

The formation of the teacher who teaches Mathematics: reflections and challenges of Special Education in Brazil

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Students with Disabilities: The Inclusive Education in Brazil

In Brazil, from the 1990s, there was an increase in the number of laws and regulations regarding inclusive education theme. The Declaration of Salamanca in 1994, can be considered as a starting point the "Education for All". Among the recommendations given by the legislation are "the education of students with disabilities or global development disorder students or giftedness ones" and also mention teacher's training or specialization.



According to the Census data presented in the chart, we see students being "included" in inclusive classes with support of laws imposed by the government, but this does not mean education is equitable or that are providing the necessary assistance to these students.

There is a compulsory subject Deaf Sign Language lasting one semester offered to all undergraduate students who will become teachers, is that only course sufficient for math teachers who are receiving students with disabilities? Does the presence of the specialized teacher in inclusive schools, which is usually formed in Education with specialization in the area, is enough to ensure a quality education for the students, as the training of other teachers still occurs at a slow pace?

Hearing Math Teachers' stories

In the defended master's research (Rosa, 2013):

- 4 math pre-service teachers who participated in a Braille course offered by the Fluminense Federal University in the state of Rio de Janeiro, Brazil.
- They wrote their memoir in a private blog, created exclusively for the research.
- Objective: To outline an understanding of how math teachers in their education process, approach of inclusive education of students with visual impairment and how they perceive inclusive education.
- Through the analysis made, it is possible to perceive a gradual movement, but still slow of the university in an effort to adapt to existing laws, adapted practices and teachers' experiences for mathematics education in inclusive classes.
- There was the search for teacher training courses aiming better preparation to receive and teach students with a special educational need.
- These courses that were not offered in their initial education or offered in an optional way.
- It was noticed that although the students are coming to schools so that part of the law is enforced, there is no support, resources or guidance.
- We can see different discourses of mathematics teachers on inclusive education, some guided by the law, others based on experiences and still others with a bit of ingenuity or reluctance to have students with disabilities that they do not know.

** Both researchers, master and doctoral, are part of the Group of Oral History and Mathematics Education of UNESP. The background of both are narratives based on Oral History methodology: written (by memoir) or oral (by interview).

Hearing Visual Impairment Students and their Mothers' stories

In doctoral research (still in progress):

- 7 interviews (three mothers and four students as one of the mothers adopted a girl who is also blind as his son).
- Objective: To understand how students with visual impairment and their guardians perceive inclusive education through narratives. We also will look at the relationship of these students with mathematics.
- The motivation for this study arose, first, from reading the memoir of one of the math teachers who has a visual impairment and narrated his difficulties as a student in a specialized school in Rio de Janeiro, after his passage by the inclusive school and when he studied at university until graduate, returning to the special school to teach math classes:
- In the second period of college, I had problems in the course called Geometrical Construction, due to my low vision I could not do the designs with precision, but I knew all the technical construction. Only missing one centimeter here, another centimeter there, I could never draw an appropriate design for what was required by the course. I tried to talk to the professor, but she gave no sign of understanding. With all this, I was disapproved (Rosa, 2013, p. 197).
- In the narratives from the interviews with students can realize the difficulties they had when they began to see less and less or became blind. In the case of mothers, there is support for their children regarding blindness and the search for medical treatments, the search for quality education for them, which implies acceptance of them by schools which is independent of the law. According to reports, they heard some excuses such as "our school does not have sufficient resources to address your child properly" or parents are expected to provide extra assistance from a specialist to be with their child in the classroom.
- Another factor is the unawareness of some teachers in order to explain with further detail what is written on the blackboard, describe graphics or figures, as they have a student with visual impairment in the classroom.