies, in Vigotski, in the learning offers available in the cultural environment. It is here, therefore, that alternative development routes can emerge.

Vigotski (2010), in his text “Pedology and the environment”, points out that the environment is not a circumstantial environment that influences development, but is the source of development of everything that characterizes and defines the human being. In the middle, we find the corresponding ideal form of development. It is considered “... - ideal in the sense that it consists of a model of what should be obtained at the end of development – or final – in the sense that this is the form that the child, at the end of his development, will achieve” (Vigotski, 2010, p. 693).

It is important to highlight that school is a privileged context for children to have access to these final forms or ideas of development. In other words, it is in the context of school education that the child can access the most developed form of language, arithmetic reasoning and scientific concepts, etc. School, in Vigotski’s opinion, is the privileged space for the full development of children.

However, according to Vigotskian premises, it is not enough for these ideal forms of development to exist in the environment in which children are inserted. It is necessary to have powerful interactions and to develop activities with them planned pedagogically and intentionally guided by teachers that are oriented towards these ideal/final forms (Vigotski, 2010).

Based on the above, investigating and discussing in the context of teaching-learning relations, the association between collective pedagogical work, mobilization of creative processes and compensation is the objective of this article, based on a close look at the teacher. In our opinion, this theme deserves relevance because it is important to identify the meanings produced, in contemporary times, about the specificities of the pedagogical place aimed at the inclusion of children with disabilities. Therefore, we ask: what are the elements that teachers identify as promoting student development in their respective

inclusive pedagogical practices? To answer this question, we started from the microgenetic analysis of an investigation episode carried out with 5 teachers who work in a public inclusive school, in the Federal District, Brazil. In order to compose our analysis, we articulate three central concepts: collective pedagogical work as a development factor, the mobilization of creative processes in an inclusive classroom. In our opinion, these concepts are fundamental for thinking about both, inclusion and the development of children with disabilities in the ordinary classroom.

The compensation concept and its relation with creative processes in the classroom

Vigotski's (2019) defectology studies emphasized the social constitution of disability. For him, the genesis of higher forms of behavior are present in the history of the children's cultural development (with and without disabilities), with the socio-historical dimension of the psyche being a guiding principle of its theoretical formulation. Based on Marxist principles for his studies, the author adopted a dialectical conception of development, being contrary to conceptions that privileged only biological aspects; primary developmental defects (limitations of organic origin).

From this perspective, human development is understood as a continuous, dynamic and complex process, which occurs based on the relation between the subject and the environment. In other words, the development of the person does not occur simply from an accumulation of skills or knowledge, but through a dialectical and complex process of internalization/conversion, not only of concrete and material aspects of social relations, but of the sense and meanings produced in them. (Pino, 2005). It is these meanings that position the subject socially, that define what he is and what is expected of him, constituting him as a social and singular being at the same time.

In this way, to develop his theory of compensation, Vigotski (2019) was mainly inspired by the theoretical postulates of Stern (1871-1938), Lipps (1851-1914) and Adler (1870-1937). According to

Vigotskian studies, Stern would have been the first to defend the double influence of the defect, stating that with the weaknesses associated with the disability also came the strength to overcome such weaknesses. The aforementioned author stated about people with disabilities that "the degree of their abnormality or normality depends on the result of social compensation, that is, on the final formation of their personality in general" (p. 43).

Regarding Lipps' theoretical principles, Vigotski (2019) drew attention to the general law of psychic activity, called by the author the *law of dam or containment*. This law indicates that, faced with an obstacle, interruption or damage to some function of the organism, psychic energy is concentrated at that damaged point, rising to overcome the obstacle and be able to advance through an indirect route. Such statements take us to the theoretical principles later developed by Vigotski regarding compensation processes, related to the role of substitutive functions and indirect paths of development, which will be discussed in this article.

Adler (1967), one of Vigotski's main influencers in the process of formulating his theory of compensation, associated his concept with the idea of balance, adaptation or accommodation of the individual to the environment. The author believed that compensation was triggered by an individual discomfort that occurred due to the disability and that decreased throughout development. Due to this discomfort, there would be a kind of struggle in search of consideration or social adaptation and balance of psychic life in the formation of personality. For him, the feeling of inferiority would be the driving force for children with disabilities to overcome their limitations.

Vigotski (2019), initially, was in agreement with Adler's principles about the importance of the feeling of inferiority for the emergence of compensatory processes. However, with the advancement of his studies and the defense of the thesis that Higher Psychological Functions are formed and developed from social relations, the author changes his concept of the personality structural formation. He goes on to state that it is the objective possibilities

offered to children with disabilities, as a collective, that promote compensatory processes in their development and not their feeling of inferiority.

