

TO PARTICIPATE OR NOT TO PARTICIPATE? THAT IS NOT THE QUESTION!

Hauke Straehler-Pohl¹ and Alexandre Pais²

¹Freie Universität Berlin ²Aalborg University

We take an experience of educational failure in school mathematics to illustrate the liberal capitalist ideology at work in educational institutions. This will be done by means of confronting the official discourse, which posits inclusion and equity as fundamental goals of mathematics education, with its actualization within a secondary school, whose student-intake can be labeled as marginalised or underprivileged. What normally runs well within the official discourse, when actualized in a specific practice, often encounters a series of obstacles that end up perverting the official intention. Usually research strives for identifying such obstacles under the imperative to eliminate them. This is assumed to ensure the full actualization of the official aims. However, we are instead interested in understanding these obstacles since they stand for the symptomatic points, which allow one to grasp the ideology manifest in current educational practices.

INTRODUCTION

International organisations (e.g. OECD), professional institutions (NCTM, 2000) and researchers (see e.g. Atweh et al, 2011; Herbel-Eisenmann et al, 2012; Gellert, Jablonka & Morgan, 2010, for very recent editions and conference proceedings) have been positing mathematics education as a key element for the development of a social just and equitable society. It is assumed that a quality mathematics education will allow people to become active participants in a world where mathematics formats many of the decisions that influence our lives. As a result, the main task of mathematics education research has been the development of teaching and learning strategies that can allow a meaningful mathematics for all. The fact that failure in school mathematics persists worldwide is seen by researchers as a contingent occurrence of a system that officially aims at equity and freedom (Pais, 2012; Pais, Fernandes, Matos & Alves, 2012). As such, researchers are often interested in describing successful experiences, showing how the obstacles to the learning of mathematics can be overcome, instead of analysing episodes of failure (Gutiérrez, 2010). This propensity to report successful experiences is supported by a broader ideology that Lacan (2008) characterized as *evolutionism*: the belief in a supreme Good, in a final goal of progress which guides its course from the very beginning. In the case of mathematics education, the supreme goal is “mathematics for all”, and research is set on eliminating the obstacles standing in the way of this goal (Lundin, 2012; Pais & Valero, 2012).

In this paper we present a study of educational failure. We settle our investigation in a secondary school that can be labeled as *marginalised* or *underprivileged*, and analyse two classroom episodes that led to students’ exclusion from learning

mathematics. If we followed the evolutionistic thesis, we were expected to formulate strategies to overcome the problems that led to students' failure. These could be formulated in terms of teacher education (e.g. a different way of interacting with the students), the curriculum (e.g. more challenging tasks), or the classroom organization (e.g. project or work group instead of blackboard centred and individual work). However, we will instead analyse this classroom episode *as it is*. This is because we are not interested in providing solutions for the problems of practice, but to pinpoint the ideological injunctions at work in the way teachers and students interact in the classroom. By analysing things as they are (instead of how they should be), we seek to make visible the incongruences between the official discourse and the life experiences of students and teachers.

We will focus our analysis in the way students decide to participate or not in the activities proposed by the teachers. The administrative moral imperative that shall assure the democratic principle of equity of opportunity is that "without consideration of rank and assets of parents, the educational pathway has to stay open which *accords with his or her ability*' (Kultusministerkonferenz, 2006, p. 5; quoted in Pietsch and Stubbe, 2007, p. 428, own emphasis). The frame is set in a way that failure cannot be attributed to anything else than student's individual choice not to participate in the classroom activities. However, as we shall see, this is a false choice since participation in classroom activities also leads to failure. By analysing these cases, we are lead to conclude that current educational practices in underprivileged mathematics classrooms initiate students into patterns of decisions not to participate.

THEORETHICAL APPROACH

As a point of departure for our analysis we claim that schooling in current capitalist society *needs* failure as an integrative part of its economy (Baldino & Cabral, 2006; Bowles & Gintis, 1977; Pais, 2012). Failure in school mathematics is not an empirical phenomena that can be solved through better research and the proper crew, but a necessary feature of existing schooling. As such, it becomes paramount to report not only experiences that tell stories of success on the local level, but also episodes that evince how failure is being built at the heart of an educational system that has inclusion and democracy as its self-legitimising principle.

