REACH: a framework for differentiating classroom instruction.

By: Marcia L. Rock, Madeleine Gregg, Edwin Ellis, and Robert A. Gable

Abstract:
Today, teachers are responsible not only for meeting the diverse needs of all students but also for ensuring improved educational outcomes. Accordingly, school personnel are seeking proven ways to strengthen traditional classroom practices. Beginning with the plight of two teachers--one general and one special education--the authors offer a rationale for differentiating instruction. Then they review the literature on differentiated instruction, highlighting the myths, models, and evidence to support it. The authors draw on the accumulated research to provide a framework for differentiating instruction. Using REACH as a mnemonic, the framework they developed includes a comprehensive inventory and several practical strategies for using it. They revisit the case vignette to illustrate the application of the REACH framework.
Keywords: classroom practices, differentiated instruction, general education, research-based methods, special education

Article:
>   Things do not change; we change. (Thoreau, 1949, p. 319)

Ms. Grody has taught third grade for 10 years in a high-poverty, urban elementary school. After a 3-week summer course, she started the year with a renewed enthusiasm. However, because her class has been especially challenging, that enthusiasm slowly diminished. She has 26 students whose reading ability ranges from prekindergarten to seventh grade. Ms. Grody has 14 students performing at grade level, 3 students performing above grade level, who attend the district's program for gifted and talented students, and 9 students performing below grade level. One of the 9 students performing below grade level is not English proficient; the other 8 students are children with disabilities who are not making progress.

Ms. Grody has known for some time that third-grade work is too difficult for many of her students. She has tried to make accommodations for students with individualized education programs (IEPs) by using lower grade-level books and offering a reduced number of tasks on grade-level assignments in math, spelling, and vocabulary. However, nothing she has done has worked. Frustrated by their repeated failure, a number of students have started to act out, behave disrespectfully toward her, and disrupt instruction. Ms. Grody has sent the same students to in-school suspension at least once in the last 2 weeks. Not surprisingly, these students are falling further behind their classmates in most subject areas.

In need of assistance, Ms. Grody approached Ms. Ent, the special education teacher assigned to her school. However, Ms. Ent has problems of her own. She has to serve 54 students with IEPs in Grades K-5. Although Ms. Ent has a good understanding of basic strategies to meet the needs of students with broad learning needs in the general education classroom, because of her present case load, she is not able to meet regularly with Ms. Grody. For both teachers, a rigorous schedule impinges on coplanning time, while paperwork consumes what little planning time is available. Limited support, scant resources, and inadequate professional development further hinder efforts to serve the needs of their students.

As most readers will attest, this glimpse into the professional life of school personnel reveals a common plight. It reflects the challenges that the growing number of diverse learners poses to teachers across the United States.

Standards-Based Reform and Access to General Education Curriculum

Over the past 3 decades, a burgeoning number of students with diverse learning needs have been placed in general education classrooms. Before 1975, about one-third of the students in Ms. Grody's third-grade class would have been excluded from public schooling. A decade later, after the passage of the Education of All Handicapped Children Act (EHCA) of 1975, school personnel would have referred those same 8 students for special education services. The students would have been referred and removed from the general education classroom and become the instructional responsibility of a special education teacher in a resource self-contained or special school placement. The original EHCA, now known as the Individuals With Disabilities Education Act (IDEA; 2004), stressed the need to educate students with disabilities alongside children who are not disabled (Haager & Klingner, 2005). Accordingly, the 8 students with IEPs in Ms. Grody's class likely would now receive special education services in the regular classroom.

The expectations about whom Ms. Grody should teach and how they should perform have changed dramatically. In the past, when students with disabilities were not achieving up to expected standards, schools would lower the standards (Quenemoen, Lehr, Thurlow, & Massanari, 2001). However, this watered-down approach failed to help students with disabilities and, in fact, hindered their academic performance (Thurlow, 2002). In an attempt to reverse this trend, the U.S. Congress enacted two important pieces of legislation, the No Child Left Behind Act (NCLB; 2001) and IDEA (2004). Together, these acts underscore the importance attached to greater accountability and improved educational outcomes for all learners. Notwithstanding these federal mandates, many students with disabilities fail to perform successfully in the general education curriculum. A report entitled Failing Our Children prepared by the National Education Association (Neill, Guisbond, Schaeffer, 2004) found that roughly 26% of all public schools did not make adequate yearly progress (AYP) during the 2005-2006 school year. Thurlow, Moen, and Altman (2006) reported that in 2003-2004, only about 30% of students with IEPs performed at the proficient level on state-required reading and math assessments. Today, more than 6 million school-aged students have IEPs, which means more than 4 million (or 70% of) school-aged students lack proficiency in reading and math.

One reason that so many students with disabilities struggle in core areas of instruction is that physical access is not synonymous with cognitive access to the general education curriculum. To fully engage in and progress through the general education classroom, students with disabilities need more than to be physically present in the classroom. They need group-individualized instruction, supplementary aids and services, accommodations, and modifications to which they are entitled (Abell, Bauder, & Simmons, 2005). It is unfortunate that many teachers lack training in ways that ensure students with disabilities cognitive access--an opportunity to actively participate and to profit from instruction linked to the general curriculum.

Importance of Differentiating Instruction

According to the 26th Annual Report to Congress on IDEA (U.S. Department of Education, 2005), roughly 96% of general education teachers have students with learning disabilities in their classrooms. Of the teachers, 9 of 10 teachers have at least 3 students with IEPs. However, the challenges that confront present-day teachers are not limited to students with disabilities. Today, students come from increasingly culturally and linguistically diverse backgrounds in which parental expectations and community norms may be at odds with traditional schooling (Lapkoff & Li, 2007). The high poverty rates that often exist in urban school districts increase the probability of a readiness gap among children beginning their schooling (Voltz & Fore, 2006).

A major drawback of traditional instruction is that many teachers "teach to the middle" (Haager & Klinger, 2005, p. 19), which means that the needs of a growing number of students will go unmet. Traditional instruction has a particularly deleterious effect on students with disabilities who often display diverse cognitive abilities, evidence multiple and varied instructional needs, and perform academically below their same-age classmates (Friend & Bursick, 1999). These deficits make students with disabilities especially vulnerable to a one-size-fits-

all approach to instruction. The net result is that many of these students perform poorly on standardized tests and have high dropout rates, low graduation rates, and high percentages of unemployment (Lipsky, 2005). One solution is what experts refer to as differentiating instruction. Differentiated instruction is the process of "ensuring that what a student learns, how he/she learns it, and how the student demonstrates what he/she has learned is a match for that student's readiness level, interests, and preferred mode of learning" (Tomlinson, 2004, p. 188). In the following discussion, we explore more fully the concept of differentiated instruction.

Differentiating Instruction: Model, Myths, and Research

To gain a better understanding of differentiated instruction, we conducted a review of the general and special education literature, including electronic searches of the Education Full Text and Education Resources Information Center (ERIC) databases using the keywords curriculum and differentiation. We found 476 records from the Education Full Text database and 187 records from the ERIC database. After a careful review, we concluded that the literature on differentiated instruction fell into one of three categories: model, myths, and evidence. Some understanding of each of these areas may be useful to the successful translation of the professional literature on differentiating instruction into daily classroom practice.