Based on this guiding principle, Vigotski (2019) states that the children with disabilities development also occurs from and in social relations, as it is in collective social life that they find possibilities and resources to develop the psychological functions necessary to trigger compensation processes. According to the author, the lack or deficit of a function associated with the difficulties or demands present in the sociocultural environment in which the person with a disability is inserted, gives rise to new functions that, in combination, act to promote psychological reorganization.

The author, when discussing compensation processes, explains this double influence of the defect on development, because:

On the one hand, it is a disability and acts directly as such, producing failures, obstacles, difficulties in the child's adaptation. On the other hand, precisely because the defect produces obstacles and difficulties in development and disrupts the normal balance, it serves as a stimulus for the development of alternative, indirect adaptation paths, which replace or supplant functions that seek to compensate for the deficiency and lead the entire broken balance system to a new order. (Vigotski, 2011, p. 869)

We can notice from this that children with disabilities, faced with the demands and challenges placed on them in the cultural context, have to find alternative ways and paths to overcome or compensate for their limitations, developing a greater reorganizing potential than other children who do not have the same difficulties. Given this proposition, we can infer that the more complex and challenging the cultural demands presented to children with disabilities, the greater the mobilization of compensatory energies, which will provide a peculiar and creative organization of their psychological functions (Mendonça & Silva, 2015).

This theoretical premise highlights the creative and powerful character of the human being,

especially in situations of organic limitations. Regarding this issue, in his studies on imagination, Vigotski (2009) states that the plasticity of the human brain allows man, in the process of adaptation/development, to alter his nervous substance and maintain the marks of these modifications. In other words, the author understands plasticity as a characteristic of the brain's nervous substance, which adapts to new situations, but also preserves impressions and memories of lived experiences (Andrade & Smolka, 2012).

Furthermore, Vigotski (2019) and Luria (1990) state in their studies that mental or neurological functions act in combination, forming a complex functional system and developing in a peculiar way in people with disabilities. For the authors, there is a dynamic and dialectical relation between brain functioning and cultural processes, as plastic changes and transformations are associated with the quality of the cultural demands that are created and their creative characteristics. In other words, there is dynamicity between brain functioning and cultural processes, with brain plasticity being impacted by the quality of social/mediational relationships and their creative dimension (Mendonça & Silva, 2015).

Regarding the way in which psychological functions develop and act, Vigotski explains that:

The main idea (extraordinarily simple) is that during the process of development of behavior, especially in the process of its historical development, what changes are not the functions, as we had previously considered (that was our mistake), nor their structure, nor its pattern of development, but what changes and is modified are precisely the relationships, that is, the link between the functions among themselves, so that new groupings unknown at the previous level emerge. Hence, when moving from one level to another, often the essential difference does not lie in the intrafunctional change, but in the interfunctional changes, the changes in the interfunctional links, of the interfunctional structure. We will call the

psychological system the appearance of these new and changing relationships in which the functions of [...]. (Vigotski, 2013, pp. 72-73)

Based on such principles, Vigotskian studies propose a developmental analysis that points to children's positive points and the possibilities for developing their higher psychological functions (Luria, 1988). As previously mentioned, this understanding is based on the view that the development of a child with a disability also occurs within the same laws that govern the development of children without disabilities.

Vigotski (2019) argues that the singularities presented by atypical children are configured in the indirect (or alternative) development paths or routes that they need to overcome or compensate for their deficits, which are found in the cultural sphere. Regarding this, the author states that "where it is not possible to advance in organic development, an unlimited path for cultural development opens up" (Vigotski, 2011. p. 869), as the indirect paths of development correspond to the acquisition of skills or the emergence of new capabilities that arise through the mediation of alternative or unconventional auxiliary resources.

In reality, Vigotskian studies surpass the biological version of compensation, previously presented, that the loss of a sensory function, for example, would be naturally compensated by the more acute functioning of other organs or senses. For Vigotski (2019), it is the demands, requirements and objective conditions that emerge in the social environment, in which the person with a disability is inserted, that positively impact their psychological functioning, being the mediating elements of the compensation processes created within the scope social, in the life interactions dynamics of each subject. In education, for example, various techniques, artificial resources, alternative methodologies and special systems of symbols are created to assist and meet the specificities of children with disabilities.

Another aspect prioritized by the author, in his analyzes of people with disabilities, is the need to

have a qualitative view of their development, which is considered an unusual and fruitful contribution to the study of these subjects to this day. Traditional studies of his time, as described in his first writings on defectology, highlighted the limits of people with disabilities, associated with their organically based deficits and the quantification of the functions or abilities that they lacked or were poorly developed. The focus was linked to a comparative and quantitative analysis regarding the development of typical children (without disabilities).