As a way of conceptualizing educational failure, we find support in the work of Slavoj Žižek, who, in the last two decades, has been recovering the outdated notion of *ideology* as a crucial concept with which to understand the dynamics of our current capitalist society. Ideology operates in the discrepancy between the official discourse—which exalts the supreme goals of democracy, equity and inclusion—and its actualization into what Žižek (1997, p. 93) calls a life-world context. What, at the level of the enunciated content, runs smoothly—practically nobody within mathematics education research contests the supreme goal of mathematics for all—when actualized in a specific practice (in our case, school practice) often encounters a series of obstacles which ends up perverting its official intentions. This way, the

motto “mathematics for all” functions as the necessary ideological double concealing the crude reality that - under the veil of meritocracy - mathematics is not for all.

Ideology simultaneously conceals its “motives” whilst making them actual and effective. It is in this sense that Žižek (1989, p. 34) says that ideology always appears in its sublated form, that is, its injunctions make effective what it “officially” conceals. When it is claimed that everyone should be provided with a meaningful mathematics education, this official claim conceals the obscenity of a school system that year after year throws thousands of people into the garbage bin that the school system itself erects. This happens under the official discourse of an inclusionary and democratic school. It is in this discrepancy between the official discourse and its (failed) actualization that ideology is made operational. Within the official discourse, what is *necessary* is the abstract motto of “mathematics for all”, all the exceptions to this rule (the ones who fail) being seen as contingencies. However, from the critical/dialectical discourse we are deploying here, what is *necessary* is precisely the existence of those who fail, the abstract proclamation being a purely contingent result of the frenetic activity of individuals (researchers, teachers, politicians) who believe in it. The antagonistic character of social reality – the crude reality that in order for some to succeed others have to fail – is the *necessary* real which needs to be concealed so that the illusion of social cohesion can be kept.

One of the ways of achieving the societal demand of mathematics for all is by implementing ability-streaming at the transition to secondary school. According to the official rhetoric, the stratification of streams shall allow the effective design of classes specifically for students with difficulties in mathematics (or more generally for students with difficulties with so-called abstract thinking). Apparently, students are confronted with the choice of participating or not in the official discourse, by means of active engagement in the classroom activities. However, as Žižek (2006, p. 348) puts it, “[t]his appearance of choice, however, should not deceive us: it is the mode of appearance of its very opposite: of the absence of any real choice with regard to the fundamental structure of society”. In our case, this appearance of choice to participate in classroom activities disavows the absence of any real choice regarding the possibilities these students have of pursuing a valuable education. The system initiates students to blame failure on their own choices in order to keep the appearance of a free and equal school system.

METHODOLOGICAL APPROACH

Mathematics education postulates equity as a crucial democratic value and as a final goal of schooling. This goal is understood to be achievable by some kind of evolutionary process that just demands *more* research and *more effective* research to overcome exclusion in mathematics education. Instances of exclusion are understood as dysfunctional within institutions that are supposed to promote inclusion. By locating our research in the critical research paradigm, and by focus on the *functionality* of exclusion within educational institutions, we seek to show how

instances of exclusion are functional in 'keeping the system running'. This is, as pointed out by Popkewitz (2007), a fundamental task of a critical research:

To make the naturalness of the present as strange and contingent is a political strategy of change; to make visible the internments of the commonsense of schooling is to make them contestable (p. xv).

In this article, our problem consists in analysing the functional moments in the exclusion of students from mathematics classroom in a marginalised social environment.

Our critical investigation has been initiated by the discussion of already available data from the "Emergence of disparity" project, in which one of us is engaged¹ Data-collection used videography, as this project had its main focus on the social interactions that discursively produce mathematical knowledge and consciousness. This project followed a comparative approach. Besides international comparison, the data collected in Germany included a comparison of a high-streaming and a low-streaming secondary school. In planning the study, we were aware that streaming and socio-economic status have are strongly related in the German school system. Further, the differential distribution of different forms of knowledge to different social groups was an explicit focus of the study. However, the *extreme* social marginalization that these particular learners face outside school, was not the focus of the methodology, but emerged as a focus during and through our analysis. Extensive interview-material that systematically captures students' voices on their perception of their own social exclusion and educational marginalization is therefore not available. The in-depth analysis of the videotapes from the sociological perspective of Bernstein (2000) by Straehler-Pohl (forthcoming) has given rise to the research problem we are addressing in this article. The initial framework of the project brought up the problem, but could not adequately address it. Therefore, we used a key-incident-analysis (Kroon & Sturm, 2000) as a methodology to reconstruct case studies from the available videotaped material. Key-incidents are concrete incidents in the data that researchers deliberately chose to "make explicit a theoretical 'loading'" (Erickson, 1986, p. 108). These key-incidents were selected from a data-set including videotapes of the first fourteen consecutive mathematics lessons in September 2009 at a low-streaming secondary school in Berlin, Germany. The students were in the seventh grade, in the age of twelve to fourteen. Before the summer holidays they have visited different primary schools and all have finished it with a recommendation to attend the lowest of three available ability-streams in secondary school. The school is settled in a neighbourhood that in the public discourse is often referred to as a ghetto. The students in the classroom are between the ages of twelve to fourteen. They can be considered as underprivileged given the social segregation that results from where they live, by their background as members of a cultural minority, by knowing the

