

Erasing queer subjects, constructing disabled subjects: towards a queering of mathematics disabilities

James Sheldon

Graduate Student, San Francisco State University

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Please direct inquiries to the author at jsheldon@jamessheldon.com

Abstract:

This paper explores how the ideology of compulsory able-bodiedness functions in special education. The apparatus of special education, this paper contends, applies a bureaucratic gaze to students from historically oppressed groups (e.g. students of color and working class students) and, finding them deficient, interpellates them as disabled. They are compelled by the logic of rehabilitation to submit to interventions designed to make them non-disabled, denied any ability to articulate their own needs and goals, and are denied any kind of collective identity or ability to articulate a confrontational position.

Once trapped in this logic of rehabilitation, the paper observes, students "with mathematics disabilities" are denied the opportunity to engage in mathematical problem solving and conversation and instead are relegated to performing rote operations, the very thing that they struggle with. These rote operations are not really prerequisite skills for problem solving, but are often seen as such by special educators. When the students are allowed to participate in problem solving, the paper argues, they are basically given the methods and answers and don't get to apply their own creativity and reasoning.

This paper offers an alternative queer reading of mathematics disability, one that accounts for radical difference. It concludes by offering a vision of a mathematics that takes all students' ideas seriously and of a special education apparatus that accounts for and celebrates radical difference.

Mathematics, Kai Rands argues, is the subject that “dare not speak its name” in queer studies. In queer studies, she said, we speak of reading, ‘riting, and pretty much anything but ‘rithmetic. In disability studies it is a similar situation – we rarely talk about mathematics and also rarely talk about queers. And mathematics education may talk about “equity,” but almost never about disability.

This means that mathematics disability is left almost entirely to the special educators, who conceptualize the problem as a series of skill deficits that need to be remediated. Henri-Jacques Stiker discussed historical rehabilitation movements and how they sought to “cause the disabled to disappear and with them all that is lacking” (p. 128, cited in McRuer p. 129)... to make them just like everyone else. Ellen Bratlinger argued that special education is based on a ludicrous premise, “that all children should be at least average” (2004, p. 491) and that anyone who isn’t at least average gets labeled “special needs” or “at-risk”. Who decides if a child is at an average level? Certainly not the child, nor even their parents. As Bratlinger reminded us, “Children and parents do not have a choice about whether to be ‘needy’ or ‘risky’, just as they were not consulted about the desirability and personal suitability of handicap, retarded, or disturbed– and before that, feebleminded, idiot, imbecile, moron, or insane” (p. 490).

The apparatus of special education (from the legislature to the administrative bureaucracies down to the principals and teachers) interpellates these children as a particular kind of subject, a disabled subject. That is, the apparatus tells the children they are disabled, and the kids look at themselves and see in themselves what they are told, and thus became what they were told they are. Louis Althusser (1971) described this process as “hailing”; he used the example of how a policeman sees someone he thinks is a criminal and shouts out “Hey You!” and in that moment the person realizes he is a criminal and turns around, both actively accepting that identity but also having no choice in doing so. In that moment, the criminal is constructed as a particular kind of a subject. In this case, the children are interpellated as disabled, and come to recognize themselves as such in the process of negotiating that identity.

I once showed up to a job site as a substitute paraprofessional and was told to ride a bus home with some students. At the time, I saw them as normal, and treated them as such. If anything, I was reading the kids as queer – they existed in an almost entirely homosocial environment, and their masculinity (in its overdone excess) crossed the line into queer performativity rather than a more relaxed, nonchalant heterosexual masculinity. Although I had no concrete evidence either way, several incidents in which they insisted on privacy from me and the female staff led me to believe that perhaps some kind of sexual activity (or something equally forbidden, such as drugs, both associated with urban black cultures and urban gay cultures) was going on, which played into my queer reading of the students.

I was not surprised when they told me these kids were different after a few weeks – I mean, I already suspected this. But rather than the difference being constituted as queer, as I had presumed, they instead told me that they had an “emotional disturbance” and that as a result they needed firm limits, restricted privileges, and all sorts of types of special rewards and punishments that are reserved

for those with an “emotional disturbance.” Later, I found out that the students were in what is called an ED/LD class, meaning that they have both emotional disturbance and a learning disability.