Regarding this issue of the quantitative approach to development, Vigotski (2019) warns that:

[...] The purely arithmetical conception of the sum of defects is a characteristic aspect of the old defectology, which becomes antiquated. The reaction against this quantitative approach to all problems of theory and practice is the most essential aspect of contemporary defectology. (p. 31)

In this way, the distinction between a qualitative and quantitative approach to disability constitutes a primordial discussion within the Historical-Cultural Theory. From this perspective, it is not possible to understand a person with a disability solely based on quantitative criteria, as these are guided by a clinical approach, which aims only to differentiate and classify the person with atypical development. In this approach, it is important to identify the particularities and limitations that allow defining the type of abnormality presented, in order to distinguish it from other nosological conditions.

Instead, Vigotski (2019) argues that what matters in relation to children with disabilities is the qualitative dimension of their development, which involves subjective and complex aspects, such as the person's perception of themselves and their relations with the environment. In the author's view, a child with a disability is not defective and cannot be defined only based on the limits associated with the primary disability, but as someone who has specific needs and many possibilities for development.

An issue that deserves to be highlighted in Vigotskian defectology studies is the differentiation between the primary and secondary dimensions of the defect. The primary dimension refers to the disability itself (organic limitations), while the secondary dimension focuses on the social and psychological consequences of the disability. Among them we can mention: the social position occupied due to the disability; discriminatory and social exclusion processes to which people with disabilities are subjected; lack of accessibility, among other factors present in the daily lives of people with disabilities that hinder or impede their development and social inclusion.

In this process, the affections mobilized in the development of these subjects, in the objective situations of their daily lives, can lead them, in the face of the difficulties encountered, to demotivation and a feeling of incapacity or to feeling challenged and driven to seek indirect ways of development, in an attempt to compensate for its limitations. This happens, according to Vigotski (2019), because our actions and thoughts are directly influenced by a series of dynamic processes, by a psychological motivation that directs us and sets us in motion. In other words, the author explains that action does not occur without a cause, without a need. Thought is motivated by affection (and vice-versa), which the author defines, based on the studies of Spinoza (1632-1677), as what can enhance or reduce the subject's capacity for action, directing their thoughts towards a certain meaning or objective to be achieved.

Based on such principles, for historical-cultural theory, development is not considered something always linear and progressive, but a winding path, permeated by ruptures, struggles, clashes and challenges. In this process, indirect paths of development only emerge when direct paths are prevented or made difficult (Vigotski, 2011), and it is therefore essential that they be offered in pedagogical dynamics, in the classroom, collective activities that are challenging, creative and that promote the emergence of new development cycles, as we will discuss below.

Collective work as a development factor

Given what has already been discussed so far, we can list that the principles pointed out by Vigotski (2019), as fundamental for the formation of compensatory processes, are: 1) The principle of substitutive functions, according to which, due to the dynamic character and systemic development, allows the modification and correlation among higher psychological functions. This means that, faced with the challenges or difficulties faced by people with disabilities in adapting to the environment, they (*re*)act by forming a series of functions with the aim of compensating, leveling or replacing the lost or deficit function and; 2) The thesis of the collective as a source of development of these functions, which find in the social dynamics, in which children with disabilities are inserted, materials and resources to mobilize the dynamics of compensation in a potentially productive way.

It is important to highlight that these principles are intrinsically related in the development process, as it is precisely the difficulties or demands that emerge in the environment, in the collective life, in which the person with disability is inserted, that trigger the dynamics of substitutive functions. This mutual and dialectical relation provides a peculiar neurological reorganization which becomes more flexible according to cultural demands. Therefore, the complexity of the demands presented, the construction of differentiated and quality learning situations in the educational context, for example, are of utmost importance for the mobilization of compensatory energies and the formation of new development cycles (Mendonça & Silva, 2015).

Dainez & Smolka (2014), in their readings on the importance of the collective as a development factor for children with disabilities, emphasize that, for a historical-cultural approach, it is collective life, the social relation in which the child is involved that make it possible the creation and recreation of relation among higher psychological functions. The authors highlight the process of internalization of these functions, which takes place in social

relations. When converted intrapsychically, they singularize and modify the personality; the structure and the functioning of psychism.