¹ For more details, see Knipping, Reid, Gellert and Jablonka (2008).

instructional language only as a second language learner, and by the institutional selectivity of the German streaming school system. Notwithstanding all these difficulties, the official discourse is one of inclusion and equity, with efforts being made by the school staff in order to make mathematics meaningful and valuable for the students.

ANALYSIS - TWO CASES OF RESISTANCE

In an exemplary report on the mathematics classroom under analysis, we (Straehler-Pohl & Gellert, 2011) have described the pedagogy enacted as one that

in order not to overcharge – infantilizes students and – in order to enable classroom management – objectifies students. [...] Learning in such mathematics classrooms adds to the underprivileged conditions that these learners face. (p. 198).

Classroom interactions are set up in a way that they hardly provide opportunities to acquire mathematical knowledge. Rather, students acquire a "consciousness of one's own ignorance" of mathematics (Straehler-Pohl, forthcoming, p. 19). Even though the cognitive demands set by the teachers were excessively low, students continuously failed on these demands and seemed to have no concerns demonstrating their failure. We concluded that most of the students did not fail because of an incapability of meeting the requirements set on them. Instead, they demonstrated an awareness of the fact that participation in this kind of mathematics education won't bring them back on the road towards participation in a meritocratic society. Failing on tasks can be seen as an integral part of the local classroom culture: For the students, it ensures that they demonstrate to their peers that they do not naively believe in the fallacy of the mathematics classroom. Simultaneously, students' failure on the tasks serves to reassure the teachers that they had been "right" in the excessively low choice of cognitive demands. Thus, taking the decision to participate in the classroom activities means to take part in the construction of one's own marginalisation. It implies not to make use of the opportunity to take a decision not to participate in a senseless and discriminating activity. The local classroom culture can thus be described as a *discourse of learning not to participate*. We will now provide two examples of students who chose to resist to this discourse of learning not to participate and report on the consequences it had for them.

The case of Melinda

Melinda's resistance is characterized by a total refusal of the teachers' authority (most of the times two teachers are present in class). In the beginning of the first math class in this new school, each of the students was required to complete the sentence, "I am feeling ____, because ____". Though just having had rare chances to get to know the second teacher, Melinda articulated the following: "I am feeling bad because today we have class with this teacher [pointing at the second teacher]". During the course of the mathematical activity (performing "887-339" at the blackboard), Melinda spent

quite some time talking to Mariella, her classmate, in a foreign language, which was mostly ignored by the teacher, though two times the teacher spoke out an admonishment in a rather calm voice. When Mariella was demanded to finish the task at the blackboard, Melinda shouted at her: "what are you doing bitch?". Though understandable quite loud and clear, this interruption remained unsanctioned. However, a few minutes later, Melinda "collected" (word of the teacher) her third calmly spoken admonishment and was thrown out of the classroom for the rest of the day. The following day, math class took a similar course, resulting in Melinda being thrown out. The third day, Melinda did not appear anymore. She had been expelled from school. As she was still in the age of compulsory education, she would have been directed towards another low-streaming school in the neighbourhood.

The teacher conceived Melissa's failure as her own personal choice. From teacher's and Melissa's classmates' perspective, she had the opportunity to choose to participate in the classroom activities, but refused to do so. But is this truly a choice of participation?