Model of Differentiated Instruction

The current model for differentiated instruction is composed of a theoretical framework, four guiding principles, and seven essential beliefs. The theoretical framework that supports differentiated instruction is rooted in cognitive psychology and based largely on research on student achievement (McTighe & Brown, 2005). Supporting the framework are four guiding principles that relate to differentiating classroom practices: (a) a focus on essential ideas and skills in each content area, (b) responsiveness to individual student differences, (c) integration of assessment and instruction, and (d) an ongoing adjustment of content, process, and products to meet individual students' levels of prior knowledge, critical thinking, and expression styles (Tieso, 2003; Tomlinson, 1999). Lending further credence to the model are seven basic beliefs (Tomlinson, 2000b): (a) same-age students differ markedly in their life circumstances, past experiences, and readiness to learn; (b) such differences have a significant impact on the content and pace of instruction; (c) student learning is heightened when they receive support from the teacher that challenges them to work slightly above what they can do independently; (d) student learning is enhanced when what they are learning in school is connected to their real-life experiences; (e) student learning is strengthened by authentic learning opportunities; (f) student learning is boosted when they feel they are respected and valued within the context of the school and community; and (g) the overarching goal of schooling is to recognize and promote the abilities of each student.

On the basis of these assumptions, it is possible to think about differentiating instruction in three ways: Teachers can consider adjusting the content, process, or product of teaching and learning (Lewis & Batts, 2005; Nordlund, 2003). According to McLeskey and Waldron (2000), teachers can vary their expectations for task completion within a single lesson or across a unit of instruction. Many teachers make use of a variety of graphic organizers, reading materials at different levels of complexity, direct instruction in small groups, previewing, and scaffolding strategies (e.g., Tomlinson, 2001). All students benefit from a variety of instructional methods and supports and an appropriate balance between the challenge of instruction and the opportunity for success (Lawrence-Brown, 2004).

Myths About Differentiated Instruction

There are a number of misconceptions regarding differentiated instruction. The most common misconceptions include: (a) students will be ill prepared for standardized tests; (b) if teachers differentiate instruction, they create unfair workloads among students; (c) it is not fair to give students credit for learning if they have not demonstrated the same knowledge as other students; (d) students will not be able to compete in the real world; and (e) there is only one way to differentiate instruction (Wormeli, 2005). There is no empirical support for any of these assertions. In fact, according to Tomlinson (2000a), it is incorrect to assume there is only one way to differentiate instruction. She stresses that differentiated instruction is "not a recipe for teaching" (Tomlinson, 2000b, p. 6) and "it is not an instructional strategy" (p. 6). Her recommendation is that teachers use broad brushstrokes rather than a paint-by-numbers approach when trying to differentiate instruction. As Tomlinson

(2000) wrote, too narrow an approach will fail students and teachers because it "confuses technical adequacy with artistry" and "confuses compliance with thoughtful engagement" (p. 11).

Research on Differentiated Instruction

Although differentiated instruction has garnered increased attention over the past decade, the basic premise is not new (Olenchak, 2001; Tomlinson, 2005a). In fact, a sizable body of research has accumulated in support of differentiated instruction. For example, in a qualitative study of teachers and students who took part in a 3-week enhanced curriculum unit in math, Tieso (2001) reported that the students evidenced several positive affective outcomes: level of engagement, motivation, and excitement about learning. In the area of reading, Baumgartner, Lipowski, and Rush (2003) used differentiated approaches that included flexible grouping, student choice of various tasks, increased self-selected reading time, and access to various reading materials. They found improvements in students' instructional reading levels and number of comprehension strategies used, mastery of phonemic and decoding skills, and attitudes toward reading. Tieso (2005) looked at the effects of curricular differentiation with between- and within-class grouping on student achievement. Using curriculum-based assessment as a pre- and posttest measure to evaluate student performance, she inferred that students with diverse abilities who received the intervention experienced significantly higher mathematics achievement than students who did not receive differentiated instruction.

Another area of interest to researchers is how to differentiate instruction. In a qualitative inquiry of how teachers differentiated instruction for students with significant cognitive disabilities, Fisher and Frey (2001) found several important factors, including a decreased emphasis on whole-class lessons and an increased use of peer-assisted learning and team--teacher collaboration. Hertzog (1998) examined teachers' use of open-ended activities to differentiate instruction and heighten learning of students identified as gifted. The results led her to infer that open-ended activities benefited all learners.

Odgers, Symons, and Mitchell (2000) used problem-solving tasks to differentiate science instruction in two mixed-ability classes. They reported positive academic outcomes and pointed out the need for teachers to allot sufficient time for students to reflect on and evaluate their learning. Gamoran and Weinstein (1998) analyzed factors associated with the introduction of differentiated instruction in restructured schools. They found that conditions such as small class size, intellectual support and commitment, and extra resources had a significant effect on student achievement. Noble (2004) used a revised version of Bloom's taxonomy to help teachers to differentiate instruction and found that the teachers expressed an increased level of confidence in their ability to meet students' differing cognitive needs. These and other studies confirm that teachers can exercise a tremendous amount of creativity and flexibility in differentiating instruction.

We found three articles on how schools went about changing from traditional to differentiated instruction (Fahey, 2000; Fisher, Frey, & Williams, 2003; Lewis & Batts, 2005). In two of these three studies, the authors reported specific outcomes resulting from these changes. According to Lewis and Batts, when elementary teachers relied largely on undifferentiated approaches to instruction, students had an overall 79% proficiency rate on state-mandated end-of-year tests. After 5 years of differentiating instruction, 94.8% of their students scored in the proficient range. Similarly, Fisher et al. documented that the average student in their high school read at a 5.9 grade level. After 4 years of differentiated instruction, the average student read at an 8.2 grade level.

If differentiated instruction works, why is it not in wider practice? The answer is not surprising. Most general educators feel ill prepared to teach students with diverse learning needs (e.g., Schumm & Vaughn, 1991, 1995). Although teachers express a desire to meet the needs of all of their students, often excessive workload responsibilities, demands for substantial content coverage, and negative classroom behavior make the challenge seem insurmountable.

REACH: A Blueprint for Differentiating Instruction

Ms. Grody and Ms. Ent are convinced that differentiated instruction will make a difference in their instruction. Nevertheless, they are uncertain about how and where to begin. With that challenge in mind, we developed a blueprint for teachers to follow. The blueprint is not a linear how-to model for differentiating instruction. Rather, it represents a general plan of action composed of proven, effective research-based methods to improve outcomes for all students by promoting cognitive access, participation, and progress in the general curriculum. Specifically, our blueprint includes an inventory of quality indicators associated with effective differentiated instruction (see Appendix A). For each general indicator, we provide a corresponding step that relates to proven effective practices. Combined, the indicators and the steps allow teachers to chart a course of action for developing and refining the use of differentiated instruction. We chose the REACH acronym to highlight each of the steps: (a) reflect on will and skill, (b) evaluate the curriculum, (c) analyze the learners, (d) craft research-based lessons, and (e) hone in on the data.

REACH: The Differentiated Instruction Quality Indicators Inventory

To guide the transformation of undifferentiated into differentiated instructional practices, we created the REACH inventory. To create the REACH blueprint and accompanying inventory, we identified major benchmarks of effective instruction for students with diverse learning needs. Each of the approaches we included in REACH has been proven effective for students who are high performing, typically performing, poor performing, and disabled. Our inventory includes five quality indicators that reflect major factors (variables) associated with differentiated instruction: (a) teacher, (b) content, (c) learner, (d) instruction, and (e) assessment. Last, we developed a series of questions to increase teacher self-awareness, facilitate self-monitoring, provide intrinsic motivation and improve overall performance. The questions central to the REACH inventory are "What and how will I teach? Who will I reach?"