Regarding the dynamics of internalization/conversion, it is important to explain that higher development processes only become internal functions of the subject if they are experienced and activated in social relations. In other words,

We consider that the collective social life of the child and the collective character of his conduct, in which he finds the material for the formation of the internal functions that arise in the process of compensatory development, constitute, to a large extent, the reserve of compensation". (Vigotski, 2019, p. 187)

Based on such assumptions, we need to remember that in pedagogical work it is essential to focus on the mediation of intellectual functions or processes that are still in the process of maturation and that constitute the prospective development of students or their zone of proximal development (ZPD). This, considered by Vigotski (2014) as what the child is capable of carrying out in collaboration with others – by means of hints, clues, exchanges and semiotic mediation – it should be, in the author's view, a priority in the teaching-learning dynamics.

Regarding the concept of Proximal Development Zone Zanella explains that:

[...] consists of the interpsychological field where meanings are socially produced and particularly appropriate, constituted in and through social relations in which subjects are involved with problems or situations in which there is a clash, exchange of ideas, sharing and confrontation different points of view. (Zanella, 2001, p. 113)

The author reaffirms the assumptions of historical-cultural theory about the need for collective pedagogical work, which promotes exchanges and production of new meanings among students, in which the circulation of meanings, questioning and the clash of ideas are instigated. It is interesting that

this work, which involves proposals for pedagogical dynamics to be carried out in partnerships or groups, starts from deliberate planning or teaching intervention, which prioritizes heterogeneity in relations between students and the development of imagination and creation of new ideas/ knowledge so that it can impact and provide compensatory processes that drive new development cycles.

The importance of collective pedagogical work is based on the principles of historical-cultural psychology regarding the fundamental role of others and imitation (in a broad sense) in teaching-learning processes, as they are responsible for activating the development of emerging mental functions, which are in the proximal development zone (Anache, 2011; Batista & Tacca, 2011; Dainez, 2009).

For Vigotski (2014), school education, whose focus is scientific and systematized knowledge, has in collaboration/imitation relationships and mediational processes (which involve teaching-learning/instruction procedures), the genesis of all psychological functions superiors. According to the author, "only instruction that goes ahead of development is good and drags the latter down. But a child can only learn what he is capable of learning. Instruction is possible where imitation is possible" (Vigotski, 2014, p. 242).

In summary, these premises indicate that good teaching would be one that boosts the development of subjects prospectively, favoring the consolidation of emancipatory cognitive processes through which increasing self-determination is established. This self-determination characterized by awareness about the historical conditions that guide choices/decisions and, consequently, the processes of objectification/subjectification.

In line with such precepts, Mendonça et al. (2020), when analyzing the emerging semiotic mediations between teacher-students and student-student (with and without disabilities) in a collaborative activity in an inclusive classroom, point out that the proposed activities, in these spaces school, need to be intentionally challenging for all children.

The authors suggest that such activities need to be directed towards the prospective development of children and lead to the promotion of development routes not yet foreseen.

Their analyzes meet the assumptions discussed here, as the authors state that these new development routes only emerge in teaching-learning situations that enable all children to relate and establish exchanges among themselves. To achieve this, it is necessary to insert them into collective dynamics, mediated by language, in the elaboration of knowledge. The authors argue that “the collaborative and challenging pedagogical space – aimed at creating new, unusual development paths – is what enables the emergence of compensatory processes” (Mendonça et al., 2020).

Mendonça’s research (2018), which discusses creative activity in teaching work, also shows that collective work, social and collaborative experiences promoted in the classroom are fundamental for the development of imagination. Such activities, according to the notes of the teachers who participated in the research, are those that promote challenges, dialogues and conflicts of ideals among students, in the process of developing knowledge. In this sense, we can infer, according to the premises of Historical-Cultural Psychology presented in this article, that there is an intrinsic and dialectical relation between creative pedagogical activities and the emergence of compensation processes in the classroom. However, we must pay attention to the fact that such activities, to be developed effectively, require intentional and conscious planning from the teachers, responsible for the development/execution processes of pedagogical work.

We can state that standardized practices developed from hegemonic conceptions of teaching-learning, from dichotomized visions of imagination/cognition, do not prioritize the development of creative processes, as they generally do not provide interrogative productions, suspicions, surprises, use of imagination and/or fantasy in the classroom (Mendonça, 2018). Consequently, such practices also do not effectively promote compensatory processes, which, as previously pointed out,

are mobilized based on the quality, differentiation and creative aspects that make up the pedagogical dynamics.

Therefore, the role of teachers in promoting such collaborative dynamics in the classroom is fundamental, developing creative and imaginative processes. In order to discuss this issue and to answer the question of this study, about the elements that teachers identify as promoting student development in their pedagogical practices, we will analyze in the episode that will be presented in which pedagogical situations elementary school teachers, who work in inclusive classes, realize the challenges to develop creative activities in the classroom, which promote new developmental routes.

