



Difference, Inclusion And Mathematics Education: Deconstructing Notions Of Normality

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The Sixth International Seminar of Research in Mathematics Education will be the first in which thirteen national working groups of the Brazilian Society of Mathematics Education are represented. GT 13, *Difference, Inclusion and Mathematics Education*, was officially created on the 13th of October of 2013 and it seems both apt and appropriate that in the event during which its first working sessions will occur, the group is also being launched onto the international scene during the round-table discussion.

The proposal for the thirteenth working group emerged alongside debates concerning the structuring of an inclusive education system and the Brazilian educational policies which, like those of other countries who have signed the United Nations Convention on the Rights of People with Disabilities (2006), privilege mainstream schools as the preferred institutions for including all students, the disabled and the non-disabled. The proposal for the creation of the new working group stressed how the number of disabled students present in the classes of mainstream schools has grown considerably this century, bringing new challenges to school communities and consequently to research in Education in general. It also pointed to how, as these challenges have begun to be addressed in different ways by researchers within the Brazilian mathematics education community across the country, a new axis of research has been formed.

The document proposing the creation of a new national working group was developed in the first instance by its twenty-three signatories, all of whom were working with questions associated with the mathematics learning processes of students who would be considered as the target population of special education within an inclusive perspective (defined in current government policies as composed of students from three groups: students with disabilities, students with pervasive development disorders and gifted students). Yet, as a group we chose a name that goes beyond attending to shifting definitions of what (or who) constitutes the target population of Special Education.

Perhaps, to borrow a term from Skosmose's contribution to this round-table debate, this choice reflects how Special Education too is a contested concept. The labelling of students as members of target groups of special education has a controversial and unstable history, both nationally and internationally.

Reflecting on Special Education and the teaching of mathematics in the US, for example, Borgioli (2008) has argued that labelling a learner as in need of special (mathematics) education has tended to involve determining “normal” or “ideal” achievement, and positioning those who deviate from this norm as problematic and in need of remediation. She cautions against viewing learners’ relationships with mathematics as defined by “their internal *disability* rather than to factors related to the learning context and environment, such as a mismatch between the learner and the task, conceptually fragile curriculum and/or instruction, inadequate social and emotional support structures, etc.” (p.139). Gervasoni and Lindenskov (2011) also indicate how discourses about disabled mathematics learners in the research literature as a whole have been infused with narratives underestimating their mathematics learning potential – a point also made in the contribution by Figueiras to this round table discussion (she also offers the compelling alternative of incorporating the combination of resources used by disabled learners as they act and reason mathematical into mainstream settings).

Healy and Powell (2013) consider the consequences of labelling student in relation to problematic measures of what is (in a particular place in history, culture and location) deemed to be “normal” achievement and the process of “othering,” that this labelling implies. They believe that the very framing of “students who differ from the socially and politically defined norms as outsiders”, perpetuates inequitable practices and legitimizes exclusion. They go on to point to how, in many countries, including Brazil, concerns have been raised about the disproportionate representation of ethnic minority students, indigenous students groups and those living in poverty in Special Education programs (Artiles, Klingner & Tate, 2006; Dyson & Gallannaugh, 2008; Mantoan, 2009; McDermott, 1993).

The move to consider Special Education within an inclusive perspective might be seen as an important step in challenging such practices, but it is still important that the issue is not brushed aside. Examining the ways in which the curriculum and assessment structures, as well as the culture and organization of schools constrain the achievement of particular groups of students, at times even pathologizing their bodies and behaviours, need to be further studied, especially in relation to the labeling of underachievement (O'Connor & DeLuca Fernandez, 2006).

Since VI SIPEM, and this round table debate, will occur whilst Brazil discusses the adoption of a Common National Curriculum base, it is perhaps timely to exemplify this brief consideration of how the construction of normality disables certain groups of learners by

considering the mathematics curriculum, a central structure around which mathematical activity in school is visioned, sanctioned and measured. To this end, I offer an analogy using the construction of building as a metaphor for the constructing of curriculum documents.

We might argue that in the past, buildings tended to be erected with the construct of an average person in mind. Average people do not exist, since an average is a mathematical construct whereas a person is not. Worse still, “average” perhaps easily becomes confounded with “ideal” as it finds its way into the construction of normality. It is only relatively recently that buildings are being constructed with the diversity of users in mind. It is only relatively recently that the bathrooms in airports, for example, include facilities for wheelchair users and for people of small stature. It is only relatively recently that tactile paving, ramps and lifts, door and corridor measures appropriate for the mobility-impaired are being included as essential elements in the construction of public amenities. But this is happening now. What is more, including these elements in the constructions of new buildings is more efficient and cheaper than adapting existing buildings to be more accessible.

Can we learn from this as we discuss the construction of a new national curriculum, a new mathematics curriculum? Will we begin the process of designing the curriculum by considering all the learners whose performances will be assessed in relation to its demands? Will we stop thinking of an average student and start thinking of students who really exist? Will we accept that it might be more efficient, even more economical, to build an inclusive school mathematics, a school mathematics built from the premise that the way that we learn may vary according to our physical, social, linguistic and cultural experiences. Will we design a school mathematics that learners will choose to include themselves in?

I hope that this analogy will work in communicating my personal view of the focus of GT 13, and to stress how the considerations of the group, which began in the context of learners with disabilities, address issues that influence all learners, the non-disabled alongside the disabled. Even more, I hope that the work of GT 13 will help us to stop disabling mathematics learners.

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