REACH Quality Indicator 1: The Teacher Variable (Benjamin, 2006; Berdine, 2003; George, 2005; Sapon-Shevin, 2005; Thurlow, 2005; Tomlinson, 2005a, 2005b; Wormeli, 2005). The first quality indicator focuses on the teacher who is at the heart of differentiated instruction. Although many teacher values drive differentiated instruction, a few are especially noteworthy. These include an appreciation of students' learning and behavioral differences, a commitment to delivering quality instruction, and dedication to continued professional growth and development. In addition, guiding the teacher's vision is a valuing of students' strengths and competencies that is not limited by their obvious failings and weaknesses.

First step: Reflect on will and skill. The guiding self-questions for this step are "What about me? How will I be?" It is important to assess your current knowledge or skill. We suggest you ask yourself what it will take to change existing classroom practices. Evaluate your knowledge base, teaching preferences, and subject-area skills. What practices do you prefer or tend to rely on most often? Identify building and district-level resources and systems of support. It may be useful to acknowledge any misgivings you have about differentiated instruction. In the end, we suggest you generate reasonable goals and create a realistic timeline for introducing differentiated instruction in your classroom.

REACH Quality Indicator 2: The Content Variable ("Access to the General Curriculum," 2001; Chapman & King, 2005; Haager & Klinger, 2005; Lewis & Batts, 2005; Schumm, Vaughn, & Leavell, 1994; Thurlow, 2005; Tomlinson, 2005a, 2005b). The content variable is the curriculum. Promoting students' cognitive access to a high-quality curriculum is the overriding goal of differentiated instruction. What instructors teach will be a function of state and national standards--the prescribed curriculum--and the students' interests and abilities.

Second step: Evaluate the curriculum. The guiding questions for this step are "What content is there? Why should they care?" Implicit in this step is the notion that teachers make choices about the curriculum they teach--choices that are guided by district, state, and national curriculum standards. Moreover, they are filtered through the interests, abilities, and educational needs of the children in the class. Begin evaluating the curriculum by reviewing the prescribed curriculum--national, state, and district-level standards--to identify and select critical content and big ideas to teach. It makes sense to review the guides preceding and following the grade level you

teach to identify core and main ideas and eliminate peripheral or nonessential information. Organize learning standards within the curriculum so students have time to make sense of ideas and master skills (Tomlinson, 2003). Ask yourself if there are any factors that might influence student outcomes, including those that have shaped a student's experiential background. Some teachers find it useful to conduct a student survey to learn what they already know about the content and identify previously unlearned content that affects the likelihood of future learning. To do so, survey 3-5 students at random to find out what they already know about the content. For example, you might ask, "Tell me what you already know about vowels." Alternatively, "What can you tell me about continents?" or "What can you tell me about adding fractions?" When conducting the survey, be sure to ask open-ended questions. In the end, it is important to pull together the information you have collected and decide able instruction. Because this is not a simple task, we suggest that you use the planning pyramid developed by Schumm et al. (1994). The pyramid is divided into three parts: The base is composed of what all students should know, the middle section contains what most students should know, and the top part relates to what some students should know. All students receive the same instruction, but they are held to varying standards.

REACH Quality Indicator 3: The Learner Variable (Chapman & King, 2005; Haager & Klinger, 2005; McTighe & Brown, 2005; Tomlinson, 2003, 2005a, 2005b; VanSciver, 2005; Wright, 2005). The focus of differentiated instruction is on the learner, not on the content. In some instances, this may necessitate a shift in emphasis from a content-centered classroom to a student-centered classroom to eliminate a one-size-fits-all approach to instruction.

Third step: Analyze the learners. Because students are the targets of differentiated instruction, the guiding questions for this indicator are "Who are the learners? Who is on the back burner?" This step differs from the previous one in that the goal is to gain specific information about each child. Do not limit thoughts to what he or she knows about the concepts to be taught. Instead, analyze the group and individual students to determine readiness, interests, preferences, strengths, and needs. Think about the possible root causes of a student's poor classroom performance. Consider students' styles of thinking (Sternberg & Zhang, 2005), but do not confuse this with learning styles. In fact, we urge resisting the temptation to try to match instructional methods with students' preferred modalities because research does not support such a practice (Kavale, Hirshoren, & Forness, 1998). At what stage of learning are students performing: beginning-to-advanced acquisition, beginning-to-advanced proficiency, maintenance, or generalization? How do you know? If, like most classroom teachers, you have 26 or more students, identifying their respective learning stages is a time-consuming process. You might be tempted to skip it, but different teaching strategies are more effective at different stages of learning.

To identify any students who are on the proverbial back burner, we suggest thinking about individual student characteristics. Ask yourself, Who are the students with IEPs? Who are the students who need enrichment? Who are the students who need remedial or supplementary instruction? Do not overlook the roles gender, ethnicity, and academic ability play in instructional decision making. Then, consider ways to group students for instruction: for instance, curricular versus managerial grouping.

Curricular grouping is especially useful for fostering students' cognitive engagement or connections with the content of instruction. It may be useful to consider which students you will ask what kinds of questions, which students need to have a higher number of opportunities to respond and at what level of cognition, which students need to develop a stronger experiential base, and which students already possess adequate prior knowledge. In contrast, managerial grouping needs are based on fostering students' behavioral or emotional engagement or connections with the content. You may also pair in your head a low- and a high-performing student so that each time you pose a question to a higher performing student, you immediately ask the same question of a lower performing student.

Last, we suggest you examine the spread and distribution of student performance in your classroom. Spread entails calculating how great the distance is between the highest performing and lowest performing students in your class on the basis of achievement data and individual assessment data (e.g., the Dynamic Indicators of

Basic Early Literacy Skills [DIBELS]; N. P. Zigmond, personal communication, February 26, 2007); distribution involves identifying where the rest of the students perform within that range. This information may influence decisions about grouping and instruction.

REACH Quality Indicator 4: The Instruction Variable (Chapman & King, 2005; Garderen & Whittaker, 2006; Haager & Klinger, 2005; Lawrence-Brown, 2004; McTighe & Brown, 2005; Tomlinson, 2005a, 2005b; Wright, 2005). This indicator represents your teaching tool kit. Most teachers are always looking for new teaching ideas; it is important to keep in mind that all strategies or procedures should be research validated. We refer readers to various U.S. Department of Education-sponsored Web sites (e.g., http://whatworks.ed.gov; http://www.k8accesscenter.org; http://cited.org), which contain information on proven-effective classroom practices.

Fourth step: Craft research-based lessons. The goal in this step is to strike a balance between instruction, remediation, and enrichment (Abell et al., 2005). Tomlinson (2000b) refers to this process as "connecting kids and content" (p. 7). The guiding question is "What methods fit? Creating lessons that hit!" The best way to achieve this goal is to plan, match, and teach. To begin, devise a plan of instruction and specify supporting learning activities. Next, adjust the plan to offer differing levels of difficulty and match students to it.

It does not matter what the area of instruction is, but it is important for the instructors to ensure that students are able to enter at their own performance level. In other words, students need to be able to participate in the instruction at differing ability levels. One way to make that possible is to examine carefully the complexity of the task and determine if there are sufficient opportunities for students to participate at different levels, cognitively and physically. The information compiled in previous steps will be useful in making sound instructional decisions. It is important to choose wisely which evidence-based practices you will use to teach the same content to a diverse group of students (Tomlinson, 2003).

To create research-based lessons that students will enjoy, use variety. We suggest you provide students with an array of direct and strategic approaches to instruction. Swanson (2001) conducted a meta-analysis of effective intervention models and reported mean effect sizes of 0.59 for eclectic approaches, 0.68 for remedial instruction, 0.91 for direct instruction, and 1.07 for strategy instruction. The larger the effect size, the more powerful the instruction. Because an effect size of .80 or better means an intervention is highly effective, there is good reason to rely on direct and strategic instruction.