The case of Hatice

On the third day Hatice, who already was known as a truant to the teachers, appeared in class for the first time. In class, Hatice was quietly doing the calculations demanded of her by the work sheet (such as 9700-300). Hatice was among three students who succeeded in finishing their work sheets. The next time Hatice appeared in class, she completed three work sheets in twenty minutes including 186 simple multiplication exercises. The fourth sheet - that was given to Hatice "as a repetition" (words of the teacher) - claims on top of the page that, "it is now getting harder and harder", and concludes at the bottom that, "if you solve all the problems

Jetzt wird es immer schwieriger- Zahlenraum bis 10.000
Achte auf die Übergänge!

[It is getting harder and harder - number range up to 10,000. Respect the transitions!]

1. 4509 + 2 =	3490 + 20 =	8970 + 40 =					
3804 + 7 =	7180 + 70 =	1990 + 50 =					
7205 + 9 =	2570 + 90 =	5980 + 60 =					
2. 3400 + 760 =	2780 + 45 =	3247 + 80 =					
8900 + 480 =	1460 + 52 =	1199 + 20 =					
7600 + 690 =	9690 + 69 =	7881 + 40 =					
3. 2800 + 754 =	7997 + 4 =	5600 + 2800 =					
6700 + 986 =	4995 + 9 =	4800 + 2400 =					
8900 + 211 =	1999 + 8 =	1900 + 2700 =					
4. 5000 - 50 =	3200 - 60 =	4200 - 400 =					
8000 - 80 =	6100 - 90 =	7300 - 900 =					
2000 - 10 =	9300 - 70 =	8100 - 600 =					
5. 8000 - 8 =	5200 - 7 =	2482 - 6 =					
2000 - 4 =	1700 - 4 =	8113 - 5 =					
6000 - 5 =	9800 - 1 =	3685 - 9 =					
6. 3200 - 23 =	8000 - 45 =	9010 - 40 =					
4400 - 98 =	3000 - 21 =	6020 - 80 =					
7900 - 11 =	5000 - 83 =	4030 - 60 =					
7. Schreibe die Aufgaben als Päckchen in dein Heft und rechne sie aus!							
[7. Write all the exercises in the form of packages and compute them!]							
4000	4500	1740	2375	+	2	20	200
6000	5800	7690	9764	-	3	30	300
Wenn du alle Aufgaben richtig hast -							
[When you have all the tasks correctly -							
dann bist du ein Rechenkönig.							
[then you are the king of computations.]							

Fig. 1: Work-sheet with translations in square-brackets.

correctly, you are the king of computations". When Hatice came back to her seat and started filling in the solutions on the work sheet (see Fig. 1), the second teacher asked her to "read the instructions first". However, there were no instructions for the first 54 exercises. Ignoring Hatice's confusion, the teacher commanded, "read!". It was not before task no. 7, that there was an instruction.

Hatice did not show up anymore during the following lessons.

Discussion of the two cases

The case of Melinda seems to be a classical case of intentional resistance (Lanas & Corbett, 2011). She makes very clear that she is not about to acknowledge the teachers' authority and thus is not about to participate in any of the activities imposed by the teacher. Instead she uses them to stage her resistance. The teachers on the other side do not use their authority to react oppressively. They just rarely raise their voices and never shout, even though at times this would appear quite comprehensible. Admonishments were not characterised explicitly by threats of punishment, but by some sort of countdown leading towards physical exclusion from the class. The message is clear: Melinda's resistance is her own choice; she gets the opportunity to decide to participate in the classroom activity herself. Thus, Melinda is agentive in her own exclusion. Apparently, she took the opportunity to decide not to participate in the meaningless classroom activity, thus it seems as if she herself was responsible for the consequences: i.e. expulsion from the school.

The case of Hatice (when being present) is quite contrary. By apparently taking the decision to participate in the activity seriously and with dedication, she goes through it so fast, that the meaninglessness of the whole activity becomes visible for all those participating. However, she seems to be participating in a different activity than her classmates: It seems as if struggling with the work sheet is an integral part of the game that the teachers and the students are playing. Thus, just finishing it, as if it was no demand at all but just a practice of mechanical routines posits her outside the activity. Thus, Hatice also makes use of the opportunity to decide not to participate in the classroom activity. It seems as if this does not remain unnoticed by the second teacher: instead of complimenting her for carrying out (correctly) three times as much calculations as her peers, she *invents* some illusive instructions to slow down Hatice. It seems as if the teacher signals her that she should rather participate in playing the game in the way her peers do. The message communicated to Hatice is that the way she participates is not considered to be legitimate. As a matter of course, Hatice's succeeding absenteeism is not taken as a challenge to question the organisation of classroom activities. Instead it is constructed as a matter of "truancy", as if it was a personal attribute.

