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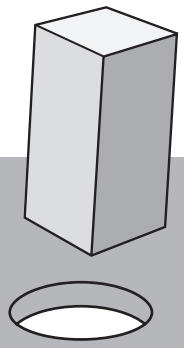

Chapter 1

Fair to All

The Mind-Set for Differentiated Instruction

Recall your days as a student. Did your teachers differentiate for you? Think carefully. If your teachers ever rephrased a question; extended a deadline; provided a few extra examples to help you understand something; stood next to you to keep your attention focused on the lesson; regrouped the class according to student interest, readiness, or the way students learned best; gave you a choice among assignments based on something they knew about you; or let you redo a test or project if at first you didn't succeed, they differentiated instruction. They may not have called it *differentiation* back then, but that's what good teachers did for us.

In a successful secondary school math class from today, we can find evidence of differentiated practice:

- Some students have done alternative problems based on yesterday's level of mastery prior to receiving the homework.
- Some students have preferential seating because of attention problems.
- The teacher moves physically closer to some students, using proximity to keep them focused.
- Desks are clustered, or if desks are in rows, they are movable for flexible grouping later in the lesson.
- Students are discussing difficult problems from last night's homework in small groups. Later, the teacher includes whole-class and independent work to meet other students' needs.

- Because the day's lesson focuses on advanced and abstract concepts and graphing, not basic calculations, the teacher allows students to use graphing calculators so that some students can maintain momentum instead of being bogged down by simple calculation and plotting errors. For now, the teacher wants to keep students focused on the new concept of the day.
- The teacher offers one student a second example of a math concept because the first one didn't clarify the concept for him.
- While the teacher assists a small group of students in the back of the room, other students who are struggling consult a list of "What to do when I'm stuck and the teacher is not available" ideas so they don't interrupt the small-group session.
- The teacher asks two students who have mastered the concepts to serve as graduate assistants for the class.
- The teacher provides a few moments for students to think reflectively about a prompt before guiding their thinking. Those students who need intrapersonal contact appreciate the time to think. Others benefit from learning how to think reflectively.

These are all examples of teaching in a fair and developmentally appropriate manner, that is, differentiating instruction.

It's an exciting time to be a teacher working with diverse young minds. We've learned more about how the brain learns and about differentiated practices in the last thirty years than in all of civilization put together. Those advancements present much good news for education but also some cautions. First, what we know about the brain is still being tested. Assertions should be preceded by terms such as *seems to be* or *as of our understanding today*. Cognitive theory and neuroscience are ever-changing fields. What we quote as fact this year may be proven otherwise in the next five years. It's difficult to keep track of all the new developments, so we are indebted to those who make sense of the research and share it with us—Thomas Armstrong, William Bender, Richard Cash, Art Costa, Marian Diamond, Howard Gardner, Diane Heacox, Eric Jensen, Robert Marzano, LeAnn Nickelsen, Debra Pickering, Spencer Rogers, David Sousa, Marilee Sprenger, Robert Sylwester, Daniel Willingham, and Pat Wolfe, among others.

So how do we strike the right balance between adapting the research to fit our classrooms and preserving practices we know to be effective? We don't want to drop everything for the sake of an interesting conjecture by a cognitive theorist. It's a big leap from observing the behavior of neurotransmitters in our synapses to shifting how we display information on the interactive instructional display at the front of the room.

Yet, there's enough positive correlation between promising cognitive science principles and classroom successes to warrant further experimentation and discussion. Strategic application of cognitive principles is one of the best ways to differentiate effectively. For example, to provide scaffolding for students who are struggling, we sometimes provide targeted texts, labs, field trips, video tutorials, and graphic organizers in advance of the learning

experiences. These steps not only prime their minds to identify the salient information but also structure their minds for meaningful management and retrieval. Other times, we don't identify varied tasks for high-, medium-, or low-functioning groups; instead, we consider whether we've taught a lesson in a way that will be best processed by the brain.

The bibliography contains suggestions for further reading about cognitive theory and differentiated instruction. To ensure a common frame of reference here, let's review the definition and rationale for differentiated practices.

Definition

Differentiated instruction is a collection of best practices strategically employed to maximize students' learning, including giving them the tools to handle undifferentiated experiences. With differentiated instruction, we use varied strategies, some or most of the time, for students who cannot learn what we intended from the general classroom approach. It is not purely individualized instruction, although we may need to provide that from time to time. Differentiated instruction is doing whatever it takes to ensure that our students can learn well. It's highly effective teaching.

If we accept this premise, then every aspect of our work, including our grading and assessment practices, should be developmentally appropriate—fair to all students—and should advance their understanding. We should consider suspect anything that does not further this aim.

What would happen if we differentiated for a particular student every single time he needed it, kindergarten through twelfth grade? (Notice the clarification that differentiation is done as needed, not all the time.) What kind of students would graduate from our high schools? Students would be highly competent, independent thinkers. They would be considerate of others, take positive risks, comfortably wrestle with difficult problems, and think flexibly. Such students would be well prepared for the world beyond high school.