Method

In order to achieve the objective proposed for this article, which consists of investigating and discussing, in the context of teaching-learning relations, the association among collective pedagogical work, mobilization of creative processes and compensation, microgenetic analysis was adopted as a methodological approach. This approach, in light of the historical-cultural matrix, points out the cultural, historical and semiotic dimensions of development as central to the study of the complex human constitution (Góes, 2000).

Thus, it can be defined as:

[...] a form of data construction that requires attention to details and the selection of interactive episodes, with the examination being oriented towards the functioning of the focal subjects, the intersubjective relationships and the social conditions of the situation, resulting in a detailed report of the events. (Góes, 2000, p. 9)

In other words, the microgenetic approach focuses on the nuances and minutiae (micro events) of development processes and their dialectical relationship with the historical and social context (macrosocial conditions). For Vigotski (2013), “the dialectical method of scientific knowledge it is the only adequate procedure for discovering the objective dialectic of development (p. 171)”. When

referring to the objective dialectic of development, the Belarusian author emphasizes that this occurs through a process, in which continuous and successive new formations are consolidated, based on a primary developmental base. In this sense, the higher functions are gradual and dynamically constituted in ontogenesis.

Based on this perspective, this study analyzed an excerpt from a research episode taken from Mendonça's Doctoral Thesis (2018). The episode described was part of one of the meetings held during a training process with 5 teachers from a Class School in the Federal District. The teachers led Classes Comuns Inclusivas (CCI)¹ from the first to the fifth year of Elementary School. The video recordings took place between 2016-2018, weekly, at the aforementioned school. The material was recorded and transcribed in full for later analysis.

In compliance with the ethical criteria for research with human beings, the names of the participants have been changed.

Data and analysis

In the following episode, teachers² Ana, Anita, Ilda, Suzi and Marília were present. The objective of this meeting was to list and discuss at which moments the teachers indicated that there was a space for creation, in the pedagogical dynamics developed in the classroom.

EPISODE: Collective work as a source of creative and compensatory processes in the classroom

Ilda: Oh! I put it like this: when challenges occur in the room, I propose challenges. I give an activity that has already been given. For example, a numerical expression! But I put

a big, different numerical expression so they can try to see what they can do from there. I see that they're like, "Who's going to get it first? Who wants? Who's going?" One goes! The other: "Ah! I achieved!" So you see that, with that there, they stimulate each other. So, this is the challenge! When you put games in place for them to be there, playing and challenging each other, games that can allow that student to be there, challenging, talking and sharing. So, you create strategies in the activities that lead the student to think and argue about something that was worked on. It doesn't just have to be math. Give science content that they will question, that they will ask, that they will (...) so at that moment, there, I am having a moment of creativity in my classroom.

(...)

Suzi: I put it like this: For me, not necessarily, in the introduction this can happen. But it's easier to happen when I introduce a subject in the classroom. But I usually put them in a circle, in a group and then I start asking questions. And I'm going to make them think from what I want until I get them to where I want. But let them build knowledge through questioning. I don't take it ready. I don't take it chewed. I want them to think about that. And then, I think, normally, it's an informal conversation about things they've already seen as fourth-year students, as they're reviewing third-year content. So, I want them to get where I want them to be. But I know that they already have something, that they have already heard about it. So, I ask questions to find out what they already know, what they haven't built yet and they build it together. So, it's through an informal conversation with questions. They build from there. So, I think this is possible in the introduction, but not necessarily just in the introduction of the content.

Researcher: Would it be during a collective activity that you realize this is easier to

1 CCI stands for Common Inclusive Class and is intended for Common Class students and students with Disabilities (Intellectual Disability, Physical Disability, Multiple Disabilities, Visual Impairment SC, Hearing Impairment who does not chose for Libras, Autism Spectrum Disorder, High Abilities) or students with Functional Disorders - FD.

2 To protect the identity of the participants in the research episode described here, fictitious names were used.

happen? So, in a collective activity in which they have the freedom to be involved?

Suzi: For example, yesterday was a continuation of content and then we sat in a circle to talk about natural and modified landscapes. So, through questioning I reached at the landscape, I asked them what was natural, what the modification was, what modification was made to the environment. So, I asked questions and they built until we arrived at the concept. I didn't come and give the concept. They built the concept and then we copied it. But like this, through questioning. You ask questions and they build their idea. They are collective activities because I like participation.

Researcher: Like a collective construction?

Suzi: That's it! That's right.

Researcher: An idea, a concept. This is different from you reaching, for example, already presenting the concept as something ready and finished.

Suzi: And explain [teacher complements the researcher's speech]... It's a conflict of ideas.