DISCUSSION AND FINAL REMARKS

Apparently the "choice" that students face regarding school mathematics is one between participating in the classroom activities and refusal to participate. However, the argument of this paper shows that in certain mathematics classes, the choice is not an "individual" choice between participating and not participating, but between two modes of "non-participation". On the one hand, participating in classroom activities that contribute to an understanding of one's own ignorance of mathematics. This implies participating in one's own stigmatization and one's own exclusion from access to socially valued vocational and educational opportunities. On the other hand,

the alternative is a straightforward non-participation by abandonment or exclusion from the school system. Regarding the first option, although the majority of students explicitly participate in the classroom activities, the narrow-mindedly mechanical and arbitrary activities guarantee that the outcomes of this learning will not provide students the right skills and knowledge to open up further educational or vocational options. Thus, students' decisions to participate in classroom activities results in their non-participation in further education, in very much the same way as the direct decision not to participate. As such, the choice is a false choice, since in either ways students are paving the way of exclusion from a consensually valued form of life. At best, students can postpone the materialisation of an already determined exclusion.

We claim that this report reveals that we do risk a lot when we keep on considering educational failure as the unpleasant obstacle on the didactic road towards salvation. While the particular instances reported here make it easy to blame the teacher (and her pedagogical actions), we want to stress that it is not only the teacher, who *organizes* meaningless activities, but also the majority of students who actively *participate* in the *game of failure*, however demandless and meaningless the activities are. Together, the teachers and the students continue a system, where failure *is* a necessity and a predictable result of the process. An extensive interview with the teacher indicates that the reasons neither lie in the teacher's individual pedagogical ineptitude nor in a lack of professionalism; it is rather, the result of long years of experience in one and the same school that constantly and apparently inevitably produces failure. The reasons also neither lie in the students' cognitive inability nor in their bad behaviour; it is rather, a result of six years of school, showing them that *they are not the ones who profit from making use of their agency*. Thus, instead of choosing the path of resistance in claiming their right for a meaningful, demanding and empowering education, the students prefer to play the game of failure. Thus, the *necessity* of educational failure is a *result*, namely a result of the systematic organization of segregation for the supposed sake of the objects of segregation. To return necessity into a contingency and thus, as a changeable educational phenomenon, we would need to deconstruct the naturalness of segregation.

A meritocratic legitimation of the school system presupposes that schools are places where equal students meet freely, and where some kind of “invisible hand” guarantees that the competition of individuals' egotisms works for the common good. What such an approach makes invisible is that such merit is possible only by the demerit of others, i.e., the notion of personal merit is only possible as long as others fail. This is the liberal capitalist ideology at work, by means of making individuals recognize their choices as their own, as free choices that they took – especially when these choices imply failure.² Finally, a failed student is robbed of the ownership of all

² People accept this inequality because the dominant ideology conceives them as self-conscious subjects (Althusser, 2000). That is, the worker who works all his life and ends up with nothing sees his misfortune as a natural consequence of the way economical relations are built.

the work s/he produced: All the time he spent in school, is not his or her own, since he will not receive the diploma at the end of the year. However, without producing all this work, it would be impossible for him or her to keep living within the system.³ Thus, it becomes an imperative that individuals must realise failure as the result of a wealth competition among equals, and repress the traumatic truth that they fail so that others can succeed. Schools need this subversive supplement in order to retain their indispensable role in maintaining our democratic and inclusive society. In order for school to be the most important ideological apparatus, to function as a credit system (Vinner, 1997), it is not productive for it to be presented as an exclusionary institution. That would cause criticism from the whole of society, and would be unbearable from an educational or political point of view. In order to perform well in the role of credit systems, schools need to be presented as inclusionary and emancipatory places, places where phenomena such as exclusion and failure are seen not as necessary parts of the same system which purports to be trying to abolish them, but as contingent problems, malfunctions of an otherwise good system.

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³ We should note here that school represents one of several possible systems. It represents the dominant system within our society and the fact that school is compulsory for everyone ensures that no one remains unaffected by the dominance of this system. This shall not deny that living outside the system is in fact possible and may even include opportunities to accumulate capital. However, accumulation of capital outside the dominant system not seldom implies a radical break with official ethics (e.g. through becoming criminal).

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