

MULTIPLE DISABILITIES: TEACHER TRAINING AND TEACHING-LEARNING PROCESSES

MÁRCIA DENISE PLETSCHE

TRANSLATED BY Eoin Paul O'Neill

ABSTRACT

This article discusses different dimensions of the educational process for students with multiple disabilities enrolled in specialized educational services – SES – offered in two multi-functional features, at a school located in Baixada Fluminense, in the state of Rio de Janeiro, in 2013. Four non-verbal students with multiple disabilities and two SES teachers participated in the investigation. The methodology employed was the perspective of action-research, as well as data collection procedures, including participant observation and semi-structured interviews. The theoretical basis followed Vygotsky's cultural-historical approach. The results showed, among other things, the importance of action-research in teachers' continuing education. Likewise, these results also indicate the possibilities for development of higher psychological processes in students with these disabilities based technology pedagogic interventions with use of alternative communication and assistive technology resources.

**MULTIPLE DISABILITIES • SPECIAL PROGRAMMES • TEACHING •
LEARNING**

Research funded by the Foundation for Research of the State of Rio de Janeiro – Faperj – and the Observatory Program of Education of Higher Education Personnel Training Coordination - Capes.

If men are formed by circumstances, what is involved is forming the circumstances humanely. (Karl Marx and Friedrich Engels. *The Holy Family*, 1844)

MULTIPLE DISABILITY IS CHARACTERIZED BY A SET OF TWO OF MORE ASSOCIATED disabilities – of a physical, sensorial, and mental nature, amongst others (BRASIL, 2006). In other words, it is a condition which affects with greater or lesser intensity the individual and social functioning of subjects with this disability. In Brazil, when compared to other types of disabilities, there are few studies of multiple disabilities, especially in relation to the analysis and assessment of the schooling of these subjects. According to Masini (2011), the most systematic research only began in 2000 with the publication by the Ministry of Education of the Program for the Training of Human Resources in Fundamental Education: Multiple Disabilities. This same situation also occurs in the international sphere, as shown by Rocha (2014) in her analysis of European and the United States databases.

This article presents the results of research carried out during the 2013 school year with four students with multiple disabilities and two teachers who worked in two different multifunctional resource rooms, who were part of the Specialized Educational Service (SES). According to the *Operational Directive for Specialized Educational Service in Basic Education, special education mode*, created by Resolution no. 4 (BRASIL, 2009), this service should be provided to students registered (included) in common classes in normal education, as a complement or supplement, and not as a substitute, as occurred/occurs in schools and special classes. This directive follows the indications of the current Special Education Policy

from the Perspective of Inclusive Education (BRASIL, 2008), according to which inclusion should occur at all the levels of education, from infant education to third level. It is not intended here to expand on the implementation of education policy in teaching networks in Brazil. Vast scientific production already exists in relation to this, (GOÉS; LAPLANE, 2009; KASSAR, 2011; BRAUN, 2012; GLAT; PLETSCHE, 2012; SOUZA, 2013, amongst others). Our objective is to discuss how the pedagogical support offered in SES and the pedagogical proposals implemented there have contributed to the teaching and learning process and consequently for the development of students with multiple disabilities, the targets of the investigation. Equally, we analyze whether the action-research methodology can or cannot contribute to the continuous education of the participating teachers.

We therefore adopted the historical-cultural reference based on Vigotski (1997), especially *The Fundamentals of Defectology*, concerned with studies related to the development of disabled people through different areas of knowledge. We also dialogue with Brazilian and international authors based on this theoretical approach. At a national level researchers such as Goés (2002, 2008), Goés and Cruz (2008), Pino (2005), Bernardes (2012), Dainêz (2012) and Souza (2013) have notably influenced our studies, but we especially highlight the research coordinated by Smolka and Nogueira (2010, 2011, 2013) with the Thought and Language Research Group, connected to the Post-Graduate Program in Education, State University of Campinas (Unicamp). At an international level our principal references are Baquero (2001), Arias Beatón (2005), Fichtner (2012) and Friedrich (2012).

In Brazil the debate about the historical-cultural perspective has advanced enormously in different areas of knowledge, such as Psychology, Education, and Philosophy, amongst others. However, we found that its use in empirical research related to the schooling of students with multiple disabilities is still rare, notably in regard to the educational and social reality of the country. We therefore face enormous challenges, since at the same time that we advance in a more general study of historical-cultural theory, we are also constantly urged to analyze problems, processes, and categories which are found in the field of work and for which we do not always have the appropriate or consolidated responses.