So now there’s two labels, neither of which were actually useful to me in the process of working with the students. On the other hand, labeling the students justified the employment of a vast bureaucracy of “specialists” to treat the children – psychologists to do the disability evaluations, resource teachers to test achievement, social workers to correct family problems, teachers and teachers’ aides to instruct the special classes, psychotherapists to treat the emotional difficulties, content specialists to coordinate the program, and various administrative personnel on the district, state, and federal level to ensure legal compliance. (Not to mention my own job as an aide!) The students, meanwhile, are trapped in these special classes. Ironically, as Bratlinger reminded us, students who fail to “catch up” (or behave appropriately, I might add) are given stigmatizing labels and shunted off to special classes (p. 492) where they, in theory, will be able to get back “up to grade level” but that rarely, if ever, happens in practice. Looking at this situation from the lens of queer, on the other hand, would enable us to really get at the key issue of difference, and start to make sense of what it means to be deviant from the “norm” in the way that disability doesn’t really even begin to address.

When we’re stuck, however, in the disability paradigm, the special education apparatus has a clear and definite process by which a student is made into a “student with a disability,” as D Kim Reid and Jan Weatherly Valle (2004) described. It starts with teachers setting grade level standards, and when a student consistently fails to achieve these objectives, the school staff start a process that makes “the child the object of intense observation and documentation, a process reserved only for children who perform outside of the anticipated range for response but for whose capacity for learning is suspected to be normal” (p. 469). Normal as in statistical average, but also normal in the sense of normalcy, the way that everyone ought to be.

The problem is located NOT within the educational environment or with society or even with anything teachers are doing ... the problem is, from the point of view of the school staff, within the individual child (Reid and Valle, p. 469). But if we turned a pathologizing and deficit-centered eye that intensively onto almost any child, we would certainly find them deficient. A friend reading a draft of this paper asks, “which children is this eye turned on in the first place?” Well, of course, it’s the children that aren’t from a straight, white, upper-class background. I once taught a middle school student (who was a person of color) in summer school who was friendly and would excitedly greet anyone that came into the room. One day I decided to read his IEP, and there was a long section on his “inappropriate initiation of communication.” Excitedly greeting people when they come into the room is now a problem that needs to be fixed, instead of a normal difference in human behavior. The kid wasn’t white and was from a lower class background. We might even choose to read this kid as queer – in his final art project of the semester he did a collage that included a guy holding a “legalize gay” sign and also included the gay icon Spongebob. So a kid of color, lower-class, and queer ... now has a deficit where before none existed. As Linton (1998) said, “we are deficient in language to describe it [difference] in any other way than as a ‘problem’” (p.141, in Reid and Valle, p. 469) ... especially when kids come from marginalized groups. Linton, though, forgets that we do have this language, the language of queer theory, a language that describes difference without it being a deficit.

When the apparatus of special education has decided to put a student under scrutiny, there are certain “scientific” tests that can be used in order to find their deficits. The Woodcock-Johnson is one of the two main instruments meant to gauge academic achievement. In the language of special education, there are two types of things a diagnostic test can measure: aptitude, which is a child’s potential ability and achievement, which is the child’s actual level of academic skill. A discrepancy between the child’s ability and achievement is one of the main criteria for the diagnosis of a learning disability.

When it comes to assessing a child’s reading skills, Woodcock-Johnson measures some important prerequisite skills to being able to understand written language: letter-word identification, oral comprehension, sound awareness, oral vocabulary, and reading vocabulary. For mathematics, however, it measures rote arithmetic computation, calculation speed, word problems, and some very basic factual questions about mathematics. The analogy between mathematics and reading falls apart here, though, as these things that are tested are not prerequisite skills to being able to do mathematics. (An actual prerequisite skill would be something more like number sense or one-to-one correspondence).