Every lesson should have a beginning, middle, and end. You might want to use Makes Sense graphic organizers to underscore for students connections between big ideas (Ellis & Rock, 2001). Students should have an opportunity to participate in small-group, whole-class, and individualized learning formats (Elbaum, Vaughn, Hughes, & Moody, 1999; Tieso, 2003). Although the pace of instruction should be brisk, be prepared to adjust the pace (slow down) to ensure students' understanding when warranted (Barr, 1973). The content of daily instruction should assure that all students are actively engaged and are responding at a high correct rate (Sutherland & Wehby, 2001). On the basis of the Council for Exceptional Children (1987) guidelines, Sutherland and Wehby recommended that "during instruction of new material you should aim to elicit 4 to 6 responses (with 80% accuracy) each minute from students. During drill and practice activities, the goal should be to elicit 8 to 12 responses (with 90% accuracy) each minute from students" (p. 114). Although these standards may seem unattainable, Feldman and Denti (2004) offered multiple ways to increase active learning, such as dry boards, choral and nonverbal choral responses, heads together, think-pair-share, and classroom whip around.

Research suggests that students should have an opportunity to participate regularly in peer-mediated instruction, such as peer-assisted learning strategies (Dion, Morgan, Fuchs, & Fuchs, 2004; Fuchs et al., 2001) or class-wide peer tutoring (Bond & Castagnera, 2006). There is ample evidence that students must receive frequent and immediate feedback regarding their academic and behavioral performance in a manner that is acceptable to that student. Ordinarily, teachers should provide students with immediate rather than delayed feedback; teachers

should vary feedback by offering positive, neutral, and corrective statements (Brosvic, Dihoff, Epstein, & Cook, 2006; Chard, Vaughn, & Tyler, 2002). Another aspect of differentiated instruction relates to questioning tactics (Price & Nelson, 2007). It is important to pose different types of questions to different students (e.g., convergent, divergent, high level, low level) depending on their instructional needs (Mastropieri & Scruggs, 2000; Orlich, Harder, Callahan, & Gibson, 2004; Sadker & Sadker, 2006).

Another way to meet the diverse instructional needs of students is with assistive technology. Assistive technology is provided to students who cannot achieve educational benefit without it and might include high- and low-technology items such as books on tape, writing and editing software (e.g., Simply Speaking, StyleWriter, Co:Writer, Write:Outloud), talking calculators, Language Masters, pencil grips, picture boards). Last, it is essential to share with students adequate supporting materials, accessible textbooks, and engaging manipulatives (Voltz, Sims, Nelson, & Bivens, 2005).

It is important to think about the context in which to apply these various evidence-based practices; that is, the physical arrangement and psychological climate of the classroom. Teachers have long paid attention to classroom seating arrangements. For example, during independent seat work, students' desks might be in traditional rows, whereas, for class discussion, they might be arranged in a large circle. Clustering student desks might facilitate use of cooperative learning (Hastings & Schwieso, 1995). Some teachers put tennis balls on the feet of students' desks and chairs to more easily reconfigure seating arrangements throughout the day. Simple things such as meet-and-greet at the classroom door, combined with a brief conversation about individual areas of interest, help to promote a positive learning environment. In managing daily instruction, teachers also find it useful to emphasize starts (e.g., acceptable behavior) rather than stops (e.g., unacceptable behavior; Gable, Hester, Rock, & Hughes, 2007).

REACH Quality Indicator 5: The Assessment Variable (Brimijoin, Marquissee, & Tomlinson, 2003; Chapman & King, 2005; Gregory & Chapman, 2002; Hendrickson & Gable, 1997; McTighe & O'Connor, 2005; Munk & Bursuck, 2003; Nordlund, 2003; Parsons & DeLucia, 2005; Tomlinson, 2005a, 2005b). Assessment is an essential part of differentiated instruction. Effective instruction depends on ongoing attention to assessing children's knowledge and skill. Although we are accustomed to assessing student performance to assign grades in the content areas, there is a lot more to assessment. This indicator involves using assessment data to determine the impact of instruction.

Fifth step: Hone in on the data. Similar to effective instruction, effective assessment must be planned. Thus, the guiding questions are "How did it go? How do I know?" During this step, you need to make data-informed decisions about students' learning. Most teachers not only routinely analyze student-performance data but also look critically at their own teacher behavior to make sound instructional decisions (McTighe & O'Connor, 2005). To do so, we suggest you consider a three-dimensional approach to assessment and data collection (Brimijoin et al., 2003). A growing number of teachers are introducing multiple methods of formal and informal assessment before, during, and after instruction. Assessment that takes place prior to instruction typically is referred to as preassessment or diagnostic assessment (McTighe & O'Connor). At this stage, you can evaluate students' interests, thinking styles, and readiness for content or skill instruction using simple checklists, interviews, surveys, and observations. Formative assessment takes place during instruction. To formatively evaluate students' understanding, you can use questioning, quizzes, probes, learning logs, work samples, think alouds, and so forth (McTighe & O'Connor). Summative assessment occurs after instruction and is the measurement of student performance against a predetermined standard (Brimijoin et al.), which teachers usually accomplish by means of unit or chapter tests, projects, portfolios, and standardized measures of achievement.

The challenge teachers face is wisely using assessment data to make timely adjustments in instruction. To do so, the assessment system must involve your students. All students should collect and use their classroom performance assessment data. Brimijoin et al. (2003) offered an excellent example of what it means to involve students in assessment. Ms. Martez is a fifth-grade teacher who uses a car windshield metaphor to help students self-evaluate during formative assessment. After she explicitly teaches a big idea from the prescribed

curriculum, she asks students to decide if their windshields are "clear as glass," have "bugs on them," or are "covered with mud." She has prearranged centers corresponding to each of the three levels and directs students to go to one of the centers based on their self-assessment. Of course, she continues to actively monitor the students' performance while they are at the learning centers. At the preassessment stage, she asks all students to complete a K-W-L (i.e., what I know, what I want to know, and what I learned) chart. Her students are also actively involved during summative assessment. She asks them to review their textbooks to prepare for annual statewide standardized achievement testing. As students look at each chapter, they use colored sticky notes to distinguish between topics they know well and those they do not. With that knowledge, the teacher can develop various lessons or establish different learning centers to reteach the latter. Technology might make it easier for teachers to use assessment data. Teachers are using handheld student response systems to monitor student understanding (Parsons & DeLucia, 2005). In addition, online survey tools provide quick, easy-to-use interfaces for conducting pre- and postassessment. Last, students' basic assessment data can be entered into an electronic database, such as Microsoft Access, to chart and graph performance data with which to make decisions about grouping, tiered lessons, and student readiness.

REACHing in the Real World

As Ms. Grody and Ms. Ent put a REACH blueprint into place, they will improve their students' cognitive access to the general education curriculum and strengthen student educational outcomes. Because all teachers face multiple, sometimes competing demands and function under stressful working conditions, we offer several suggestions on ways to use the REACH blueprint in the real world. Experience tells us that educators will be more successful if we establish realistic goals and take it one step at a time. A thoughtful, well-planned, goal-directed approach will allow practitioners, especially teachers, to reach the goal of differentiated instruction over time. We offer the following strategies for using the REACH Differentiated Instruction Quality Indicators Inventory (Bagozzi & Warshaw, 1992; Warshaw, Sheppard, & Hartwick, 1982).

