

REINVENTING SCHOOL?

REACTION TO ERIC GUTSTEIN'S "REINVENTING FREIRE: MATHEMATICS EDUCATION FOR SOCIAL TRANSFORMATION"

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During my first years as a teacher I had the chance to stumble into some of Paulo Freire's writings. My ideas about education at that time were oscillating between didactic knowledge and pedagogical knowledge, which provided me a very professional but narrow view of my role as a teacher. I felt comfortable. I was enjoying my first years of teaching, with lots of new things to do, and plenty of didactic ideas to implement in the classroom, in order to allow success to my students. But problems and contradictions started to arise. For example, the fact that some of the nice and worked plans that I prepared to my classes failed because of strange things that aren't supposed to happen in a classroom. Things that had to do with the presence of thirty children with wills, fears, desires, problems, families, that definitively weren't the ones I imagined when preparing the class, in the comfort of my home. I started in a very intimate way, to realize that education is more than just teaching the right thing to a bunch of children. And the reading of Paulo Freire offered me the language to start thinking more clearly about the entire educational dimension that surpasses didactic knowledge and school. Freire helped me to realize that education, per se, is an empty word. Education implies cultural communication and a dialogical relation between teacher and students. But continuing the readings of his works I went further. I situated my work as a teacher in the world, in a society, which I progressively started to look with a critical stance. From then I couldn't ever separate my role as a teacher from my role as a human being. I started to be politicized about education.

So reading and having the opportunity to comment on this paper that describes an educational experience substantiated in the ideas and work of Paulo Freire, was a joy and an opportunity to see work of this kind in action in a contemporary space. But I am getting old, and my first years as teacher are history, as is my confidence in school education. So I would like to raise some doubts and to put some questions concerning the implementation of a critical mathematics education in a classroom within a modern capitalist society. But first, a short comment to the most relevant aspects of Gutstein's paper.

Like I said, bringing Paulo Freire's ideas and work to the current scenery of mathematics education is one of the important aspects of the paper. According to Freire (1998), the universal ethic of educators is to educate, to have political clarity regarding their stance (which implies an interpretation of man and the world), and to engage dialogically with their students. That political dimension should be present in every act of education, because, like Freire said, education is politics and an act of

indignation against the injustices of the world. Education has the double role of making possible the conscientization of dehumanizing structures and practices present in everyday life, but also the transformation of that same reality. Those two aspects are very strong in Gutstein's work.

Secondly, Gutstein's has a preoccupation with connecting scientific research to people's real problems. The way Gutstein and his colleagues worked in school from *generative* problems, that emerged from real concerns of students and community, is based on the importance for teachers "to see students as allies in common struggles for social justice" (Gutstein, 2008, p. 3). But, since Gutstein is also a researcher in university, we could also say that this work is an example of research where the researcher sees people as allies and not as objects of study.

Finally, there is the possibility for students to do a different mathematics, a mathematics that opens up the possibilities for world scrutiny, and not just the truth as given by the logic of mathematics that assesses a given, real world. The projects were specifically designed to use mathematics as a vehicle to become aware of racial, economic, gender, or other discrepancies or inequalities. The question was very clear: how can we use mathematics to promote social justice?

Being a teacher in a basic Portuguese school (from 7th to 9th), after reading Gutstein's paper I immediately began thinking about my school. It's a typical Portuguese low-middle class school, with children from different backgrounds, some descendents from African, Brazilian and Eastern Europe countries, but mainly Portuguese students, not much different from the majority of Portuguese urban schools. It's also a very old school and it's literally falling apart, with scarce places to child to play. Aesthetically speaking, it's a decrepit school. During last an atmosphere of discontentment emerged between the teachers due to several central political measures that changed the condition of the profession. Among the teachers prevailed several dogmas on education, concerning its purposes, the pedagogical relation with the learners and so on, most of them very far from Freire's ideas. But the most severe aspect of the school reality is the huge gap between students and teachers. They are far from being allies; there are, if not adversaries, no more than neighbours. So, inspired by the central question made by Gutstein (2003) - how might teaching for social justice in a regular school be different? – I started to wonder about the possibilities and constraints of implementing or, using Gutstein (2008) words, normalizing a curriculum based on critical mathematics education for social justice in a (all) regular schools. But doubts appeared. Let me start by taking a look at the difficulties pointed by Gutstein.