What is it about differentiated practice that yields those results? Students who benefit from differentiated instruction develop competence. They understand themselves as learners, and because of that, they are better equipped to advocate for themselves. They see that classmates are at different points on the same journey and are not threatened by these differences. Rather, they recognize each other's strengths, as well as their struggles. Students consider themselves beginners at some things and experts in other areas, with variance as a natural part of learning.

Looking at these traits, you'd think differentiated practice leads to an almost utopian, model citizen. Could there be a downside to so much differentiation? For example, could students become overly dependent on others to differentiate for them in the real world? After all, since age five, adults have always made it easier for them to learn and succeed.

Answering the Challenges

There's the rub: differentiated instruction does not mean we make learning easier for students. Instead, it provides the appropriate challenges at strategic moments in students' development to help them thrive. Because we know our students so well, we know what buttons to push. We teach in a responsive manner: if students are becoming too dependent on teachers, we do whatever it takes to create personal autonomy within them. When we teach in the way a student's mind best processes information and skills, he finds the lessons compelling. Classroom management gets easier; appropriately challenged students are cooperative and see the value of the experiences provided.

Some educators and parents still see differentiated instruction and assessment as a crutch. They are correct but not in the negative sense they intend. In their minds, a crutch refers to something leaned on too much. If teachers always provide alternate means to the same destination, they reason, students will never learn to do as others do. They will forever be dependent.

Those conjectures just aren't true. Let's look at some real examples of how differentiation has enabled people to learn, participate, and be accountable for meeting high standards. Consider Canada's Terry Fox, who lost his right leg to bone cancer at age eighteen and then three years later started running coast to coast to raise money for cancer research. Although the cancer spread to his lungs and stopped him from completing the journey, Fox's campaign raised more than $24 million and inspired millions of people around the world. Was his marathon any less remarkable because he used an artificial leg?

What about American actor Christopher Reeve, who became a quadriplegic after being thrown from a horse during an equestrian competition? Reeve required a wheelchair and a breathing apparatus for the rest of his life but became an effective advocate for people with spinal-cord injuries and the advancement of stem cell research. Many people considered his latter-day achievements far more heroic than his previous work, which included portraying Superman in the movies. Did Reeve struggle more than an able-bodied man? Of course. But with accommodations, he achieved great things.

Shouldn't our students be able to make similar adjustments as needed?

What if students experience differentiated practices in middle or high school, yet in the next grade levels (high school and college, respectively), their teachers do not differentiate? Won't they be expecting varied learning approaches? When they don't receive them from their teachers, won't they become disabled? No. They will do well in the next grade levels, differentiated instruction or not, if they know the material of the earlier grade levels and they know themselves as learners. Differentiated approaches provide both of these in abundance when done well.

How then do we respond to the challenge from some educators who say, "We can't differentiate in middle school because they are not going to differentiate for students in high school; we have to get them ready for that"? Or, "We can't differentiate in high school because

they are not going to have differentiation in college, career training institutes, or the military" and on and on. Let me be blunt. What these educators are really saying is "Our students are going to be miserable and suffer through poor instruction later, so we need to make them miserable now and limit their learning here because they will have miserable and limited learning later." This is not a tenable position for highly accomplished, differentiating teachers. We don't sacrifice effective pedagogy because other teachers lack the professionalism or training to do right by students.

Here's a clarifying example: Two students are seated at the back of the classroom. One of them is nearsighted and cannot see anything clearly that is more than a few feet away. He wears thick eyeglasses to see long distances. The teacher asks both of the students to read, record, and learn the information written in small print on the front board on the opposite side of the room. To be equal, however, the teacher removes the nearsighted child's eyeglasses and asks both students to get started. The child needing eyeglasses squints but can't read anything on the board.

Did the teacher make it harder or easier for the nearsighted child? Most educators claim the teacher made it harder. On the contrary, however, the teacher made it much easier. We learn from cognitive scientists that the brain is a survival organ—it's out for its own self-preservation. Without his eyeglasses, the student has an excuse: He can cop out. Escape. When we return his eyeglasses, which are analogous to scaffolding (providing support) and differentiating, he is compelled to read the board and consider its content. He thrives. We didn't make it easier by providing him with his eyeglasses; we made it more demanding. Undifferentiated classes are the easy ones because the my-approach-or-nothing teacher conveys to students that they can coast or drop out if the lesson is not working for them. In differentiated classes, teachers know students so well that they know how to get students engaged with their learning, and they use those strategies. These classes are challenging. Students are held accountable, and they achieve more.

Is providing support and differentiation fair for both children? To answer this question, let's look at the two students' results on the next day's test: If we remove the eyeglasses, will both children have fair opportunities for success? No. If we don't provide the eyeglasses to the student who needs them, the grade he earns on the test is not accurate. The grade does not indicate his true mastery of the topic; he didn't have the tools to learn well. Not only did the child not learn but also any grade we give him will be distorted and cannot be used to document progress, provide feedback, or inform instructional decisions. By not differentiating, we defeated the whole purpose of education.

