# Inclusion in an Era of Accountability: A Framework for Differentiating Instruction in Urban Standards-Based Classrooms

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*In our current climate of standards-based reform, efforts abound to have all students reach the same goals. At the same time, other educational reforms, such as inclusion, are creating increasingly diverse populations of students in general education classrooms. Consequently, teachers often view inclusion and standards-based reform as incompatible ideas. These tensions can be exacerbated in urban districts, where educators often find the need to make greater gains with fewer resources. This paper describes a professional development sequence found useful in helping urban teachers reconcile two divergent educational initiatives—standards-based reform and inclusion.*

With the passage of the No Child Left Behind legislation, there has been increasing emphasis on the use of large-scale tests to monitor students' progress toward meeting educational standards and to hold school districts accountable for this progress. While the standards movement is felt across education as a whole, it is often felt with particular force in urban districts, where accountability test scores typically lag behind national averages, and where the resources to assist in closing these gaps are generally scarce (Council of Great City Schools, 2005). At the same time as efforts abound to have all students reach the same goals, other educational reforms, such as inclusion, are creating increasingly diverse populations of students in general education classrooms. Not only must general education students meet these rigorous goals, but most special education learners will be held to the same goals as well. These goals are reflected in the standards-based IEPs currently used in special education. State and national mandates to meet specific grade-level standards for all students places tremendous pressure on both general and special education teachers. As stated by Roach, Salisbury, and McGregor, general education teachers are likely to view inclusion and standards-based reform as "competing rather than complementary agendas" (2002, p. 452). These frustrations are often even greater in urban contexts, where a wider array of cultural, linguistic, social, and economic differences add complexity to the teaching process. Studies have shown that the more diverse a school population is, the more difficult it becomes to meet achievement goals established by measures such as the No Child Left Behind Act that require adequate

progress to be shown across all subgroups (Neill, 2003). This is an important consideration for inclusive urban schools.

Inclusion, or the movement toward maximizing the participation of students with disabilities in general education classes, has been an important theme in the field of education since the mid to late sixties. In the past, most of the discussion around the integration of special needs learners into general education classes focused primarily on integrating *students* in general and special education. For example, whereas great attention was given to the idea of having students with and without disabilities educated together in general education classes, relatively little emphasis was placed on helping general and special educators work together in a single educational environment. Neither was much attention placed on coordinating other critical aspects of general and special education systems, such as assessment programs, educational standards, and teacher preparation. It was not until the late 1980s that the systems integration concept of inclusive education brought with it a renewed impetus to restructure general education settings in order to provide the supports needed to facilitate the learning of a broader range of students. Since that time, the number of students with disabilities taught in general education classrooms has increased consistently and substantially (McLesky, Henry, & Hodges, 1999).

Despite recent gains on the National Assessment of Educational Progress in some urban districts, academic performance in the vast majority of urban districts continues to lag behind that of the nation as a whole (Council of Great City Schools, 2005; U.S. Department of Education, 2003). Students who are referred for special education tend to come from the lowest quartile of their class (Gottlieb, Alter, Gottlieb, & Wishner, 1994), which suggests that students in urban special education are among the lowest performers drawn from a group of students for whom achievement has already been depressed. This underscores the challenges of implementing inclusion in urban classrooms in the context of accountability reform driven by large-scale tests.

Eight-two percent of public school teachers teach in classrooms that include students with disabilities (National Center for Education Statistics, 2004). Yet research has suggested that many teachers feel ill-prepared to implement standards-based reform in heterogeneous learning environments. In a national survey of 400 general education teachers, less than half (37%) reported that they felt well-prepared to teach students with disabilities according to their states' content standards (Goldstein, 2004). Likewise, a state survey of 98 Virginia special education administrators revealed that a majority (55%) of these administrators believed that special education teachers in their state were not adequately prepared to assist special education students in meeting state standards (Defur, 2002). Evidence also suggests that accountability

assessments may encourage the reluctance of general education teachers and administrators to embrace the inclusion of students with disabilities for fear that the scores of these students will depress school or class scores (Defur, 2002, McDermott & McDermott, 2002). Increased referral rates to special education also have been associated with standardized test driven accountability systems (Defur, 2002; Parrish, 2000).