In relation to this, it is worth emphasizing that collective work based on action-research has contributed to thinking about these aspects, precisely because it is characterized as a method of scientific investigation conceived and carried out in close association with an action aimed at the resolution of a collective problem (BRAUN, 2012; ROCHA, 2014). The principal characteristic is the active participation of individuals belonging to the field of research and their interaction

with members of the investigation team (formed by me, two scientific initiation grant holders, two SES teachers and a Master's student). It therefore differs from conventional methods, although it has a qualitative focus, resulting in the posture of an investigator distanced from the reality researched. Action-research also favors the collection of data by showing itself to be a flexible methodology by offering conditions for a permanent dialogue, aggregating the contributions of each of the participants and thereby permitting joint preparation in the search for 'solutions' for possible problems found in the field. Nevertheless, the fact of giving voice to participants appears to us to be one of its principal attributes, above all if we consider the traditional methodological in the area of special education, which often speak for subjects and not with them.

In relation to data collection, we adopted the use of the field diary as the basis of participant observations, and the filming of pedagogical practices developed by teachers with students with multiple disabilities, their interactions, and the answers given by the students. We also did semi-structured interviews with the teachers. Using these procedures, the field research was divided into two parts: a) fortnightly meetings with teachers and the research team to discuss their practices and the theoretical reference used as a foundation; b) weekly field observations and filming the practices carried out by teachers with the four students who are the targets of the study. During the investigation 11 meetings were held with the teachers and 48 observations were filmed of students being attended in the multifunctional resource rooms.

The participant observations were recorded in the field diary consisting of annotations written during the sessions and afterwards, when more details were added. In addition to the description of the events observed, the records also focused on information about time and the duration of the assistance provided. These procedures followed the orientations of Rocha (2014). The images of the videos, in turn, were transcribed and analyzed in light of microgenetic analysis (GÓES, 2000). According to Pletsch and Rocha (2014), this approach dialogues with the historical-cultural approach and its characteristics and procedures meet the profile of the subjects participating in the investigation, who have enormous language difficulties or are non-verbal. The analysis of the films from the micro-genetic perspective became one of our principal allies, since it allowed the coverage of moments of interaction of students with the school environment and the specificities of the teaching and learning process. In other words, it allowed us observe attentively facial expressions, small gestures, or even noise, which without the participant observation could pass unperceived. The transcriptions were organized in vignettes according to the suggestions of Pino (2005).

The semi-structured interviews, in turn, occurred during the discussion meetings with teachers, who were encouraged to raise questions about their education and their pedagogical practices, as well as the difficulties and the paths found. For example: a) How do you understand your pedagogical practice and your professional training? b) Which strategies can contribute to educational work with students with multiple disabilities in SES? c) What is the importance of knowledge of resources such as those of assistive technologies in work with students with multiple disabilities and difficulties in communication and/or who are non-verbalized? d) How much did the historical-cultural perspective contribute to the planning and preparation of pedagogical practices? Based on the answers, a script was prepared for semi-structured interviews, following Manzini's (1990) indications. All the interviews were recorded on audio and literally transcribed.

In relation to the participating subjects, it is important to clarify that the teachers Ana Clara and Ana Flor had degrees in Pedagogy and had specialized in Special Education. The former also has a qualification in SES for students with global development disturbances. The participating students were: João (9 years), Pedro (10 years), Ana Luiza (18 years) and José (12 years), all with certified multiple disabilities. The first three were non-verbal, while the last one had enormous language limitations, understood in the vast majority of times only by his mother.

Based on the triangulation of the data collected in the interviews, participant observation, and video images, it was possible to organize the information in thematic groups, which were regrouped and gave rise to the analysis categories, following the indications of Pletsch (2010). In this article, we will succinctly focus on two of these categories: action-research as a further education strategy for SES teachers for students with multiple disabilities and the teaching and learning process of these students.

ACTION-RESEARCH AS A FURTHER EDUCATION STRATEGY FOR TEACHERS

Much has been said about teaching work, teaching activity, the practice of the teacher. Much has been studied about teachers and their daily lives, their knowledge and duties, their beliefs, their experience, their wisdom. Much has been asked and commented about the difficulties, the beauties, and the specificities of this form of human relations we call teaching. Despite so much talk, it seems so enigmatic, sometimes because we talk about much, sometimes disconcerting, often daring, in all its (im)possibilities of occurring. (SMOLKA, 2010, p. 107)

As well as the lack of clarity about the best paths to be followed in SES work with students with multiple disabilities and the lack of theoretical knowledge learned in the initial training and in further education to provide a foundation to teaching practice, the results of the research identified a series of problems which negatively impacted on the pedagogical actions planned by teachers. The principal ones were: a) difficulties of infrastructure, materials, and resources suitable to meet special educational needs, which are very specific for each student with multiple disabilities; b) problems related to adapted public and/or school transport to allow students arrive in school; c) lack of linkage between the educational system and the health system, since many students with these disabilities suffer from convulsions and apneas without having the necessary clinical monitoring; d) lack of access to the necessary technological resources to work with students with serious disabilities, especially helping the development of communication. Furthermore, the research also showed the lack of: a) teachers' specific knowledge to implement pedagogical activities to stimulate the development of these students; b) linkages between the work of the teacher in the multifunctional resource room and the common classroom; c) clarity about the role of the SES teacher for students with multiple disabilities.