One college mathematics teacher of mine struggled with basic arithmetic, to the point where most handouts we were given had arithmetic errors in them. But he had a doctorate in mathematics and had published numerous papers on advanced mathematics. This might come as a shock to most elementary school teachers, but mathematicians are allowed to use calculators. Seeing these supposed deficits in our students’ basic skills, though, we pull them out of the general education mathematics instruction in order to give them specialized instruction (Gina Borgioli, p. 140) in basic procedures while the rest of the class gets to do real mathematics, a privilege you apparently have to earn by showing your fluency in rote operations. As John Woodward (2006) reminded us, “Far too often students with LD and those in remedial classrooms spend their time completing worksheets or responding to low-level questions in a direct instruction context” (p.47). These rote operations are not actually a prerequisite, but special educators **think** they are and act accordingly. And these procedures are taught without giving students any background on the historical nature of the algorithms – the strong mathematical histories of people of color are erased and these algorithms are presented entirely as a European invention in what little history is taught– and alternative methods and number systems that weren’t adopted by the Europeans are totally left out. So students are getting exactly ONE algorithm for each procedure – often not the one that makes the most sense conceptually, or the one most used around the world, but rather just the one that is standard in American culture.

So suppose instead we take the students that we’ve labeled as having disabilities and decide to incorporate them into the general education curriculum. This seems like a wonderful idea – now they’re going to get the opportunity to solve complex problems, to make arguments, and to work in groups. But, wait, aren’t these students supposed to be learning disabled? They couldn’t possibly handle this kind of work. Not surprisingly, according to the literature on special education students and problem solving, these students “typically have deficits in attention, memory, background knowledge, vocabulary, language processes, strategy knowledge, visual-spatial processing, and self-regulation” (Jitendra and Star, 2011, p.13). These deficits, reform educators claim, lead to struggling with

“generalization, applying metacognitive strategies, discriminating key points from irrelevant information, and solving multistep problems” (Cole and Wasburn-Moses, 2010, p. 15). These reform special educators have solutions for this, but many of them fail to get at the very issues they hope to address.

These students, now labeled disabled, are expected to integrate “into society as it is” (McRuer, p. 129), so instead of altering the nature of the curriculum in order to allow special education students to access it, special educators respond by creating programs and rather contrived strategies to teach “problem solving” to our students with “disabilities.” One of the strategies commonly recommended in the literature is schema-based instruction, where students are taught to “go beyond surface features of word problems and analyze underlying mathematical relationships that are crucial to successful problem solving” (Jitendra and Star, 2011, p. 14). A four part strategy is given for implementing this method: “FOPS: F- Find the problem type, O-organize the information in the problem using the diagram, P-Plan to solve the problem, S- Solve the problem” (p. 16). In schema based-instruction, students should be able to figure out which time of problem they’re working on and then quickly and efficiently find the answer.

But, wait a second. Problem solving in mathematics is supposed to be about struggling with an unfamiliar problem and working with your classmates to devise (and defend) one’s solution. In day number one of the math methods course that I took, the teacher said with great emphasis, a problem is not an exercise. A problem is something that you **don’t** already know how to do and need to struggle with and figure out. Rather than students learning to struggle with unfamiliar problems, we’ve now handed them a series of algorithms designed to be used to “solve problems.” In other words, we give them a procedure and they apply it by rote. That’s not problem solving, and we’ve just taken away the ability of our special education students to do actual mathematics. And what happens when they encounter a problem that doesn’t fit one of those categories? I guess they just sit there until the teacher shows them how to do it.

Students are supposed to passively await the special educator’s solution to their problems, both in terms of their “disability” and in terms of solving mathematical problems. Above all, Stiker (and McRuer) argued, in models of rehabilitation “disability cannot be a confrontational position” (Stiker, p. 137 in McRuer, p. 130). Because the children have been constructed as disabled subjects, they are expected to passively accept the logic of rehabilitation. Bratlinger reminded us that services are “delivered” to students whether or not they want them (p. 491). I remember one day I was working with a student who was labeled as having a learning disability in reading and an emotional disturbance. After the third time reading through the same passage to develop his oral fluency, he (not surprisingly!) said that he was bored. It doesn’t matter, though, whether he wants to read. He has a “deficiency” in reading (as determined by professionals) and so it was my job to treat him as prescribed. He wasn’t supposed to speak up and articulate preferences. As Robert McRuer contended, “Rehab demands compliance or— more properly— makes noncompliance unthinkable” (p. 130). We as educators think we know what’s best for kids with disabilities, and their own self-knowledge or goals are irrelevant.