Given the apparent tension between the increasing standardization of educational goals and the increasing diversity of the student population, efforts should be made to assist teachers in reconciling and successfully implementing these critical themes in urban education. This suggests the need to investigate how urban teachers think about inclusion in standards-based classrooms, and how they go about the task of differentiating instruction for student success. Often, inadequate attention is given to listening to the teachers who must implement policies established by administrators and legislators. Getting a better idea of how urban teachers think about differentiating instruction in a standards-based context will provide the foundation upon which more effective professional development practices can be built. This study investigated the following questions: How do urban teacher conceptualizations of differentiated instruction evolve after training in a specific framework? How did this training impact urban teacher beliefs with respect to standards-based reform and inclusion?

## Methods

### *Participants*

Forty-four teachers from nine elementary schools (K-5) in an urban school district in the south volunteered to participate in this project. No screening was used. All volunteers were accepted until the program was full. Table 1 presents demographic information for these teachers. Teachers participated in this project in school-based teams that each included at least one special education teacher. Teams ranged in size from two to ten teachers. All teachers taught at least one student with high-incidence disabilities (e.g., learning disabilities, mild mental retardation, emotional disturbance, speech-language disorders).

### *Intervention*

*$M^2$ECCA framework.*

In order to better prepare them for inclusive, standards-based classrooms, teachers were trained on the implementation of a framework for differentiated instruction referred to as "$M^2$ECCA for Inclusion", shown below in Figure 1. This framework integrates concepts related to

TABLE 1

*Participant Demographics*

| | |
|---|---|
| **Gender** | |
| Female | 95.5% |
| Male | 4.5% |
| **Race/Ethnicity** | |
| African-American | 86.4% |
| White | 13.6% |
| **Highest Degree Earned** | |
| 2 | 43.2% |
| MA/M.Ed | 54.5% |
| Doctorate | 2.3% |
| **Teacher Type** | |
| General education | 72.7% |
| Special education | 27.3% |
| **Teaching Experience** | |
| Mean number of years | 11.63 (range = 1-27) |

both differentiated instruction (Tomlinson, 1999) and multicultural education (Banks, 2001). The framework emphasizes major aspects of instruction—methods, materials, environment, content, collaboration, and assessment—important to implementing inclusion in diverse, standards-based classrooms. For example, in terms of methods of instruction, the M$^2$ECCA framework encouraged teachers to consider how students learn best and to tap into student strengths, interests, and cognitive styles. The M$^2$ECCA framework highlighted the fact that while standards provide a vision for where we should be going instructionally, determining the best route to get there is largely up to teachers--and this "best route" should be varied based on individual student learning needs and characteristics.

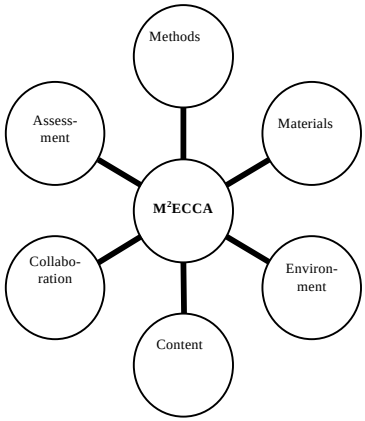


FIGURE 1
*M$^2$ECCA for Inclusion*

Related to methods of instruction are the materials that enable these methods. Through the M$^2$ECCA framework, teachers were

encouraged to consider a broad variety of enabling equipment and materials in planning instruction to meet diverse needs. For example, materials that reflected cultural plurality were explored. Various formats of textbooks---standard, reduced reading level, large print, audiotape, and digitized (e-text) on a CD--were presented and discussed. Assistive technology, such as screenreading software, voice recognition software, and talking word processors also were demonstrated.

In terms of the environment of the classroom, physical, organizational, and social aspects were considered. For example, the use of classroom furnishings (e.g., individual student mailboxes) to promote differentiation was addressed. The organization of student seating and the strategic positioning of students was explored. Behavior management strategies and the influence of culture on behavior also were aspects of this element of the $M^2$ECCA framework.