In relation to the lack of knowledge, the interviews with the teachers indicated that the project had a positive impact on the practices they developed, as well as providing a theoretical foundation for their actions, helping in the identification of resources from the assistive technology area, and based on this on alternative and expanded communication. For studies in this area, in the fortnightly meetings texts of authors such as Deliberato, Gonçalves and Macedo (2009), Nunes *et al.* (2011) and Rocha (2014) were looked at. The concept of assistive technology adopted followed the official orientations which characterized it as an area of interdisciplinary knowledge, covering products, resources, methodologies, strategies, practices, and services, whose objective is to encourage functionality related to activity and to the participation of people with disabilities, incapacities, or reduced mobility, aimed at their autonomy, independence, quality of life, and social inclusion (BRASIL, 2007). Alternative and expanded communication was understood, according to Nunes *et al.* (2011, p. 6-7), as one of the area of assistive technologies which:

Involve the use of manual gestures, facial and corporal expressions, graphic symbols (bi-dimensional such as photographs, engravings, drawings and the alphabetical language, and tridimensional such as real objects and miniatures), the digitized or synthesized voice, amongst others, as means of effecting face to face communication of individuals incapable of using oral language.

It is worth noting that the SES Operational Directives (BRASIL, 2009, art. 13) define as one of the attributes of the SES teacher “VII – teach and use assistive technology in order to expand the functional abilities of students, promoting autonomy and participation”.

According to the participating teachers, the recognition and acquisition of resources in the area of expanded and alternative communication, with the financial support of the project, favored their pedagogical practices with the students. They also emphasized that the contributions of these resources are very important for the teaching and learning process, and consequently for the education and social development of students with difficulties or limitation in oral language.

Notwithstanding the contribution of the project, during the research it was evident that, despite the legal guarantees (BRASIL, 2008; 2009), the multifunctional resource rooms (belonging to SES) mostly functioned and dealt with students with serious impairments much more on the basis of the personal efforts of the teachers than the solidity of the public policies related to this service. In other words, despite being multifunctional, the rooms were precarious and did not meet minimum demands and needs. Furthermore, the preparation of the alternative communication boards was done by teachers in their own homes, since access to printers and ink was necessary, which signified extra-school work and having to pay for this out of their own salaries. In relation to this, it seemed to us that there existed an enormous distance between the federal directives and their implementation in municipalities. The precariousness and/or non-functioning of this service was also shown in the doctoral work of Souza (2013), carried out in Campinas (São Paulo), in the narration of Alan’s school trajectory. The contradictions, problems, and challenges faced by the federal and municipal government to implement SES with quality are enormous. In addition, this is one of the results of the research of the National Special Educational Observatory (*Observatório Nacional de Educação Especial – Oneesp*), which since 2011 has mapped and analyzed SES in multifunctional resource rooms in 16 states in Brazil, with the participation of more than 200 researchers (MENDES, 2014).

In relation to the lack of theoretical knowledge to provide a foundation for the theoretical practices of teachers, we selected scientific articles about the historical-cultural perspective of human development, such as internalization, meaning, significance, compensation, and mediation. Greater emphasis was given to the concepts of mediation and compensation. Considering the length of this article, it will not be possible to expand on them here. Nevertheless, it is worth looking at, albeit briefly, the participants understanding of compensation. Based on the reading of Vigotski (1997), the concept was defined as a strategy to create conditions and establish interactions to allow the development

of individuals with disabilities. In other words, for the participants of the investigation, compensation occurs through social interaction and pedagogic intervention. For Vigotski (1997), the disability of a function or lesion of an organ means that the central nervous system and the psychic apparatus assume the tariff of compensating the defect. This idea constitutes the core of its propositions about the development of children with disabilities: “all defects create the stimuli to prepare a compensation” (VIGOTSKI, 1997, p. 14). One of the reports collected during the study meetings shows the teacher’s understanding of compensation and its relationship with development:

Our pedagogic intervention involves different dimensions which affect development. Remembering that we are human being affected by the subject and that we also affect them, we thus manage to provide the intervention and compensation so that they can make internalizations and afterwards develop them. But this is only possible with systematized and planned action.¹

From this perspective, based on collaborative reflection with the SES teachers, we discussed how this and other concepts could affect (positively or not) the construction and internalization of scientific content (understood as formal learning taught in school), their meanings and significance for students with multiple disabilities. The concept of internalization was understood as “something we do with everything we hear and to which we pay attention, but appropriation demands that what is paid attention to become part of the thought and consciousness of whoever takes possession of this knowledge” (ANDRADE; SMOLKA, 2012, p. 708).