In his other work (Gutstein, 2003), Gutstein goes further describing his experience in implementing a critical mathematics education in a Latino, urban school. Here Gutstein enumerates some problems and constraints that we could face when trying to carry out one initiative in mathematics education for social transformation in a school. Those are related with:

- Creating and implementing a curriculum with generative themes involving critical mathematics education. Many teachers don't have the time, the knowledge or the will to do that. According to Gutstein (2007), in some way you need to be a super teacher, that is, a teacher that simultaneously has knowledge to create rich mathematics curricula and skills to successfully teach in urban schools.
- The pressure to learn the mathematics of the standard curriculum, or, as Gutstein (2007) named, the classical knowledge, that will be essential to students' approval in the high-stakes tests.
- The roots of mathematics education as a field stem from mathematics and psychology, and researchers have historically focused more on cognition than on sociocultural contexts.
- The common notion that mathematics is an "objective" science that is neutral and context free. To most people it sounds strange to talk about mathematics and social justice.
- The character of school. Children are not volunteers, they are forced to go to school, and they learn that school is more a space and a time they have to surpass to be someone, and not a place to criticize or go to discuss their problems.
- In the capitalist society, education is market oriented. Like Gutstein (2008) says: "The ACI is a particular and current manifestation of positioning mathematics education to serve capital in the US" (p. 8).

The disciplinary society that normalize and accommodate all the possible agents of transformation (like teachers). Like Gutstein (2003) says "educational practices that involve students in discussions and actions that critique sources of knowledge, question institutional practices, and run counter to norms and power structures within society are potentially problematic and can threaten schools and authority. Teachers put themselves at genuine risk by raising such issues" (p. 41).

Then we can say that there are difficulties related with power (the disciplinary society), ideology (psychology versus sociology), epistemology (nature of mathematics), economy (high-stakes tests, capitalist society), and students' expectations about school. All those dimensions clearly influence and condition the implementation of a critical mathematical education in the classroom.

Gutstein managed to overcome some of those difficulties. The question of ideology and epistemology is well resolved since the curriculum developed is clearly socially relevant. Schooling continues to be obligatory, but, as mentioned by Gutstein (2008), students stop asking questions like "When am I ever going to need this?" Those projects in which they were involved were, per se, meaningful. The economic question was problematized in the classroom through the development of a social justice oriented curriculum, but the high-stake tests remain (as does the capitalist society). Finally the question of power and the fact that education is part of a state apparatus to govern children's souls, as put by Popkewitz (2002). This problem is

apparently overcome by Gutstein due to the specific conditions under which he implemented this initiative: particular students were interested in common problems making it possible to construct a curriculum based on generative themes, a school that gave him space for developing this project, a group of teachers motivated and engaged on doing mathematics for social justice. But I ask the question (as Gutstein does): will the results will be as optimistic in the majority of regular schools? What are possible scenarios for implementing mathematics education for social justice in ordinary schools, with normal conditions, heterogeneous students and teachers resigned to the status quo?

Taking teachers as an example, Covalieskie (1993) argued that the institutional arrangements, in ways no one quite seems able to pin down, make even the most able and intellectual of the teachers tone down their teaching to the level of the approved curriculum materials. Many teachers have personal interest in real political, economic, and social issues which they leave at the classroom door. Seeing their job as controlling their students, they seek to do this through control of the curriculum. Then it is not a “personal” problem of teachers, but a “structural” problem, having to do with the mechanisms and discourses to govern people that constantly disable us to work in transformative ways. The question is how to connect the implementation of critical mathematics education in schools that, as mentioned by Gutstein, need to be for liberation rather than for domination and submission, with the social role carried out by school in regulating and governing population (Walkerdine, 1994; Rose, 1999; Popkewitz, 2002)?