In discussing the content of instruction, it was noted that standards provide general parameters for content, but not much guidance with respect to the specific subskill areas needed to attain the standards with a given student. Hence, the $M^2$ECCA framework assisted teachers in coming up with ways of finding out as much specific information as possible about what students can and cannot do with respect to the standards in question. In other words, it encouraged teachers to raise questions such as: What prerequisite skills and content do I need to teach this student in order to enable him to meet this standard? Where is the student now in relation to where we are trying to go? How can I meet the student where he is and move him forward?

Collaboration among general and special educators is the cornerstone of successful inclusive classrooms. As such, the $M^2$ECCA framework emphasized the collaborative roles that support successful inclusion, such as exchanging student progress information, joint IEP planning, joint parental conferences, collaborative problem solving, and co-teaching.

Assessment both begins and ends the $M^2$ECCA process in inclusive standards-based classrooms. Assessment is used to inform instruction, monitor student progress, and guide program evaluation. This aspect of the framework encouraged teachers to use informal assessment to gather the information they need to plan the best route to student mastery of standards. Appropriate accommodations for large-scale assessments also were addressed.

*Training format.*

The training sequence was conducted in 2004 by the author, in collaboration with school district administrators. The sequence included two major components: 1) an 18-hour seminar focused on the $M^2$ECCA framework shown above; and 2) two small- group planning sessions at

the participating school sites. The seminar portion of the project was delivered on three Saturdays over a three-month period. As a part of this professional development sequence, participating teachers engaged in two small-group meetings at their schools sites, during which they shared standards-based lesson plans they developed. Each teacher brought a draft of a lesson s/he had planned that targeted state reading or math standards. During the planning meetings, teachers applied the $M^2$ECCA framework in making suggestions to their group members regarding ways the lessons they brought could be refined to enhance learning outcomes for students with high-incidence disabilities. These small group meetings lasted approximately one hour, and took place before school, after school, or during planning periods. School teams including more than six members were divided into two groups for the purpose of engaging in the small-group sessions. After the team meetings, the modified lessons were then taught and outcomes for students with and without disabilities were noted by participating teachers. The goal of these activities was to enhance teacher conceptualizations of what it meant to differentiate instruction in a standards-based environment by providing them with a framework for doing so.

## Data Collection and Analysis

*Concept Maps*

Concept maps have been used as a research tool to assess conceptual change (Artiles, Mostert, & Tankersley, 1994; Markham, Mintzes, & Jones, 1994; Morine-Dershimer, 1993; Voltz, Brazil, & Scott, 2003). In this project, all participating teachers were asked to develop concept maps, which are designed to visually display relationships between various aspects of a concept. Participants were given verbal instructions regarding how to construct a concept map, were provided an example of a concept map, and then were asked to create a concept map reflecting critical aspects of differentiating instruction for diverse learners with disabilities in a standards-based context. Participants created concept maps both before and after participating in this professional development experience. Using an adaptation of procedures developed by Morine-Dershimer (1993), concept maps were analyzed based on the variety and quantity of aspects related to differentiating instruction included on the maps. The six aspects of instruction outlined in the $M^2$ECCA framework above were used to classify items included on the concept maps. Each teacher's concept map was rated, for both pre and post administrations, based on the variation in the nature of items included, as well as the quantity of items included. The variation rating was based on a one to six scale and was