As could be deduced from the meetings, the teachers showed a greater understanding of the concept of compensation through pedagogic mediations with students. Equally, they marked as positive the use of resources (here called external tools) to allow students develop communication. It should be emphasized that the concept of mediation was considered essential for understanding the functioning of the teaching and learning process. Based on discussion with the research team, it was also highlighted that, unlike what had been understood until that moment, mediation could occur in the teaching and learning process without the visible or immediate participation of the other, through mental or symbolic representation, as Smolka and Nogueira showed (2002).

The interviews also revealed that the teachers saw their practice as positive, but defended more systematic interventions and planning in a collaborative manner with normal teaching. The lack of systematized actions in the different educational spaces frequented by these subjects,

¹ Recorded in a field diary on 5/6/13, available in the research group database.

according to them, ends up weakening the development of students, who, in function of their specificities, need greater intervention. It is also clear that the subjects demanded practices and actions related to the development of communicative abilities, perception and activities in daily life which are not achieved in the space of the multifunctional resource room, since the activities occur two or three times a week for just a single hour.

The teachers were firm in stating that it was impossible to comply with federal directives which required unenforceable actions in practice, due to the lack of time available to develop individualized teaching proposals (the SES plan), time to carry out joint planning with common education teachers, and conditions and time to build partnerships external to the school institution, amongst the duties stipulated in the already mentioned SES Operational Directives (BRASIL, 2009). In relation to this reality, the teachers questioned the school model and the specialized service offered in SES. At another moment, they suggested that the form in which inclusion policies have been implemented has either not contributed or contributed very little to the development of students with multiple disabilities. However, we still do not have longitudinal research with evaluations of the impact of these proposals in the specific case covered here.

Given the above, it can be stated that the research revealed different dimensions of the work of two SES teachers of students with multiple disabilities. It also showed that to overcome the distancing between the local reality and federal policies the action-research methodology is an interesting tool in further education.

Further education projects and practices which use methodologies such as action-research or intervention-research are more effective, since they guarantee the participating professionals' conditions to reflect on the new demands and construction in a collaborative and well based manner new teaching and learning possibilities, stimulating teachers to reflect on their own educational processes. The use of action-research as a possibility and tool for further education was also indicated in the research of Glat and Pletsch (2012).

THESES TEACHING AND LEARNING PROCESS WITH STUDENTS WITH MULTIPLE DISABILITIES

Development is not guaranteed by learning, since the school process has its own threads, logic, and complex organization. Teaching develops in function of a previously determined planning, in a sequential manner, in the form of lessons, duties, which are organized according to the different fields and subjects to be taught. It is this

organization Vigotski has in mind when he characterizes the laws of learning. (FRIEDRICH, 2012, p. 111)

Historically, students with multiple disabilities have not had access to the teaching and learning process, especially because they were seen as incapable. Many of these peoples end up confined at home without access to any educational intervention. Fortunately, this reality has changed in recent years thanks to scientific advances and the expansion of educational rights to people with disabilities in general.

Our objective here is to look at some aspects of the pedagogical implications of the teaching and learning process of these subjects and their consequent development. We begin by looking at the superior psychological processes, understood as those which characterize typically human psychological functioning (FICHTNER, 2010) – these processes are constructed and (re)constructed based on the use of instruments and signs during the subjects life (PINO, 2005). They are actions, amongst others, which involve voluntary attention, logical memory, the formation of concepts, abstraction, and generalized thought, which from the Vigotskian perspective are necessarily developed through educational intervention.

Advances in the development of both social and academic abilities in severely compromised students through exposure to proper high quality education was the theme of a recent article by Kassar (2013). She calls our attention to the argument that the “question is not exactly where the students learn, since individuals are always learning; [...] the question is the opportunities offered to them” (KASSAR, 2013, p. 155). In this case, more than in other deficiencies, the subject cannot be labelled for what he does not do (does not walk, does not talk, does not communicate, etc.), leaving aside their possibilities, which even when considered elementary, primary, or repetitive, involve complex psychologies. After all, the human being not only is, but is also constituted as something that the person will become.