Strategy 1: Set Specific REACH Performance Goals

Begin to incorporate differentiated instruction into your teaching by using the REACH Differentiated Instruction Quality Indicator Inventory to help you establish specific performance goals. This action is an important step to strengthen your commitment to the task (Eagly & Chaiken, 1993; Kendzierski, 1990), which in this case is to develop or improve approaches to differentiated instruction. To do this, we suggest you first take stock of your existing approaches by identifying your strengths and needs relative to the use of differentiated instruction. Carefully review the REACH inventory using two colors of ink or highlighting markers to identify your strengths and needs (Chapman & King, 2005). Then identify and access the most up-to-date resources on differentiated instruction to bolster your professional knowledge and skill. See Appendix B for a list of practitioner-friendly guidebooks, multimedia kits, DVDs, CD-ROMs, and videotapes, that offer ideas, examples, and strategies for differentiating instruction. Some school personnel have formed faculty groups to support implementation and refinement of differentiated instruction (Edwards, Carr, & Siegel, 2006). These faculty groups can evolve into study teams, share readings on differentiating instruction, meet regularly to discuss various aspects of differentiating instruction, and celebrate successes (Lewis & Batts, 2005).

Strategy 2: Carry Out and Oversee REACH Performance Goals

Even the commitment to specific goals to differentiate instruction can quickly fall by the wayside if teachers do not have a plan to carry them out and keep track of progress. One strategy is to create building-based action teams composed of two or three in-grade-level teachers or cross-grade-level teachers. Teams review the REACH inventory and discuss specific performance goals that they established. Team members might find it useful to observe instruction in other classrooms; if conflicting schedules do not allow for direct observations, it is possible to capture differentiated instruction lessons on video- or audiotape (Duffy & Keller, 2005). Technology advances such as Webcams make video recording less obtrusive and easier to manage than in the past. Last, it might be useful for team members to offer one another feedback that includes corrective comments about their use of newly learned approaches to differentiated instruction (Guskey, 2005). We acknowledge that what we propose is time-consuming. This is one reason that the action teams should be composed of no more than two or three members.

Strategy 3: Evaluate REACH Performance Goals

Ongoing assessment of the effectiveness of differentiated instruction provides powerful evidence of the quality of your instruction, not only for yourself but also parents and administrators. That assessment requires a two-pronged approach that focuses on teacher and student performance. To monitor your instruction, we suggest you make use of the REACH inventory and use it to collect self- and peer data. Then use that information to share suggestions on ways to achieve your classroom goals with colleagues at least once every 9 weeks. One way to assess student performance is to use pre- or postmeasures, DIBELS data, work samples, and curriculum-based measurements across content areas and periodically review these data to make adjustments to your differentiated instructional practices. This information allows teachers to objectively evaluate goal-driven performance and to decide more accurately and objectively what and how to teach all students.

Ms. Grody and Ms. Ent Revisited

For purposes of our discussion, teachers can assume that Ms. Grody and Ms. Ent accepted the challenge to differentiate instruction. From the beginning, they understood that changing their approach to classroom instruction would not be easy. Therefore, they decided to use the goal-setting, monitoring, and evaluating system that composes the REACH blueprint. In recognizing the importance of starting small, they targeted reading because it is a skill all students need to be successful in school. Together, they used the REACH inventory to identify five goals. First, they decided to try using direct and strategic approaches to instruction using whole-class, small-group, and individualized formats. Second, they provided increased opportunities for all students to respond correctly during each lesson by pairing multilevel instruction with high-access instructional strategies. Third, they ensured sound structure and infused graphic organizers into each lesson. Fourth, they used curriculum-based measurement to monitor students' performance. Fifth, they worked to establish a positive classroom environment. Over time, they became an effective team--planning together, observing one another teach, offering corrective feedback, pouring over data, and keeping track of their goals. Ms. Grody and Ms. Ent have struggled with their share of trials and tribulations. Even so, it is gratifying to see the changes in their students with IEPs, such as fewer behavioral disruptions, less absenteeism, increased work completion, and higher scores on state-mandated tests.

Conclusion

Differentiating instruction is not a passing fad; it is a revolution--a fundamentally different way to teach students with diverse learning and behavioral needs Although putting differentiated instruction into practice poses a tremendous challenge, the time and effort are well spent. In taking a step-by-step approach to introducing the strategies and procedures we have discussed, students with disabilities will have cognitive access, be active participants, progress in the general curriculum, and, most important, achieve their educational outcomes. Aim high and use REACH to achieve the goals you have established for your students. See Appendix C for final suggestions of practices to anticipate and avoid while using the REACH framework.

APPENDIX A
The REACH Inventory: An Inventory of Differentiated Instruction Quality Indicators

General indicator and essential questions	Specific attitude and behavioral index	Strength (+)	Need (−)
R: Reflect on will and skill; the teacher variable. What about me? How will I be?	Knowledge about teaching and learning is based on up-to-date research		
	Day-to-day attitude toward learners with differing abilities is positive		
	Aware of misconceptions about differentiating instruction		
	Has adequate knowledge		

	to change
	Resources are readily available to support change
	Professional support is available to guide ongoing change
	Reasonable goals are identified to guide change
	Plan is established to monitor change
	Measures are in place to evaluate change
	Knowledge of teaching preferences and biases is accurate
	School and classroom cultures value diversity
	School and classroom environments are positive and respectful
	Individual differences are celebrated
E: Evaluate the curriculum; the content variable. What content is there? Why should they care?	Big curriculum ideas are identified in each content area
	Has knowledge of standards and curriculum guides (previous, subsequent, and current)
	Standards for each content area are organized within prescribed grade- level curriculum
	An adjusted pacing guide is created
	Student surveys are conducted
	Decisions are made about differing levels of task completion within a lesson or unit in each content area
A: Analyze the learners; the learner variable. Who are the learners? Who is on the back burner?	Learning profiles are constructed for the group in each content area (academic and social or emotional or behavioral)
	Learning profiles are constructed for each student in each content area (academic and social or emotional or behavioral)
	Readiness, interests,

preferences, strengths, learning needs, stages of learning are evaluated

Group dynamics are evaluated (e.g., competitive vs. cooperative)

Individual student characteristics are considered.
  Who needs enrichment?
  Who needs supplemental instruction or remediation?
  Who has an Individualized Education Program?

Grouping plans are developed (curricular vs. managerial)

The spread and distribution of student performance in the classroom is identified in each content area

C: Craft research-based lessons; the instruction variable. What methods fit? Creating lessons that hit!	Varied models are used to guide teaching and learning throughout the day (e.g., direct instruction, strategic instruction, constructivist approaches, jurisprudential inquiry)
	Multiple learning experiences, activities, and assignments are used to support lessons and units (e.g., multilevel-learning centers, project-based learning, cooperative learning)
	The physical environment is engineered to promote success (e.g., rows, desk clusters, circle or U-shape configuration); environment is language- and print-rich
	Safe, positive, and inviting learning climate is established (e.g., clearly stated

expectations, higher rate of praise to corrective teacher talk [4:1 or 5:1])

Instructional formats are varied (e.g., whole class, small group, one-to-one tutoring)

Flexible grouping is used (e.g., heterogeneous, homogeneous, cross-age, between-class, within-wide class)

Sound lesson structure is evident (beginning, middle, end)

Visual supports (e.g., graphic organizers, multimedia presentations, video, models, real objects, photographs, diagrams, handouts, posters, whiteboards, outlines, pictures) are used in instruction

Instructional pace is varied (brisk vs. slow)

High rate of opportunities for correct student responding (opportunities to respond) is evident using a variety of high access instructional strategies

Peer-assisted learning strategies (PALS) are incorporated (class-peer tutoring)