Anita: Yeah (...) in reality what she said is the same thing I was going to say. I put it: creating collective moments so that unity and trust in colleagues can be awakened, allowing everyone to collaborate in their own way. Create groups, usually of four. I prefer groups to being in circles. And then, sometimes, you put the concept on the board and say (...) "Oh! I want you to read it there and explain it to me here." And then you make them, each in their own way, in their own experience, achieve (...) Because what happens? It's just like Ilda said. Sometimes, I tell him something that he doesn't understand, but Solange next to me understands, then she will pass it on to me and I will understand it better than if the teacher explained it to me up front... Sometimes, we stay there, stuck to the board, stuck to the book, the kids don't understand anything! But you put them in

a group and say: "let's do a shared reading, here, among you. Then you will explain to me." And then, based on what they tell me, I assemble and construct a text...

Researcher: Unhum... So you think that working with groups makes ideas flow more easily?

Ana: They flow. Do you know why? Because you create heterogeneity there. You don't need to include everyone who is good. You put a very good one with an average one. Then you build it and they start feeling it.

(...)

In Marília's view, collective work in the classroom is central to the emergence of creative processes. The teacher points to the fact that, when the activity developed involves all students and when we are faced with collective action, there is greater productivity among students. She states: "creation in the classroom happens when the teacher manages to develop an activity that generates controversy among students, questions, doubts, which challenges them to seek new knowledge". The teacher emphasizes: "When doubt begins... Then, I challenge them to look for a solution, to look for an answer, to look for knowledge that is different from what they have."

In other words, when working collectively with students, they are impelled through the exchange of information, the questions asked between them and by the teacher, to think and re-elaborate their own knowledge about the topic studied. In this dialogical and propositional context happens, what Vigotski (2011) states when discussing compensatory processes, that students, when challenged and confronted, are forced to think, to seek solutions and alternative routes of development. In this case, they are led to reflect on their already consolidated knowledge, expanding it and producing new ideas through mediation and collective exchanges, because as Vigotski's studies point out:

[...] the development of higher forms of behavior happens under the pressure of necessity; If the child has no need to think, he will never

think. If the difficulties organized by us force the child to correct their behavior, to think before acting, to become aware in words, as Claparède says, then the aforementioned situation occurs. (Vigotski, 2011, p. 866)

As highlighted by Marília, the creative experience in the classroom is intrinsically related to a collective practice that involves pedagogical relationships between teacher-student and student-student. The teacher points out that such relationships, mediated in unusual ways by the teachers, instigate, challenge and help students (especially those who are included) and that, therefore, they are essential in the classroom. They enable students and teachers to jointly elaborate questions, doubts, hypotheses and, consequently, processes of imagination and creation that consolidate into new knowledge.

Such propositions also corroborate the fundamental principle of Historical-Cultural Theory that the collective is a fundamental source for the development of compensatory processes and higher psychological functions, as we have already pointed out in this study. We can affirm that the collective dynamics developed in the classroom, when designed to intentionally provide the emergence of imaginative and creative processes, lead to an entire neurological reorganization and the emergence of new interfunctional relations, increasingly complex, triggering, therefore compensatory development processes. The included students, involved in this collective process of knowledge construction, need to question their own thoughts and ideas, review their previously established concepts, present arguments to support their point of view, bring data from their experiences that corroborate their ideas, expanding their proximal development zone.

In line with these principles, Susi also draws attention to the importance of collective and dialogical processes, developed in the classroom, which involves working with language and aims to produce knowledge and expand concepts with students. She states:

“For me, not necessarily, in the introduction this can happen. But it’s easier to happen

when I introduce a subject in the classroom. But I usually put them in a circle, in a group and then I start asking questions. And I’m going to make them think based on what I want, until I get them to where I want. But let them build knowledge through questioning. I don’t take it ready. I don’t take it chewed. I want them to think about that. . . . But I know that they already have something, that they have already heard about it. So, I ask questions to find out what they already know, what they haven’t built yet and they build it together.”

It is important to note that Suzi, when carrying out the group activity with the students, uses what they already know. In other words, she values the knowledge they already have about the content to be studied (Real Development) so that, in the process of student-student and teacher-student mediation, this knowledge can be expanded.

She reinforces her idea with an example of an activity she developed in the classroom the day before:

“Yesterday was a content continuation and then we sat in a circle to talk about natural and modified landscapes. So, through questioning I arrived at the landscape, I asked them what was natural? What was the modification? What modifications were made to the environment? So, I started asking questions and they built until we arrived at the concept... They are collective activities because I like participation”.

As described, in addition to valuing the real development zone of each student, the teacher, when proposing the collective construction of knowledge, also provides the development of what Chaiklin (2011, p. 667) called the subjective zone of proximal development, which is defined by the author as “a way of referring both to the functions that are developing ontogenetically in a given (objective) age period and to the current state of development of a child in relation to the functions that ideally need to be performed (subjectively).”