In relation to this, once again in dialogue with Kassar (2013), we understand that this process occurs through the means of social interaction, even though at a primary moment the biological aspects are predominant. Corroborating this perspective, the development of severely compromised students goes through the recognition of their specificities to appropriate culture through the means of different social and psychological instruments, without ruling out human individuality and the complexity of the teaching and learning process.

In other words, the possibilities of the incorporation of culture by people with multiple disabilities – especially those which involve symbolic operations –, depend on interactions established between teacher and student and/or student and student during the pedagogical

practices, as well as practices in themselves and their concrete living conditions (material, organic, and psychological). Therefore, to allow students with multiple disabilities develop new forms of mental functioning, school activities should prioritize the teaching of concepts, their significance, and meanings. Souza (2013) reinforces this vision by arguing that the teaching and learning process for disabled students involves the offering of a curriculum which privileges actions which have sense and meaning, and which allow students to construct a cognitive, motor, affective, and linguistic conceptual network. For this, it is enough to mention that in many cases, these individuals need permanent support other than what is currently offered by the Brazilian school model. Once again we highlight the importance of mediation and the experiences of learning to which individuals are exposed in the school environment, as well as precocious stimulation activities in which they have the opportunity to participate.

Showing how this process occurs in students with multiple disabilities requires analyzing details (often linked to gestures and facial expressions), above all in cases where there is no verbalization. Another aspect which impacts on the development of seriously compromised students is how we look at the expectations we have about them and their development. Dainêz (2012), in narrating the school histories/trajectories of Guilherme and André, problematizes the relationship between the pedagogical act aimed at these students, the impact of concepts about their development and the possibilities found by them to 'compensate' their specificities.

In the cases we analyze, communication difficulties demand sensibility to recognize and measure, based on filming, evidence of the development of superior psychological processes. It is worth noting "in teaching relations, the teacher shows, points, draws, indicates, and the student, participating in the teaching activity, prepares conceptual processes, produces knowledge in and through language" (SMOLKA, 2012, p. 10). In turn, Kassar (2013, p. 101) considers that language acts "as an instrument of psychological activity, also contributing to the alteration and development of thought." In other words, the role of language is fundamental for there to occur the transformation of situational thought (strongly impregnated by experience) into conceptual thought (related to the development of the concept which implies generalizations and abstractions). It is worth noting that scientific concepts gain new configurations and vitality through experience. In other words, scientific concepts become concrete and are transformed in connection with spontaneous concepts (GÓES; CRUZ, 2006; BERNARDES, 2012).

While the research was being carried out, the concept of language (as a possibility of communication) and its relationship with

the teaching and learning process was the object of our discussions. At a determined moment, we recognized it as a form of comprehension developed through relations between the social, psychological, and biological dimensions. Remembering that by assuming the social nature of human development, we also assume that its organic dimension is “impregnated by culture and marked by history” (SMOLKA; NOGUEIRA, 2002, p. 80). Based on the studies of Vigotski (1997), as examples of compensation, we can mention that for the blind the mechanism used is the learning of Braille, while for the deaf it is the learning of sign language. Both are learned resources which act within the organization of thought and language. In the case of students with multiple disabilities, the principal compensation tool can be considered language (spoken or with the use of alternative symbols), through interaction and the statements and challenges proposed to individuals. In other words, “although is not reflected in the word, it is realized in it” (VIGOSTKI, 2001, p. 342). The following citations show evidence of students’ understanding of the educational proposals aimed at them:

The activity began with the teacher telling the story of the Three Little Pigs. She narrated the story with a great wealth of details in her facial expressions. Every time she blew, imitating the wolf, Pedro fell around laughing. There were moments in which he interacted, emitting some sounds and tightening his eyes. As the teacher talked about the different houses in the story, she placed pins on a slope to have an interface with the quantities. [...]. Miniatures, cuddly toys, and drawings were used during the storytelling. Often he interacted by smiling at the funny sounds the teacher made. (Recorded in the field diary on 5/6/2013, available in the research group database)

The teacher showed slides with symbols from the PCS system. She began with an image of an angry person and asked if José was like this. He answered that he was by nodding and smiling. (Vignette transcribed based on video images on 19/6/2013, available in the research group database)

Despite the recognition of evidence of student participation – through smiles, gestures, and glances with the use of different resources –, we would like to emphasize that the concept of comprehension deserves greater discussion, including about its genesis and references used in Vigotski’s work in the 1920s and 1930s. Also necessary is the expansion of observation and research similar to what was described in this article in a longitudinal form, with the objective of obtaining more information to assess the relationship between

the evidence presented by the subjects, the development of advanced psychological processes, and compensation of the organic condition through external tools or signs as an alternative form of communication. This reservation is relevant since, like Dainêz and Smolka (2014, p. 4), we are also concerned about the naturalization the concept has undergone, which is defined as the “social compensation of the organic deficit; the disability needs to be compensated.” In this way, according to these authors, the principles, arguments, and analytical potential of human development present in Vigostkian proposals is changed.