TABLE 2 *Quest*

| | T | | | | | |
|---|---|---|---|---|---|---|
| | 3.61 | .24 | 4.97 | 5.53 | .650 | |

| Item | Pre-assessment | | | | | Post-assessment | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | % Strongly disagree/ disagree | % Undecided | % Agree/ strongly agree | Mean | SD | % Strongly disagree/ disagree | % Undecided | % Agree/ strongly agree | Mean | SD |
| It is possible for a teacher to successfully implement both standards-based reform and the inclusion of students with disabilities in general education classes. | 9.1 | 40.9 | 50.0 | 3.43 | .79 | 4.5 | 13.6 | 81.8 | 4.02* | .76 |
| The demands of standards-based reform and accountability assessments have caused me to become more skeptical about including students with disabilities in my classes. | 11.4 | 59.1 | 29.5 | 3.09 | .83 | 36.4 | 15.9 | 47.7 | 3.14 | 1.27 |
| Standards-based reform will enhance educational outcomes for non-disabled students. | 2.3 | 59.1 | 38.6 | 3.34 | .61 | 2.3 | 25.0 | 72.7 | 4.02* | .82 |
| Standards-based reform will enhance educational outcomes for students with disabilities. | 2.3 | 68.2 | 29.5 | 3.25 | .58 | 2.3 | 18.2 | 79.6 | 3.98* | .70 |
| Standards-based reform will have no impact on general education teachers' attitudes with respect to included students with disabilities in their classes. | 38.6 | 45.5 | 15.9 | 2.68 | 1.00 | 61.4 | 13.6 | 25.0 | 2.55 | 1.28 |
| The $M^2$ECCA framework is useful in generating ideas about lesson adaptations. | | | | | | 2.3 | 0.0 | 97.7 | 4.32 | .71 |
| Working in school-based teams on lesson adaptations improved my expertise in this area. | | | | | | 2.3 | 2.3 | 95.4 | 4.39 | .75 |

derived by determining the number of categories from the $M^2$ECCA framework that were represented among items included in each teacher's map. The quantity rating was obtained by totaling the number of items

included. For example, if a concept map included two items that fell into the content category and three items that fell into the materials category, that concept map received a variation rating of two and a quantity rating of five. Paired t-tests were used to compare mean variation and quantity scores across pre and post administrations.

*Questionnaires.*

Teachers completed brief questionnaires containing questions related to standards-based reform and inclusion both before and after participating in the professional development sequence. These items are shown in Table 2. Teachers rated each item on a five- point Likert-type scale ranging from strongly disagree to strongly agree. Pair t-tests were used to compare responses across pre- and post- administrations.

## Results

*Concept maps*

Table 3 displays the percentage of teachers whose concepts maps included items in each of the six categories for both pre and post administrations. During the pre assessment, the majority of the participating teachers included items related to instructional methods and materials, with these two categories of items being the most commonly included, followed by items related to content, collaboration, assessment, and the learning environment. During the post assessment, the majority of teachers included items in each of the six categories, with the relative ranking of categories based on frequency remaining fairly stable.

TABLE 3
*Percentage of concept maps including items in each category*

| | Pre | | Post | |
|---|---|---|---|---|
| | Percent | Rank | Percent | Rank |
| Methods | 75.0% | 1 | 93.2% | 1 |
| Material | 61.4% | 2 | 84.1% | 2 |
| Environment | 22.7% | 6 | 59.1% | 4 |
| Content | 36.4% | 3 | 61.4% | 3 |
| Collaboration | 27.3% | 4.5 | 54.5% | 5.5 |
| Assessment | 27.3% | 4.5 | 54.5% | 5.5 |

The mean quantity and variation ratings for concept maps on pre and post-assessments are shown in Table 4. A significant difference was found between pre and post variation ratings and between pre and post quantity ratings. This suggests that the concept maps produced by teachers during the post assessment contained significantly more categories of items than was the case for the concepts maps produced during the pre assessment. Likewise, these findings also suggest that

teachers included significantly more items on concept maps during the post administration than were included during the pre administration.

TABLE 4
*Variation and Quantity Ratings*

| | Pre | | Post | |
|---|---|---|---|---|
| | Mean | SD | Mean | SD |
| Variation | 2.43 | 1.04 | 4.00 | 1.56 |
| Quantity | 5.64 | 3.24 | 9.52 | 5.50 |

*Questionnaire*

Questionnaire results are displayed in Table 2. As is shown, on the pre-assessment, there was no single item with which a clear majority of teachers agreed or disagreed. On the post-assessment, however, a clear majority of teachers did indicate agreement with three of the items included on the pre-assessment: the item addressing the feasibility of implementing both standards-based reform and inclusion; and the two items related to standards-based reform enhancing educational outcomes for students with and without disabilities. There was a significant difference between the ratings of these three items across the pre and post administrations of the questionnaire. An overwhelming majority of teachers also agreed that the $M^2$ECCA framework and the opportunity to work in school-based teams had enhanced their ability to make lesson adaptations. However, on the post-assessment, the majority of teachers disagreed with the idea that standards-based reform would have no impact on teacher attitudes about inclusion.