Frequent, immediate, and instructive feedback is provided

Accommodations and modifications are offered based on individual student need

Enrichment or supplemental instruction opportunities are readily available

Assistive technology is used and encouraged

Text materials of varying difficulty are offered

Manipulative materials are readily available to all students

An array of differing

	prompts and cues is paired with oral and written directions Multilevel or overlapping instruction is used High-choice conditions based on interest and challenge are offered Questioning is planned strategically and adjusted spontaneously Critical connections are facilitated (e.g., prior knowledge, real-world need to know)
H: Hone in on the data; the assessment variable. How did it go? How will I know?	A variety of summative assessments is used to guide judgments about curriculum and instruction An array of formative assessments is used to make sound instructional decisions Formal assessments are used annually to measure large changes in student performance Informal assessments, including curriculum-based measurements, are used routinely to monitor small changes in student performance Multimethod assessments are administered to the group or class to determine students' mastery of subject-specific content Multimethod assessments are administered to individual students to evaluate strengths and needs Teacher assessments (self, peer) are used to guide reflection and improve classroom practice Student assessments (peer, self) are used to offer support and feedback to all learners

Professional Resources on Differentiating Instruction

Books

1. Differentiated Instruction for Students with Learning Disabilities: Best Teaching Practices for General and Special Educators, by William Bender.

This book provides ideas, examples, and strategies for implementing up-to-date differentiated instruction when working with students with learning disabilities.

Cost: Paperback $32.95, Hardcover $69.95; Available from http://www.CorwinPress.com

2. Curriculum Mapping for Differentiated Instruction K-8, by Michelle Langa and Janice Yost.

This guide provides hands-on manipulatives to guide instructors though the use of curriculum mapping and instructional planning in the classroom.

Cost: Paperback $27.95, Hardcover $61.95; Available from http://www.CorwinPress.com

3. Differentiated Instructional Strategies in Practice: Training, Implementation, and Supervision, by Gayle Gregory.

This book has a variety of strategies for teachers to use when differentiating instruction in the classroom.

Cost: Paperback $25.95, Hardcover $57.95; Available from http://www.CorwinPress.com

4. Differentiation in Practice: A Resource Guide for Differentiating Curriculum, Grades K-5, by Carol Ann Tomlinson and Caroline Cunningham Eidson.

This guide provides teachers with lesson plans, units, and materials they can use to carry out differentiated instruction in the K-5 classroom.

Cost: Paperback $25.95; Available from http://www.NPRinc.com

5. Differentiation in Practice: A Resource Guide for Differentiating Curriculum, Grades 5-9, by Carol Ann Tomlinson and Caroline Cunningham Eidson.

This guide provides teachers with lesson plans, units, and materials they can use to carry out differentiated instruction in the 5th-9th grade classroom.

Cost: Paperback $29.95; Available from http://www.NPRinc.com

6. Differentiation in Practice: A Resource Guide for Differentiating Curriculum, Grades 9-12, by Carol Ann Tomlinson and Cindy A. Strickland.

This guide provides teachers with lesson plans, units, and materials they can use to carry out differentiated instruction in the 9th-12th grade classroom.

Cost: Paperback $31.95; Available from http://www.NPRinc.com

7. Differentiated Instruction Guide for Inclusive Teaching, by David E Riley and Anne M. Moll.

This book offers a simple approach that helps teachers to carry out a variety of differentiated instructional approaches in the classroom. Practitioners will find the assessment plans and the overview of the general education curriculum especially helpful. Cost: Paperback $29.95; Available from http://www.NPRinc.com

8. Instructional Strategies for Differentiated Learning, by Wendy Conklin.

This book is an easy reference for a teacher that provides current research-based approaches to differentiating instruction that could easily be put into classroom practice.

Cost: Paperback $19.99; Available from http://www.NPRinc.com

9. Drumming to the Beat of Different Marchers: Finding the Rhythm for Differentiated Learning, by Debbie Silver and Peter H. Reynolds.

This book offers teachers a quick reference to research-based approaches for differentiating instruction. The authors also include original poetry throughout the book.

Cost: Paperback $19.95; Available from http://www.NPRinc.com

10. Differentiating the High School Classroom, by Kathie Nunley.

This book offers practical advice to help teachers overcome the obstacles they may face when attempting to carry out differentiated instruction in the classroom.

Cost: Paperback $29.95; Available from http://www.NPRinc.com

11. The Teacher's Toolbox for Differentiating Instruction, by Linda Triton.

The information presented in this book provides teachers with multiple approaches to differentiating instruction in all academic content areas.

Cost: Paperback $39.95; Available from http://www.NPRinc.com

Multimedia Kits

1. Differentiated Instruction Multimedia Kit (includes DVD/VHS, companion book, and facilitators' guide).

This multimedia collection provides up-to-date information about differentiated instruction and is designed to support a school district's professional development program on the topic.

Cost: $299.95; Available from http://CorwinPress.com

DVDs

1. Differentiating Instruction to Meet the Needs of All Students

There are two DVDs in this set. Each one is 42 minutes long and together they offer a variety of assessment strategies to help secondary teachers understand the importance of differentiating instruction in the classroom.

Cost: $359.00; Available from http://www.insight-media.com

2. Differentiating Instruction for Students With Learning Disabilities

This DVD provides a variety of effective learning strategies teachers and school leaders can put into practice to improve instruction for students with learning disabilities. Some of the strategies include differentiating assessment, self-monitoring, and scaffolding. Cost: $289.00; Available from http://www.insight-media.com

3. Assistive Technology: A Way to Differentiate Instruction for Students With Disabilities

This DVD includes content describing and demonstrating appropriate methods for selecting assistive technology for all students.

Cost: $159.00; Available from http://www.insight-media.com

4. The Common Sense of Differentiation: Meeting Specific Learner Needs in the Regular Classroom

This DVD offers viewers glimpses into K-12 classrooms where differentiated instruction is in practice and includes teachers' success stories.

Cost: $549.00; Available from http://www.insightmedia.com

5. Differentiated Instruction and the English Language Learner

This DVD explores with viewers a variety of diverse classrooms and discusses how to create a classroom that will meet national requirements.

Cost: $159.00; Available from http://www.insight-media.com

6. Differentiated Instruction Practice DVD Series: Differentiated Instruction: A Focus on Inclusion and Differentiated Instruction: A Focus on the Gifted.

Both DVDs present content exploring the past and present practices associated with differentiated instruction while also offering a variety of practices that could be carried out in the classroom.

Cost: Two DVDs at $129.00 each; Available from http://www.NPRinc.com

7. Applied Differentiation: Making It Work in the Classroom

The information shared in this DVD helps teachers and administrators realize the simplicity of implementing differentiated instruction in the classroom.

Cost: Elementary $645.00, Secondary $645.00; Available from http://www.NPRinc.com

CD-ROMs

1. Differentiated Instruction in Action

This CD-ROM offers teachers a variety of views and approaches regarding differentiated instruction presented by 13 leading experts in the field.

Cost: $199.00; Available from www.insight-media.com

VHS

1. Differentiated Instruction With Small-Group Instruction

This video provides teachers with 25 small-group activities reflecting differentiated approaches to instruction.

Cost: $239.00; Available from http://www.insight-media.com

2. Differentiated Instruction Practice Video Series: Differentiated Instruction: A Focus on Inclusion and Differentiated Instruction: A Focus on the Gifted.

Like the DVD version, these videos present content exploring the past and present practices associated with differentiated instruction while also offering a variety of practices that could be carried out in the classroom.

Cost: Two videos at $129.00 each; Available from http://www.NPRinc.com

3. Applied Differentiation: Making it Work in the Classroom

Like the DVD, this video version helps teachers and administrators realize the simplicity of implementing differentiated instruction in the classroom.