Continuing the debate, since the subjects of the study do not verbalize the compensation (or evidence of this), also observed was the use of external tools, as in the case of the alternative communication boards, which allowed the subjects to interact and communicate, as well as to show evidence of the appropriation of social content and concepts. José, for example, did mathematical activities (addition and subtraction) with the help of an adapted finger pointer (constructed for teachers) in order to type. As a result, with the use of technological resources it was possible for the subject “to internalize activities that are socially organized through speech” (BAQUERO, 1998, p. 27). The importance of language and its relationship with the teaching and learning process was highlighted in the following statement given by one of the teachers:

We have learned how much language is fundamental for learning. So, if my student cannot speak and I know that language is much more than this, I need to find ways for him to develop it. In this point I see that alternative communication helps a lot, not just for the subjects to be able to ‘speak,’ but also to reason. (Audio recording made on 13/11/2013, available in research group database)

It is worth noting that in some cases, the appropriation of the significance of words such as yes and no is fundamental for students with these disabilities to be able to make basic choices in life, such as deciding what they want to eat and dress. This knowledge to a great extent is not considered formal (what is taught and learned in school), but we argue that for these students, it represents a first step to learning and the appropriation of historically produced knowledge and cultural goods. In other words:

Only when language corresponds to something experienced, which can be signified, does real compensation occur, since there the language allows for the formation of concepts and it contributes to generalizing thought and to the construction of superior mental functions. (GÓES, 2002, p. 104)

For this, we have defended that the concept of learning, especially in the most serious cases of disability, should be expanded beyond the formal processes of schooling (the so-called scientific concepts), allowing these students the possibility of participating and interacting with the social environment so that new modes of being and acting can be developed. This defense is possible through the analysis of superior psychological processes in the historical-cultural perspective, presented above. Furthermore, based on Góes and Cruz's indications (2006, p. 41), by defending that "teaching systematized and culturally valorized knowledge is a commitment of the school. However, when we add the notion of meaning, this commitment expands, covering various forms of working in the field of signification". Acting pedagogically in this sense appears to us to be one of the possibilities of work to be carried out in SES in a collaborative manner with common teaching for students with multiple disabilities, without ignoring the dimensions which involve the curriculum and formal learning. Also because, for example, the appropriation of numerous concepts which are learned only in social interaction with the other by a person without specificities in development may not occur, or occur only in a very incipient form, in people with disabilities, especially the more serious ones, who need specific pedagogic interventions with diversified instruments and signs.

To instigate reflection about this, it is worth returning to the question posed by Mendes-Lunardi and Silva (2014): by advocating social inclusion discourses, especially those mentioned here about individuals with disabilities, and in parallel establishing the 'replacement' of academic knowledge by social and inclusive, are we contributing to modifying the school knowledge to be taught?

We hope that the reflections proposed in this article can encourage researchers to carry out new investigations with longitudinal methodologies to assess the development of students with multiple disabilities considering the diversity and multiplicity of forms, relations, and possible paths to achieve it, as well as the impacts on inclusive education policies and of SES as the only model of pedagogical support. These studies necessarily need to take in account technological advances and the social adversities in which a large part of this population live in the country.

To conclude, notwithstanding the positive indications of the research in relation to the work carried out by SES teachers with students with multiple disabilities, the data shows that, in addition to this service, in these cases it is also important to offer a network of support with different professionals (such as occupational therapist, and physiotherapist, amongst others), which, as is well known, the public system offers precariously if at all. Families in more favorable economic conditions pay for these services, but it is not possible for the

overwhelming majority of Brazilian families. For people with multiple disabilities to actually and legally have their development guaranteed, it is necessary for the state to offer material and human resources and, above all, precocious and high quality pedagogical interventions. For this, it is indispensable that teachers have access to knowledge which allows an education which recognizes the complexity and possibilities of the human being through the appropriation of culture.