## Limitations

One of the most significant limitations of this study is that it does not include actual classroom observations. Neither does it involve pre and post assessments of student learning, or random assignment of teachers and students to control and treatment groups. Consequently, this study provides only supporting evidence regarding a professional development practice that shows promise in enhancing teacher conceptualizations of differentiated instruction and teacher beliefs regarding the potential efficacy of standards-based reform inclusive settings. There was no systematic data collected regarding the impact of these changes on the teaching behaviors of the participants, or any resulting changes in student achievement. These areas would constitute next steps in this line of research.

## Discussion

Teacher responses on the pre-assessment questionnaire suggest a high degree of ambivalence or uncertainty regarding some of the issues

examined related to inclusion and standards-based reform. This lack of teacher confidence in standards-based reform in general, and standards-based reform in inclusive classrooms in particular, is echoed in the literature (Defur, 2002; Edgar, Patton, & Day-Vines, 2002; Jones, 2001; Nevi, 2001). On the post-assessment, however, participating teachers generally expressed a more confident or positive view with respect to these issues. They were far more likely to agree that it is possible to successfully implement both standards-based reform and inclusion. They were also more likely to agree that standards-based reform will enhance learning outcomes for students with and without disabilities. These findings suggest that there may be a high degree of malleability associated with these teacher attitudes and beliefs, and further, that professional development may be key in bringing about these changes.

The concept maps completed by teachers during the pre-assessment suggest relatively impoverished ideas about differentiating instruction for diverse learners with disabilities in a standards-based context. Only two categories of items, methods and material, were included in the concept maps of the majority of teachers. Relatively few teachers included items related to the content of instruction, the instructional environment, educational collaboration, or assessment in their conceptualizations of differentiating instruction in a standards-based context. The total number of items included also was relatively low.

By contrast, during the post-assessment, each of the six categories of items in the $M^2$ECCA framework was included in the concept maps of the majority of participating teachers. These changes across pre and post-assessments were reflected in the variation and quantity ratings, which significantly increased during the post-assessment. This suggests that the professional development sequence may have helped teachers enrich their thinking about differentiating instruction in diverse, standards-based classrooms. Further, when specifically asked, teachers overwhelmingly agreed that the $M^2$ECCA framework and working in school-based teams were effective strategies in improving their expertise in this area.

The significance of these findings lies, at least in part, in the importance of teacher beliefs and teacher self-efficacy in the success of any educational initiative. If teachers have a limited understanding of the educational initiative that they are charged to implement, or if they feel that they lack the skills to do so, then the success of that initiative will be compromised—and children will be left behind, political posturing notwithstanding. This study provides one example of a professional development sequence that resulted in evidence of enhanced teacher conceptualizations of differentiating instruction in a standards-based context. This enhancement may have played a role in more teacher confidence being expressed during the post-assessment with respect to

the feasibility of implementing both standards-based reform and inclusion, as well as the general efficacy of standards-based reform in enhancing educational outcomes for students with and without disabilities. As teachers better understood what it meant to differentiate instruction in a standards-based context, and were given tools for doing so, they probably saw it as a more feasible undertaking. These changes in teacher conceptualizations and dispositions could potentially have a favorable impact on student learning, in that teachers would have both the will and the skill to enhance learning outcomes for students with disabilities.

The context of this study also adds to its significance. It focuses on a population of teachers who are often most challenged by standards-based reform—those who teach students with disabilities in diverse, urban areas. These teachers may arguably feel the most overwhelmed by the uncompromising demands of standards-based reform and the least supported in their efforts to meet these demands.

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