Cost: Elementary $645.00, Secondary $645.00; Available from http://www.NPRinc.com

4. A Visit to a Differentiated Classroom

This video allows viewers to peer inside a 3rd or 4th grade multiage classroom and showcases how the teacher uses differentiated instruction.

Cost: $170.00; Available from http://www.NPRinc.com

5. At Work in the Differentiated Classroom

The content offered in each video provides teachers information they need to know to successfully differentiate classroom instruction. The developers also include a variety of classroom scenes for teachers illustrating how-to models for carrying out the approaches in their classrooms.

Cost: Tape 1 (Planning Curriculum and Instruction) $210.00, Tape 2 (Managing the Classroom) $210.00, Tape 3 (Teaching for Learner Success) $210.00; Available from http://www.NPRinc.com

APPENDIX C
What to Anticipate and Avoid When Using REACH to Differentiate Instruction

Framework	Anticipate	Avoid
R: Reflect on will and skill	Anticipate the need to ask for support from administrators and colleagues because you will need it.	Avoid viewing differentiated instruction as simply another educational fad.
E: Evaluate the curriculum	Anticipate the need to always	Avoid assuming that a

	begin with the end in mind.	differentiated approach to curriculum and instruction will only benefit the students who are struggling or performing poorly.
A: Analyze the learners	Anticipate the need to become a keen observer and to continually collect data about your students' strengths, needs, interests, and preferences.	Avoid confusing students making their own choices on projects with differentiated instruction.
C: Craft research-based lessons	Anticipate that there are many evidence-based ways to differentiate instruction.	Avoid trying to begin by simultaneously differentiating instruction in all curriculum content areas.
H: Hone in on the data	Anticipate the need to make decisions about differentiated instruction on the basis of ongoing analysis of summative and formative assessment data.	Avoid overrelying on group-administered achievement-test data to make sound educational decisions.

REFERENCES

Abell, M., Bander, D., & Simmons, T. (2005). Access to the general curriculum: A curriculum and instruction perspective for educators. Intervention in School and Clinic, 41, 82-86.

Access to the general curriculum: Questions and answers. (2001). Teaching Exceptional Children, 34, 84-85.

Bagozzi, R., & Warshaw, P. (1992). An examination of the etiology of the attitude-behavior relation for goal-directed behaviors. Multivariate Behavioral Research, 27, 601-634.

Barr, C. R. (1973). Instructional pace differences and their effect on reading acquisition. Reading Research Quarterly, 9, 526-554.

Baumgartner, T., Lipowski, M., & Rush, C. (2003). Increasing reading achievement of primary and middle school students through differentiated instruction. Unpublished doctoral dissertation, Saint Xavier University, Chicago.

Benjamin, A. (2006). Valuing differentiated instruction. Education Digest, 72, 57-59.

Berdine, W. (2003). The president's Commission on Excellence in Special Education: Implications for the special education practitioner. Preventing School Failure, 47(2), 92-95.

Bond, R., & Castagnera, E. (2006). Peer supports and inclusive education. Theory Into Practice, 45, 224-229.

Brimijoin, D., Marquissee, E., & Tomlinson, C. A. (2003). Using data to differentiate instruction. Educational Leadership, 60, 70-73.

Brosvic, G., Dihoff, R., Epstein, M., & Cook, M. (2006). Feedback facilitates the acquisition and retention of numerical fact series by elementary school students with mathematics learning disabilities. Psychological Record, 56, 20-35.

Chapman, C., & King, R. (2005). Eleven practical ways to guide teachers toward differentiation (and an evaluation tool). Journal of Staff Development, 26(4), 20-25.

Chard, D., Vaughn, S., & Tyler, B. (2002). A synthesis of research on effective interventions for building reading fluency with elementary students with learning disabilities. Journal of Learning Disabilities, 25, 386-406.

Council for Exceptional Children. (1987). Standards and guidelines for curriculum excellence in personnel preparation programs in special education. Reston, VA: Author

Dion, E., Morgan, P., Fuchs, L. S., & Fuchs, D. (2004). The promise and limitations of reading instruction in the mainstream: The need for a multilevel approach. Exceptionality, 12, 163-173.

Duffy, M., & Keller, C. (2005). "I said that?" How to improve your instructional behavior in just 5 minutes per day through data-based self-evaluation. Teaching Exceptional Children, 37, 36-39.

Eagly, A. H., & Chaiken, H. B. (1993). The psychology of attitudes. Fort Worth, TX: Harcourt.

Education of All Handicapped Children Act (EHCA) of 1975, Pub. L. No. 9,1-142, [section]2, 89 Stat. 77. (1975).

Edwards, C., Carr, S., & Siegel, W. (2006). Influences of experiences and training on effective teaching practices to meet the needs of diverse learners in schools. Education, 124, 13.

Elbaum, B., Vaughn, S., Hughes, M., & Moody, S. (1999). Grouping practices and reading outcomes for students with disabilities. Exceptional Children, 65, 399-415.

Ellis, E. S., & Rock, M. L. (2001). Makes sense strategies: Connecting teaching, learning, and assessment. Tuscaloosa, AL: Masterminds.

Fahey, J. (2000). Who wants to differentiate instruction? We did ... Educational Leadership, 58, 70-72.

Feldman, K., & Denti, L. (2004). High-access instruction: Practical strategies to increase active learning in diverse classrooms. Focus on Exceptional Children, 36(7), 11.

Fisher, D., & Frey, N. (2001). Access to the core curriculum: Critical ingredients for students. Remedial and Special Education, 22, 148-157.

Fisher, D., Frey, N., & Williams, D. (2003). It takes us all. Principal Leadership, 4(3), 41-44.

Friend, M., & Bursick, W. (1999). Including students with special needs: A practical guide for classroom teachers (2nd ed.). Upper Saddle River, NJ: Allyn & Bacon.

Fuchs, D., Fuchs, L., Al Otaiba, S., Thompson, A., Yen, L., McMaster, K., et al. (2001). K-pals: Helping kindergartners with reading readiness: Teachers and researchers in partnerships. Teaching Exceptional Children, 33, 78-80.

Gable, R. A., Hester, P. P., Rock, M. L., & Hughes, K. (2007). Another look at teacher use of classroom rules, praise, and ignoring. Manuscript in preparation.

Gamoran, A., & Weinstein, M. (1998). Differentiation and opportunity in restructured schools. American Journal of Education, 106, 385-415.

Garderen, D., & Whittaker, C. (2006). Planning differentiated, multicultural instruction for secondary inclusive classrooms. Teaching Exceptional Children, 38, 12-20.

George, P. (2005). A rationale for differentiating instruction in the regular classroom. Theory Into Practice, 44, 185-193.

Gregory, G., & Chapman, C. (2002). Differentiated instructional strategies: One size doesn't fit all. Thousand Oaks, CA: Corwin Press.

Guskey, T. (2005). Mapping the road to proficiency. Journal of Educational Leadership, 63, 32-38.

Haager, D., & Klingner, J. K. (2005). Differentiating instruction in inclusive classrooms. Columbus, OH: Merrill.

Hastings, N., & Schwieso, J. (1995). The effects of seating arrangements on task engagement in primary classrooms. Educational Research, 37, 279-291.

Hendrickson, M., & Gable, R. (1997). Collaborative assessment of students with diverse needs: Equitable, accountable, and effective grading. Preventing School Failure, 41(2), 159-163.

Hertzog, N. (1998). Open-ended activities: Differentiation through learner responses. Gifted Child Quarterly, 42, 212-227.

Individuals With Disabilities Education Act (IDEA) of 2004, Pub. L. 108-446, 20 U.S.C. [section]1400 et. seq. (2004).