REFERÊNCIAS

- ANDRADE, Joana de J. de; SMOLKA, Ana Luiza B. Reflexões sobre desenvolvimento humano e neuropsicologia na obra de Vigotski. *Psicologia em Estudo*, Maringá, v. 17, n. 4, p. 699-709, out./dez. 2012.
- ARIAS BEATÓN, Guillermo. *La persona en el enfoque histórico cultural*. São Paulo: Linear B, 2005. 297 p.
- BAQUERO. R. *Vygostky e a aprendizagem escolar*. Tradução de Ernani F. da Fonseca Rosa. Porto Alegre: Artes Médicas, 2001. 167p.
- BERNARDES, Maria Eliza M. *Mediações simbólicas na atividade pedagógica: contribuições da teoria histórico-cultural para o ensino e aprendizagem*. Curitiba: CRV, 2012. 231 p.
- BRASIL. *Resolução n. 4, de 2 de outubro de 2009*. Institui Diretrizes operacionais para o atendimento educacional especializado na educação básica, modalidade educação especial. Brasília, DF: MEC, 2009.
- _____. *Política nacional de educação especial na perspectiva da educação inclusiva*. Brasília, DF: MEC, 2008.
- _____. Comitê de Ajudas Técnicas. ATA V. 2007. Disponível em: <www.mj.gov.br/sedh/ct/corde/dpdh/corde/comite_at.asp>. Acesso em: jan. 2014.
- _____. *Educação infantil: saberes e práticas da inclusão: dificuldades acentuadas de aprendizagem: deficiência múltipla*. Brasília, DF: MEC/SEE, 2006.
- BRAUN, Patrícia. *Uma intervenção colaborativa sobre os processos de ensino e aprendizagem do aluno com deficiência intelectual*. 2012. 324 p. Tese (Doutorado em Educação) – Universidade do Estado do Rio de Janeiro, Rio de Janeiro. 2012.
- DAINÊZ, Débora. *Constituição humana, deficiência e educação: problematizando o conceito de compensação na perspectiva histórico-cultural*. 2012. 119 p. Projeto de qualificação (Doutorado em Educação) – Universidade Estadual de Campinas, Campinas, SP, 2012.
- DAINÊZ, Débora; SMOLKA, Ana Luiza B. O conceito de compensação no diálogo de Vigotski com Adler: desenvolvimento humano, educação e deficiência. *Educação e Pesquisa*, São Paulo, v. 40, n.4, p. 1093-1108, out./dez. 2014.
- DELIBERATO, Débora; GONÇALVES, Maria de J.; MACEDO, Eliseu C. de. *Comunicação alternativa: teoria, prática, tecnologias e pesquisa*. São Paulo: Memnon, 2009. 364 p.
- FICHTNER, Bernd. *Introdução à abordagem histórico-cultural de Vygostky e seus colaboradores*. Disponível em: <www3.fe.usp.br/secoes/inst/novo/eventos/detalhado.asp?num=226>. Acesso em: dez. 2012. (Seminário de Pesquisa)
- FRIEDRICH, Janette. *Lev Vigotski – mediação, aprendizagem e desenvolvimento: uma leitura filosófica e epistemológica*. Campinas, SP: Mercado das Letras, 2012. 128 p.
- GLAT, Rosana; PLETSCHE, Márcia D. *Inclusão escolar de alunos com necessidades especiais*. 2. ed. Rio de Janeiro: EdUERJ, 2012.

GÓES, Maria Cecília Rafael de. As contribuições da abordagem histórico-cultural para a pesquisa em educação especial. In: BAPTISTA, Claudio R. et al. (Org.). *Educação especial: diálogo e pluralidade*. Porto Alegre: Mediação, 2008. p. 37-46.

_____. Relações entre desenvolvimento humano, deficiência e educação: contribuições da abordagem histórico-cultural. In: OLIVEIRA, Marta K.; SOUZA, Denise T.; REGO, Teresa C. (Org.). *Psicologia, educação e as temáticas da vida contemporânea*. São Paulo: Moderna, 2002. p. 95-116.

_____. A abordagem microgenética na matriz histórico-cultural: uma perspectiva para o estudo da constituição da subjetividade. *Cadernos Cedes*, v. 20, p. 9-25, 2000.

GÓES, Maria Cecília Rafael de; CRUZ, Maria N. da. Sentido, significado e conceito: notas sobre as contribuições de Lev Vigotski. *Pro-Posições*, v. 17, n. 50, p. 31-45, maio/ago. 2006.

GÓES, Maria Cecília Rafael de; LAPLANE, Adriana L. F. de (Org.). *Políticas e práticas de educação inclusiva*. 2. ed. São Paulo: Autores Associados, 2009.

KASSAR, Mônica de C. M. Funções mentais superiores e a formação da consciência em sujeitos com deficiência mental grave: implicações pedagógicas. In: SMOLKA, Ana Luiza B.; NOGUEIRA, Ana Lúcia H. (Org.). *Estudos na perspectiva de Vigotski: gênese e emergência das funções psicológicas*. Campinas, SP: Mercado das Letras, 2013. p. 151-172.

_____. Percursos da constituição de uma política brasileira de educação especial inclusiva. *Revista Brasileira de Educação Especial*, Marília, SP, v. 17, p. 41-58, maio/ago. 2011. Edição especial.

