The relationship between youth and adults students with mathematics: a case study of brazilian school context

Carla Cristina Pompeu1
Vinicio de Macedo Santos2

Introduction

The purpose of this study aim to discuss the relationship between subject and mathematics knowledge in the school context. The school context presented make part of brazilian educational scenario of youth and adults education. Initialy we going to present a brief discuss about the education scenario for youth and adults in Brazil and worldwide. In addition, we will discuss the relevance of the process in teaching and learning mathematics, the relationship between subjects of youth and adults education with the mathematics knowledge and the implications of the specificities of this subject within learning context. The proposal was analyse subjects in process of learning in a school context, taking into account the singularity of this subjects and the way they connect different knowledge with the mathematics knowledge. The pragmatic sociology that recognize the necessity to analyze the subjects in situ and is interest for negotiations, experiences and senses of subjects was the reference of analyze of this work. We going to present the initial results of this research of youth and adults students in two brazilian schools, considering the sociology discusses about subject, mathematics as social practice, the individuality and of the experience.

Study

Adult Education and mathematical practices

Adult education is now a subject of great interest to international organizations responsible for ensuring and discuss access to education, citizenship and human rights. In Brazil, in the past decade, there have been important improvements related to the access of youth and adults to school although it still remains no plans of effective public policies and linked to compensatory programs (HADDAD, 2001). Since the 90s, the large number of young Brazilians who have left school, either for the need to enter into the labor market or the school failure, caused that the night school education ended up with more and more young students (DI PIERRO 2001 ). These changes in adult education setting in Brazil makes diversity even greater and leads to the need to rewrite and rethought new educational policies for all subjects of this educational scenario. In order to analyze how subjects connected to mathematical knowledge in the school context, we consider the mathematical knowledge as mathematical practices (LAVE, WENGER, 1999) constructed socially and culturally and, in particular, that youth and adults are social subjects with knowledge and relevant experiences for the teaching learning process. Although these subjects have common features of social exclusion and are composed mostly of the same social and cultural groups, we believe that each subject recognizes and experience the mathematics in unique way, assigning own meanings and values to their mathematical practices that modify their relationship to knowledge. Thus, this research developed from the contributions of microsociology, which proposes the study of subjects in action, interested in the negotiations, experiences and meanings that the subjects attribute to mathematical practices throughout their trajectories as possibility of analysis and research. (TRABAL, 2012; BOLTANJSKI, 1990).

Methodology

The contexts chosen for this research were two classrooms of youth and adults in Brazil, in public schools located in the cities of São Paulo and Indaiatuba. Participated in this investigation 65 students between 18 and 67 years old with a history of leaving school for different reasons. The two school contexts were part of the last stage of Basic Education in Brazil.

The data were collected from math class observations, semi-structured interviews, questionnaires and problem-solving workshops. This investigation is configured as qualitative because we believe in the need for a profound and complex analysis of the collected data with the ability to understand social relations and the chosen context in more broadly way (BOGDAN & BIKLEN, 1994). Based on studies by Charlot (2001) and Brotman (2012), the data were organized into three categories of analysis: How the research subjects associated to knowledge and the school (1); Which way these individuals associated with the mathematics (2); Meaning attributed by the EJA's individuals to mathematics and their views on mathematics learning (3).

Results and Discussion

We present here the initial results of this research. The data will be presented from a table composed of three analysis categories which had the objective of understanding the relationships of students with mathematics within the school context, and how these relationships between subject and knowledge influence the learning process.

The two contexts studied were different and therefore had different implications when it comes to ways to associated students with math. The school context of São Paulo was composed of students, mostly young people between 18 and 25 years old, the school was located outskirts of the city. In the Indaiatuba's school the students were mostly between 30 and 70 years old, many with a prior relationship with the school.

Next we present the analysis categories of two analyzed contexts and briefly discuss the ways outlined to date, considering the actions of individuals in knowledge negotiation situations.

Final Considerations

The considerations presented here are early however, it is possible to admit the different relationships of the subjects with practice school mathematics. Although all they have a history of social exclusion and school failure, the students that has been participated in this research reveal different relationships with mathematics. Some of the students from both schools, even resistant to new proposals for activities, proven to be able to relate their non-school mathematical knowledge with school mathematics. This process is not simple, since they believe in the superiority of school knowledge on their own knowledge. The barrier school and adults still remains in the two school contexts where students and school recognize themselves in school because they believe they are not able to learn. These and other situations have shown that although many of the subject react in tough way to new practices and learn mathematical school, the different ways of seeing and understanding the math can enrich the school scenario.

The subjects youth and adults proved to be the school context, a space for knowledge negotiation, often with prevalence of the teacher's knowledge before the students' knowledge but as a rich set of complex relationships between students and mathematics.

Bibliography


1 Universidade Federal do Triângulo Mineiro, Universidade de São Paulo / ccppompeu@usp.br
2 Universidade de São Paulo (vmn@usp.br)