Suzi provides, in the activity she develops, the circulation and production of new meanings in relation to the concepts/meanings that are being studied in the classroom. The teacher then allows students, through questions and contextualization of the content studied with the students' reality, to freely express their ideas and knowledge about the subject in question. Thus, they manage to arrive together, through the various meanings produced, to a collectivized knowledge.

Anita also highlights that it is necessary to *create* collective moments so that unity and trust in colleagues can be awakened, allowing each person to collaborate in their own way. She also shows that "in groups, students ideas flow. Do you know why? Because you create heterogeneity there. You don't need to include everyone who is good. You put a very good one with an average one. Then, you build it and they start feeling it."

Anita emphasizes the importance of heterogeneity in the pedagogical mediation process. In other words, she reaffirms that, when forming work groups, it is good for students with different development processes to be able to support each other in teaching-learning situations. Anita's notes refer to an essential premise about the role of others' collaboration in instructional processes, which are responsible, according to Vigotski (2014), for the genesis and development of all higher psychological functions, including imagination. In other words, collective work induces creative processes.

But how does this imply development?

Imagination, in historical-cultural theory, "It is considered as a more complex form of psychic activity, as the real union of various functions in their peculiar relations" (Vigotski, 2014, p. 436). It is, therefore, a central function for higher psychological functioning, being intrinsically associated with the development of creative and compensatory processes.

Therefore, it is impossible to think of any creative human activity dissociated from the interrelation between the processes of imagination and language

which, in a reciprocal action with work, they are at the basis of the long trajectory of transformation, development and evolution of man himself (author, 2018). According to Pino (2006), production and/or imaginary activity, such as creation, constitutes a prerequisite for all human production, whether material or symbolic.

Because of this, the creative activities identified by the teachers are based on the imagination processes provided in the collective dynamics developed in the classroom. These are characterized by the participants as challenging dynamics, outside the standard and school routine, generating controversies and pedagogical conflicts, promoting the exchange of knowledge and experiences between students. Activities that encourage the expression of differentiated and divergent thoughts/ideas. Such pedagogical situations, according to the teachers, are activities that involve debates, games, games, oral presentations, construction of collective texts, group problem solving, conversation circles, etc.

Cruz (2015) explains that the semiotic operation, characteristic of imaginative functioning, allows the human race to develop concepts that go far beyond a logical and rationalist dimension. Children, for example, when they play and imagine, are also producing knowledge that will be extremely important for their development.

Therefore, from this perspective of analysis, imagination constitutes the basis for the cognitive/abstract and conceptual development of individuals, involving, as a complex and interfunctional system, the specific interrelations of several higher functions semiotically structured. Human mental functioning and the relations among the various functions are structured and mediated by the sign (the word).

Considerations

We can point out, based on the shared teaching reports, that there is an intrinsic relation between collective pedagogical work, mobilization of creative processes and compensation in the context of teaching relations.

The data analyzed show that when teachers invest in collective work, they not only involve the participation of all students, but they also promote creative pedagogical situations that mobilize other ways of elaborating knowledge in the context of the inclusive classroom.

Here, the creative activities planned by the teachers, by implying the emergence of creative processes, encourage the consolidation of new development routes; they activate proximal zones that give rise to alternative, differentiated and unusual development paths.

The data analysis also highlights that the collective work developed in an inclusive classroom enables students (with and without disabilities): a) cognitive challenges in the processes of thinking, feeling and creating and; b) the development of new interfunctional relations that potentially imply the reorganization of functional psychic connections. This conclusion is not a mere detail, but an important signpost about the demands that are opening up for a new praxis in the context of the inclusive perspective.