MANZINI, Eduardo J. A entrevista na pesquisa social. *Didática*, São Paulo, v. 26/27, p. 149-158, 1990.

MASINI, Elcie F. S. Pesquisas sobre surdocegueira e deficiências sensoriais múltiplas. *Revista Construção Psicopedagógica*, São Paulo, v. 19, n. 18, p. 64-72, 2011.

MENDES, Enicéia G. *Observatório Nacional de Educação Especial (Oneesp)*. Disponível em: <www.revistareacao.com.br/website/Edicoes.php?e=957&d=0>. Acesso em: jan. 2014.

MENDES, Geovana M. L.; SILVA, Fabiany de C. T. Currículo e conhecimento escolar na contemporaneidade: desafios para a escolarização de sujeitos com deficiência. *Education Policy Analysis Archives*, Arizona, v. 22, n. 80, ago. 2014.

NUNES, Leila R. O. de P. et al. (Org.). *Comunicar é preciso: em busca das melhores práticas na educação do aluno com deficiência*. São Paulo: ABPÉE, 2011. 193 p.

PINO, Angel. *As marcas do humano: às origens da constituição cultural da criança na perspectiva de L. V. S. Vigotsky*. São Paulo: Cortez, 2005. 303 p.

PLETSCH, Márcia D. *Repensando a inclusão escolar: diretrizes políticas, práticas curriculares e deficiência intelectual*. Rio de Janeiro: Nau/Edu, 2010. 279 p.

PLETSCH, Márcia D.; ROCHA, Maíra G. de S. da. A etnografia como abordagem metodológica em pesquisas na educação especial. In: NUNES, L. R. d'Oliveira de P. *Metodologia de pesquisas em educação especial*. São Paulo: ABPÉE, 2014. No prelo.

ROCHA, Maíra G. de S. da. *Processos de ensino e aprendizagem de alunos com múltiplas deficiências no AEE à luz da teoria histórico-cultural*. 2014. 218 p. Dissertação (Mestrado em Educação) – Instituto de Educação e Instituto Multidisciplinar/PPGEduc, UFRRJ, Nova Iguaçu, Rio de Janeiro, 2014.

SMOLKA, Ana Luiza B. Prefácio. In: FRIEDRICH, Janette. *Lev Vigotski – mediação, aprendizagem e desenvolvimento: uma leitura filosófica e epistemológica*. Campinas, SP: Mercado das Letras, 2012. p. 7-10.

_____. Ensinar a significar: as relações de ensino em questão ou (não) coincidências nas relações de ensino. In: SMOLKA, Ana Luiza B.; NOGUEIRA, Ana Lúcia H. (Org.). *Questões de desenvolvimento humano: práticas e sentidos*. Campinas, SP: Mercado das Letras, 2010. p. 107-128.

SMOLKA, Ana Luiza B.; NOGUEIRA, Ana Lúcia H. (Org.). *Estudos na perspectiva de Vigotski: gênese e emergência das funções psicológicas*. Campinas, SP: Mercado das Letras, 2013. 268 p.

SMOLKA, Ana Luiza B.; NOGUEIRA, Ana Lúcia H. *Emoção, memória, imaginação: a constituição do desenvolvimento humano na história e na cultura*. Campinas, SP: Mercado das Letras, 2011. 203 p.

_____. *Questões de desenvolvimento humano: práticas e sentidos*. Campinas, SP: Mercado das Letras, 2010. 239 p.

_____. O desenvolvimento cultural da criança: mediação, dialogia e (inter)regulação. In: OLIVEIRA, Marta K.; SOUZA, Denise T.; REGO, Teresa C. (Org.). *Psicologia, educação e as temáticas da vida contemporânea*. São Paulo: Moderna, 2002. p. 77-94.

SOUZA, Flávia F. de. *Políticas de educação inclusiva: análise das condições de desenvolvimento dos alunos com deficiência na instituição escolar*. 2013. 297 f. Tese (Doutorado em Educação) – Universidade Estadual de Campinas, Campinas, SP, 2013.

VIGOTSKI, Lev S. *Obras escogidas V*. Madrid: Visor, 1997.

_____. *A construção do pensamento e da linguagem*. São Paulo: Martins Fontes, 2001. 496p.

MÁRCIA DENISE PLETSCHE

Associate Professor, Department of Education and Society, and Post-Graduate Program in Education, Contemporary Contexts and Popular Demands – PPGEduc – of University Federal Rural do Rio de Janeiro – UFRRJ –, Seropédica, Rio de Janeiro, Brasil; *Jovem Cientista do Nosso Estado* of Fundação de Amparo à Pesquisa do Estado do Rio de Janeiro – Faperj
marciadenisepletsch@gmail.com