



**Address to the National Mathematics Advisory Panel
Made by Janie Zimmer
Speaking on behalf of NCSM,
Leaders in Mathematics Education
April 20, 2007**

Honorable Members of the National Mathematics Advisory Panel: Thank you for the opportunity to speak to you today. I am Janie Zimmer from Research-Based Education, speaking on behalf of the National Council of Supervisors in Mathematics or NCSM, an organization of leaders in mathematics education. I serve on the NCSM Board.

First of all, we would like to tell you how much we appreciate the very important work that you have been doing on this Mathematics Advisory Panel. We realize how difficult it is, and we are very hopeful that your report will give us much information and direction.

This morning I would like to again bring before you an issue that is critical in mathematics education – an issue that, on behalf of NCSM, I addressed with you in June of 2006 in North Carolina. That critical issue is EQUITY – the opportunity for and the expectation that every child will be successful in mathematics and will have opportunities to reach high levels of excellent mathematics content.

Schools and teachers do have this expectation for a lot of our children; and we think that we have this belief for all children when we profess to permit *all* children into high level classes – beginning with Algebra I– *if* they are prepared and ready to do that rigorous work. And with every good intention, we continue to compassionately profess. . . **IF** *they are ready to do that rigorous work*. . . because we want every child to be successful, i.e. to get good grades. In the meantime we continue to sort and select which students will go into which high level classes and which students will go into the low-level or remedial class or Algebra I-A/B classes.

In the *Principles and Standards for School Mathematics* (PSSM), NCTM has an Equity Principle that states:

All students . . . must have opportunities to study—and support to learn—mathematics. Equity does not mean that every student should receive identical instruction; instead, it demands that reasonable and appropriate accommodations be made as needed to promote access and attainment for all students.

In many schools, educators continue to create classes into which they place students according to their performance on state assessments. Moreso, in today's NCLB culture, with the requirement to disaggregate data, we see schools create inclusion classes that contain both the general education students and the special needs students, frequently

without support. But does that act in itself create equity? In the words of a Pennsylvania teacher who is continuing her education at Penn State University:

“I expect very different things from this (low level or inclusion) class than I do from other classes. IEPs send the message that a student does not have to perform at the same accuracy rate as my other students to receive the same grade – isn’t that holding a different expectation? . . . what I am communicating is that some of my students are not “smart” enough to do the same high-level work . . .”

Yet *how* are students who are allowed to enter the ninth grade with fourth-grade mathematics skills able to do the ninth-grade, high-level algebra; *how* are they able to do the same high level work of an on-grade-level student who is entering that algebra class.

There are 14 classifications of disabilities for special education students – and out of the 14, only one is mental retardation or low IQ. From very early grades, when we sort and select, where is our belief that all children can learn high levels of mathematics?

A school district of about 50,000 students in Maryland has grappled with this issue. The system started moving into inclusion classes in the early ‘90s. Today, all students in the middle school are placed into on-grade level classes, with added support for struggling students. In all 12 of their high schools, all incoming students take Algebra I as a minimal class. Students with IEPs and 504 plans are included in these regular classes. In addition, high schools provide an extra support class (Algebra Seminar) as part of the schedule of students whom they deem in need of extra help. These classes are capped at 20 students and assigned two teachers – a mathematics-certified teacher and a special education teacher – making the student/teacher ratio to be 10 to 1, and they are co-taught by both teachers. An observer walking in would most likely not be able to tell which is the special educator, and which is the general ed mathematics teacher.

They have had much success with this program. All 12 high schools in the district achieved AYP in mathematics for their general population and also for all of their disaggregated populations. Overall in the district, the special education students of the extra Algebra Seminar class had a pass rate on the state Algebra/Data Analysis Assessment that was 17% higher than the general population of the Algebra classes – that is, this group of special education students actually outperformed the other students! In addition, special education students who were in the extra Algebra Seminar class had a pass rate that greatly exceeded the pass rate of peer special education students who had not been placed in this extra Algebra Seminar class – by 36% in one school, and by 33%, 27%, 25%, and 21% in other similar schools.

As we look throughout the country, we see other successful programs in place.

Most special education students are not intellectually challenged, but they are challenged in many other ways. Equity is on the plate of most mathematics educators, yet they need to grow and expand their understanding of the deep implications for this principle.

We realize that equity, in itself, is not the mission of this panel; yet equity is a big part of your charge. When you were placed on this panel, you were charged with making recommendations based on the best available scientific evidence, on “the processes by which students of various abilities and backgrounds learn mathematics;” and “on instructional practices, programs, and materials that are effective for improving mathematics learning.” Equity, in itself is not your charge, but it is an enormous part of the charge that you have been given. We ask that you take to heart our information and address equity in every facet of your work – and equity not only for students with special needs, but also for students who are native speakers of other languages, who are economically challenged, who have families unable to provide support, who seem unmotivated, or who in some other way do not fit into the norm.

As a panel you have a critical charge to set a direction and to make recommendations that will make sure that every child in America is achieving in mathematics and ready to be successful in Algebra. NCSM asks that you consider the content of this address, and invites you to call upon us to help inform your work or to provide support in any way we can.

Again, thank you for the opportunity to address this Panel.