References

- Adler, A. (1967). *A ciência da natureza humana* (6a. ed.). Companhia Editora Nacional.
- Anache, A. A. (2011). Aprendizagem de pessoas com deficiência intelectual: desafios para o professor. In A. M. Martinez, & M. C. V. R. Tacca (Orgs.), *Possibilidades de aprendizagem: ações pedagógicas para alunos com dificuldade e com deficiência* (pp. 109-138). Alínea.
- Andrade, J. J., & Smolka, A. L. B. (2012). Reflexões sobre Desenvolvimento Humano e Neuropsicologia na obra de Vigotski. *Psicologia em Estudo*, 17(4), 699-709.
- Batista, A. S. & Tacca, M. C. V. R. (2011). Errata: onde se lê deficiente mental, leia-se criança que aprende como sujeito de possibilidades. In A. M. Martinez & M. C. V. R. Tacca (Orgs.), *Possibilidades de aprendizagem: ações pedagógicas para alunos com dificuldade e com deficiência* (pp. 139-152). Alínea.
- Chaiklin, S. (2011). A zona de desenvolvimento próximo na análise de Vigotski sobre aprendizagem e ensino. *Psicologia em Estudo*, 16(4), 659-675. <https://doi.org/10.1590/S1413-73722011000400016>
- Cruz, M. N. (2015). Imaginário, imaginação e relações sociais: reflexões sobre a imaginação como sistema psicológico. *Cadernos Cedes*, 35(spe), 361-374. <https://doi.org/10.1590/CC0101-32622015V35ESPECIAL154116>
- Dainez, D. (2009). *A inclusão escolar de crianças com deficiência mental: focalizando a noção de compensação na abordagem histórico-cultural*. [Dissertação de mestrado, Universidade Metodista de Piracicaba].
- Dainez, D., & Smolka, A. L. B. (2014). O conceito de compensação no diálogo de Vigotski com Adler: desenvolvimento humano, educação e deficiência. *Educação e Pesquisa*, 40(4), 1093-1108. <https://doi.org/10.1590/s1517-97022014071545>
- Góes, M. C. R. (2000). A abordagem microgenética na matriz histórico-cultural: uma perspectiva para o estudo da constituição da subjetividade. *Cadernos CEDES*, 20(50), 9-25. <https://doi.org/10.1590/s0101-32622000000100002>
- Luria, A. R. (1988). Vigotski. In L. S. Vigotski, A. R. Luria, & A. N. Leontiev (Orgs.), *Linguagem, desenvolvimento e aprendizagem* (4ª ed., pp. 21-37). Ícone.
- Luria, A. R. (1990). *Desenvolvimento cognitivo: seus fundamentos culturais e sociais*. Ícone.
- Mendonça, F. L. R., & Silva, D. N. H. (2015). *Formação docente e inclusão: para uma nova metodologia*. Appris.
- Mendonça, F. L. R. (2018). *A atividade criadora e sua dimensão ontológica: significados partilhados e sentidos produzidos no trabalho docente*. [Tese de doutorado, Universidade de Brasília].
- Mendonça, F. L. R., Silva, D. S., Barbosa-Andrade, F. S., & Silva, D. N. H. (2020). Mediações em sala de aula na construção do conhecimento em escolas inclusivas. *Psicologia Escolar e Educacional*, 24, 1-9. <https://doi.org/10.1590/2175-35392020193222>
- Mendonça, F. L. R., Abreu, F. S. D., Costa, M. T. M. S., & Silva, D. N. H. (2020). As contribuições da Teoria Histórico-Cultural e dos estudos de defectologia de Vigotski para a conceituação/compreensão da pessoa com deficiência intelectual. *Revista Com Censo: Estudos educacionais do Distrito Federal*, 7(2), 165-172.
- Pino, A. (2005). *As marcas do humano: às origens da constituição cultural e a criança na perspectiva de Lev. S. Vigotski*. Cortez.
- Pino, A. (2006). A produção imaginária e a formação do sentido estético: reflexões úteis para uma educação humana. *Pro-Posições*, 17(2), 47-69. <https://periodicos.sbu.unicamp.br/ojs/index.php/proposic/article/view/8643628>
- Vigotski, L. S. (2009). *Imaginação e criação na infância* (Z. Prestes, Trad.). Ática.
- Vigotski, L. S. (2010). Quarta aula: A questão do meio na pedagogia (M. P. Vinha, Trad.). *Psicologia USP*, 21(4), 681-701.
- Vigotski, L. S. (2011). A defectologia e o estudo do desenvolvimento e da educação da criança anormal. *Educação e Pesquisa*, 37(4), 861-870.

Vigotski, L. S. (2013). *Obras Escogidas I - El significado histórico de la crisis de la Psicología I* (J. M. Bravo, Trad.). Editorial Pedagógica.

Vigotski, L. S. (2014). *Obras Escogidas II - Pensamiento y lenguaje Conferencias sobre Psicología* (J. M. Bravo, Trad.). Editorial Pedagógica.

Vigotski, L. S. (2019). *Obras Escogidas - Tomo V: Fundamentos de defectología*. Unioeste.

Zanella, A. V. (2001). *Vygotski Contexto, Contribuições à Psicologia e o Conceito de Zona de Desenvolvimento Proximal*. Univali.



This is an open access article distributed in Creative Commons license terms.

Mailing address

Fabiana Luzia de Rezende Mendonça
QNM 40 conjunto S casa 7 - Taguatinga, DF, Brazil -
CEP 72146-019
E-mail: fabianaluzia.rezende@gmail.com