Taking my school as example, we can imagine all the constraints I felt when trying to implement critical mathematics education in the classroom. Although the Portuguese curriculum explicitly mention the importance of working with student topics of mathematics and society, it is content orientated and the high-stakes tests are always present, putting pressure on teachers and students to be glued to specifically mathematical content. That corrupts any possible change. As a teacher I feel that the only thing I can do is to confront students with the reality, with the contradictions I feel, and doing so, contribute to politicizing mathematics education in particular, and school in general. But I am conscious that little transformation has been made.

Like I mentioned before about my school, all the discourses and practices present in my school are disciplinary mechanisms that progressively constrain any well-meaning initiative. For one reason or the other: the initiative is seen as something isolated and become marginal, or is absorbed in practices that are far from promoting change, or integral to the system.

The work of Gutstein clearly shows that under certain circumstances, it is possible for teachers to promote more equitable classrooms, “helping students explicitly and consciously use mathematics itself as a tool to understand and analyse the injustices in society” (2003, p. 69). But my point is that, when we try to expand or institutionalize critical mathematics education in school, all the attempts of

transformation is *compromised* by the structure of a society that obviously has other goals for education. Even Gutstein (2003) admits this when he says “but one cannot easily know how our 2 years together helped students develop more as agents, nor in fact, whether helping them do so will contribute to justice in society.” (p. 69) In fact, all the problems remain intact: school as an obligatory institution, in a capitalist society, with plenty of high-stakes tests, and with a mandatory curriculum that is irrelevant to students’ lives.

I am not saying that experiences like the one Gutstein developed aren’t important. They certainly were important to those people he worked with, in a particular context, and, through the dissemination of his work, will definitely inspire others to carry on initiatives for social justice in the classroom. But the particularity of the case made me more pessimistic about implementing critical mathematics education in the classroom. Not only because nothing has changed in the core difficulties pointed by Gutstein, but also because I feel that creating the idea that a critical mathematics education could be implemented in the regular school will contribute to the normalization of topics of mathematics for social justice in such a way that allows everything else (the main problems of our society) to remain the same. Assuming that a critical mathematics education is possible in school and can contribute to social transformation within our contemporary society, is taking the risk of normalizing those practices and integrating them in the school discourse, that is, as mentioned by Gutstein, the economical discourse. Like Freire (1998) said “the elites are anxious to maintain the status quo by allowing only superficial transformations designed to prevent any real change in their power of prescription” (p. 508). So we are always facing the danger of being deceived, as we think that we are struggling against oppression, when in fact we are being allowed by the dominant class to do so, just to cool down the rebellion. As I said before, the core things, like assessment and school, are here to stay.

What I want to highlight is that there are traps in trying to educate children to be participative, critical, active, socially competent. Like Freire mentions, nobody educates anybody, men are educated in communion, so there is a problem when we stipulate that education should form some kind of citizen, though we may have a view of what the right citizen is. We must fight the idea that to educate is to fill out people with something they lack: whether it is knowledge, self-esteem, skills, or criticism, activism or participation. On other hand, what should we do with the children who aren’t active, participative, critical or socially competent? This is, what do we do with the young people who don’t achieve through education that level that we all (teachers and society) desire. They will be excluded. Exclusion begins when we create those categories, those goals based on someone’s opinion of what education means, or the characteristics of the educated person. So critical mathematics education should be dealt with care when trying to stipulate goals or concerns for mathematics education in order not to get trapped in the same artifice

that leads to social exclusion and injustices, those very aspects of education that critical mathematics education criticizes.

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