Kavale, K., Hirshoren, A., & Forness, S. (1998). Meta-analytic validation of the Dunn-and-Dunn model of learning-style preferences: A critique of what was Dunn. Learning Disabilities Research and Practice, 13, 75-80.

Kendzierski, D. (1990). Decision making versus decision implementation: An action control approach to exercise adoption and adherence. Journal of Applied Social Psychology, 20(1), 27-45.

Lapkoff, S., & Li, R. (2007). Five trends for schools. Educational Leadership, 64, 8-15.

Lawrence-Brown, D. (2004). Differentiated instruction: Inclusive strategies for standards-based learning that benefit the whole class. American Secondary Education, 32, 34-62.

Lewis, S., & Batts, K. (2005). How to implement differentiated instruction? Adjust, adjust, adjust. Journal of Staff Development, 26(4), 26-31.

Lipsky, D. (2005). Are we there yet? Learning Disability Quarterly, 28, 156-158.

Mastropieri, M., & Scruggs, T. (2000). The effectiveness of mnemonic instruction for students with learning and behavior problems: An update and research of synthesis. Journal of Behavioral Education, 10, 163-173.

McLeskey, J., & Waldron, N. (2000). Inclusive schools in action: Making differences ordinary. Alexandria, VA: Association for Supervision and Curriculum Development.

McTighe, J., & Brown, J. (2005). Differentiated instruction and educational standards: Is detente possible? Theory Into Practice, 44, 234-244.

McTighe, J., & O'Connor, K. (2005). Seven practices for effective learning. Educational Leadership, 63, 10-17.

Munk, D., & Bursuck, W. (2003). Grading students with disabilities. Educational Leadership, 61, 38-43.

Neill, M., Guisbond, L., & Schaeffer, B. (2004). Failing our children. The National Center for Fair and Open Testing. Retrieved November 19, 2007, from http://www.fairtest.org/Failing_Our_ Children_Report.html

Noble, T. (2004). Integrating the revised Bloom's taxonomy with multiple intelligences: A planning tool for curriculum differentiation. Teachers College Record, 106, 193-211.

No Child Left Behind Act of 2001, Pub. L. No. 107-110, [section] 115, Stat. 1425-2094. (2001).

Nordlund, M. (2003). Differentiated instruction: Meeting the educational needs of all students in your classroom. Lanham, MD: Scarecrow Education.

Odgers, S., Symons, A., & Mitchell, I. (2000). Differentiating the curriculum through the use of problem solving. Research in Science Education, 30, 289-300.

Olenchak, R. (2001). Lessons learned from gifted children about differentiation. Teacher Educator, 36, 185-195.

Orlich, D. C., Harder, R. J., Callahan, R. C., & Gibson, H. W. (2004). Teaching strategies. A guide to better instruction (6th ed.). Boston: Houghton Mifflin.

Parsons, C., & DeLucia, J. (2005). Decision making in the process of differentiation. Learning & Leading With Technology, 33, 8-10.

Price, K. M., & Nelson, K. L. (2007). Planning effective instruction: Diversity responsive methods and management (3rd ed.). Belmont, CA: Thomson.

Quenemoen, R., Lehr, C., Thurlow, M., & Massanari, C. (2001). Students with disabilities in standards-based assessment and accountability systems: Emerging issues, strategies, and recommendations (Report No. H326G000001). Washington, DC: National Center on Educational Outcomes. (ERIC Document Reproduction Service No. ED452654)

Sadker, M., & Sadker, D. (2006). Questioning skills. In J. Cooper (Ed.), Classroom teaching skills (8th ed.; pp. 1-398). Boston: Houghton Mifflin.

Sapon-Shevin, M. (2005). "Afterward" in the critical middle school reader. New York: Routledge.

Schumm, J., & Vaughn, S. (1991). Making adaptations for mainstreamed students: General classroom teachers' perspectives. Remedial and Special Education, 12, 18-27.

Schumm, J., & Vaughn, S. (1995). Meaningful professional development in accommodating students with disabilities: Lessons learned. Remedial and Special Education, 16, 344-353.

Schumm, J., Vaughn, S., & Leavell, A. (1994). Planning pyramid: A framework for planning for diverse student needs during content area instruction. Reading Teacher, 47, 608-615.

Sternberg, R., & Zhang, Z. (2005). Styles of thinking as a basis of differentiated instruction. Theory Into Practice, 44, 245-253.

Sutherland, K., & Wehby, J. (2001). Exploring the relationship between increased opportunities to respond to academic request and the academic and behavioral outcomes of students with emotional behavior disorders (EBD). Remedial and Special Education, 22, 113-121.

Swanson, L. (2001). Searching for the best model for instructing students with learning disabilities. Focus on Exceptional Children, 34(2), 1-15.

Thoureau, H. D. (1949). Walden. New York: Houghton Mifflin.

Thurlow, M. (2002). Positive educational results for all students: The promise of standards-based reform. Remedial and Special Education, 23, 195-202.

Thurlow, M. (2005). Educating students with disabilities: Do you pass the test? Principal Leadership, 6(4), 12-15.

Thurlow, M., Moen, R., & Altman, J. (2006). Annual performance reports: 2003-2004 state assessment data. Minneapolis: University of Minnesota, National Center on Educational Outcomes.

Tieso, C. (2001). Curriculum: Broad brushstrokes or paint-by-the-numbers? Teacher Educator, 36, 199-213.

Tieso, C. (2003). Ability grouping is not just tracking anymore. Roper Review, 26, 29-36.

Tieso, C. (2005). The effects of grouping practices and curricular adjustments on achievement. Journal for the Education of the Gifted, 29, 60-89.

Tomlinson, C. A. (1999). Mapping a route toward differentiated instruction. Educational Leadership, 59, 12-16.

Tomlinson, C. A. (2000a). Differentiated instruction: Can it work? Educational Digest, 65(5), 25-31.

Tomlinson, C. A. (2000b). Reconcilable differences: Standards-based teaching and differentiation. Educational Leadership, 58, 6-11.

Tomlinson, C. A. (2001). Differentiated instruction in the regular classroom: What does it mean? How does it look? Understanding Our Gifted, 14(1), 3-6.

Tomlinson, C. A. (2003). Teaching all students. Educational Leadership, 61, 6-87.

Tomlinson, C. A. (2004) Sharing responsibility for differentiating instruction. Roper Review, 26, 188.

Tomlinson, C. A. (2005a). Traveling the road to differentiation in staff development. National Staff Development Council, 26(4), 8-12.

Tomlinson, C. A. (2005b). Differentiated Instruction. Theory Into Practice, 44, 185-273.

U.S. Department of Education. (2005). Twenty-sixth annual report to congress on IDEA. Washington, DC: Author.

VanSciver, J. (2005). Motherhood, apple pie, and differentiated instruction. Phi Delta Kappan, 86, 534-535.

Voltz, D., & Fore, C. (2006). Urban special education in the context of standards-based reform. Remedial and Special Education, 27, 329-336.

Voltz, D., Sims, M., Nelson, B., & Bivens, C. (2005). A framework for inclusion in the context of standards-based reform. Teaching Exceptional Children, 35, 14-19.

Warshaw, P. R., Sheppard, B. H., & Hartwick, J. (1982). The intention and self-prediction of goals and behaviors (Working Paper No. 80-18, McGill University). Greenwich, CT: JAI Press.

Wormeli, R. (2005). Busting the myths about differentiated instruction. Principal Leadership, 5(7), 28-33.

Wright, J. (2005). Intervention ideas that really work. Principal, 85, 13-16.