And in rehabilitation logics, there is not supposed to be a “disabled community.” So we can throw aside Charlton (2000)’s insistence on “nothing about us without us” because there is no “us” to

deal with – just individuals who are in need of correction and fixing. We write papers on the plight of the student with a disability, but, as Reid and Valle pointed out, we erase teachers and researchers with disabilities from the discourse entirely. Reid and Valle ask asked, “What questions might researchers who grew up labeled with LD pursue? How might those questions differ from those that are now being addressed? Do teachers identified as having LD teach differently? How would they reorganize schools if they were given the liberty to do so?” (p. 472).

Students identified as having disabilities are also almost universally excluded from research on other topics, similar to how LGBTQ students are almost universally left out any research not specifically about them (Sheldon, 2010). What this means is that studies on mathematics are taken to be about able-bodied students, a sort of automatic assumption that exists **whenever** difference is not marked. As McRuer reminded us, “Able-bodiedness, even more than heterosexuality, still largely masquerades as a nonidentity, as the natural order of things” (p. 18). And when research is specifically about “students with disabilities” it ignores dimensions such as race, class, gender, or sexual orientation, “randomiz[ing] away or otherwise ignoring personal identity factors” (Reid and Valle, 2004, p. 473). Difference is erased from our society, our classroom, and even our research.

Returning to the kids I’ve worked with again – the overenthusiastic communicator middle school student, the black hypermasculine elementary school students... we as educators are all too quick to label them “autistic” or “learning disabled” or “emotionally disturbed” but highly averse to reading them “queer.” Absent an approach that can critically analyze difference, the students strengths get ignored while their pathologies are highlighted. Because of being in a marginalized group, they are put under such a strong lens that almost anyone subjected to it would be found to have a disability. They’re denied the ability to have their own preferences or a say in their own “rehabilitation” and are put under a corrective regime that disciplines them into the way that we think they ought to behave... white, upper-class, heterosexual behavior. And then, even though every one of these kids carries a calculator on a cell phone at all times, we pull them out of math class and make them do basic math algorithms (without understanding) over and over again... while preventing them from getting to solve actual and interesting mathematical problems, something that doesn’t require drill and kill style procedural skills as a prerequisite.

In order to insure access to the general education mathematics classroom, we are first going to have to look at how real problem solving is uncomfortable and messy. Woodward observed that many students have a “mistaken belief that all math problems can (and should) be answered in five minutes or less.” My fear is that many teachers feel that way as well, and as a consequence their students miss out on working on problems that are actually challenging and have significant mathematical content. He observes that instead, students need to learn how to participate in mathematical discussions and that teachers need to “create a working community where students felt comfortable sharing their ideas with others in a discussion... given how often these students opt out of whole-class discussions” (p. 45). Teachers can “scaffold student responses [and]... revoice student comments, and in doing so insert mathematical vocabulary into the discussion” (p. 45). This requires that we have a belief in student’s **abilities** rather than in their **disability**, and to trust that they will have something useful to contribute to a mathematical discussion.

A friend reading this paper asks at this point if I'm saying that we must always include students in the general education classroom. I'm saying something perhaps even more radical here, that no matter where students are placed, they need to be engaging in mathematical conversations and problem-solving. The general education curriculum needs to be altered to be accessible to ALL students, special educators and general educators need to be trained together in their credential programs, and all students should be engaging in mathematical conversations and problem-solving no matter where they are placed.

Furthermore, I want to take things even further that simple pedagogical and curricular change.. I'm not arguing for the apparatus of special education to always place students in general education regardless of their needs. Rather, I want to rethink the entire paradigm of the apparatus through the lens of radical difference. I want to rethink the notion that we need intense scrutiny on students of color and working class students to see if they have a "disability." I want to rethink the paradigm of looking for "deficits" and start looking for strengths. I want difference to be something that's okay to have in the classroom, and for students to be able to articulate their own goals and needs in the classroom.

Queering mathematics disability means an acceptance and validation of difference rather than attempting to erase it. It means looking at how the special education apparatuses construct a student's disability through endless observation, documentation, and analysis. It means taking what these students say seriously, both in terms of how they'd like to learn but also in terms of their contributions to mathematical discussions. And it means adjusting the classroom and the larger society in order to accommodate those who have difference, rather than attempting to "fix" the individual student.

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