Some people believe differentiation leaves students ill prepared for standardized testing. Not so. Students will do well on standardized, undifferentiated tests if they have learned the material from class, and differentiated practices are the ways we maximize students' learning at every turn. Keep in mind that standardized tests can only sample learning, making observations about mastery inferential at best. Such tests are meant to look at trends and patterns for a school, not to be the sole diagnostic evidence for an individual student's or

teacher's performance. State and provincial policy makers want us to focus on our true goals: to teach students how to interpret graphs, obtain insight from historical events, understand the scientific processes of living organisms, incorporate a healthy diet and exercise into everyday life, and create the jarring beauty of music written with just the right dynamics. Anything we do to enable students to become their own advocates in this cause is worthy, and differentiated practices do just that.

What's Fair?

Just as we let students use their prescribed eyeglasses to read material in our classrooms, giving them a fair opportunity to see, we can offer fair support for learning in many ways. What about students who have visual-spatial challenges? We could allow them to use graph paper or to turn lined paper sideways so that numbers will line up in columns as they complete math problems. We could allow some students to use focus frames (Forsten, Grant, and Hollas 2002) with interlocking L's to direct their eyes while reading. We could allow some students to listen to their history textbooks on iTunes or on CD rather than having to read silently. In all these ways, students learn the material, and any assessments should accurately render their mastery, assuming there are no issues with the assessment formats and test protocols.

What is fair isn't always equal, and our goal as teachers is to be developmentally appropriate, not one size fits all. If we give a graphic organizer to four students who are struggling with text but not to their classmates who do not need it, we are still being fair. The same test will be given to all students at the end of the unit, and grades are legitimately reported in both groups. Although some tests are about procedures and processes, most tests are about essential understandings—knowledge, concepts, and skills—not how students learned the information.

Don't these accommodations make our students ill prepared for the working world? After all, the rest of life is not differentiated. Think again. Imagine a garage mechanic charged with fixing the timing in a car's engine. If the car is not a brand he's serviced or studied before, he could consult the manufacturer's manual or call the manufacturer directly. He could ask for guidance from a senior mechanic or possibly extend the deadline by talking with the customer.

Consider the military. On the surface, the armed forces seem fairly rigid, no-nonsense, with little tolerance for individual deviation or accounting for learning differences. Looking more closely, we see many examples of differentiated practices. When young recruits are learning how to take apart and reassemble an assault rifle in the field, for example, some will complete the job after four tries, while others might need nine or ten attempts. Some recruits will look at the manual, while others will concentrate on their trainer's words. Some recruits will need to practice on less complex firearms in clear daylight, while others can easily assemble more complex assault rifles in total darkness. Each of these approaches demonstrates differentiated practice.

How about surgery? Absolutely. We hope our surgeon differentiates. If she opens our bodies for surgery and finds something unexpected, she should be able to adapt, perhaps with another procedure, piece of equipment, or length of time to complete the task. Yes, the post–high school world is differentiated.

In that world, we all gravitate toward careers with tasks for which we have some proclivity. We don't spend an entire day working in our weak areas. In kindergarten through twelfth-grade schooling, however, we have to be good at everything everyone else is good at doing, on the same day, during the same hour, as indicated by the same testing instrument used by everyone else, regardless of our background, level of family support, and other individualizing factors. This is the inappropriate demand of a lockstep curriculum sequence by age, sharpened by the human need to impose order and schematics on something inherently disorderly and messy to prove accountability. Not the best stuff for students' post–high school success.

What if we never differentiated instruction for students who needed it, kindergarten through twelfth grade? What kind of students would graduate from our high schools?

It's a trick question. In all likelihood, they wouldn't graduate. If differentiated instruction advances a student's learning, then the lack of differentiated instruction puts competence and graduation in jeopardy.

Commit to Sound Grading Practices

What students learn is the greatest testimony for our work as teachers. Let's rally our assessment and grading energy around that. Differentiation provides focus and methodology. It is a compelling, highly effective approach that is equal parts technical dexterity and professional can-do attitude. That commitment to all students and their learning extends to grading and assessment, and this point is key: we commit to students and to sound grading practices. Unsuccessful teachers deny their own involvement in their students' success or lack thereof. In 2005, secondary school educator Ellen Berg commented via a personal e-mail exchange:

> In my experience, there are teachers who put 100 percent of the responsibility on the kids, teachers who share the responsibility, and teachers who take 100 percent of the responsibility. Teachers in that middle category seem to be the most successful at my school.
>
> The thing is, if I took a look at my end grades and saw a huge percentage of Fs, I'd be disturbed. I'd look for causes (missing work, low scores, etc.) and figure out what types of strategies to try with those students. I am the teacher, and so it is up to me to teach the kids I have, be they unprepared, irresponsible, etc. . . . I'm not saying that's easy, but if what we're doing isn't getting us the desired results, doing the same thing over and over and expecting something different is not only nonproductive, it creates stress and unhappiness in our lives.

Most teachers who dive into differentiation's mind-set and practices feel liberated, not burdened. They breathe a little easier because they experience students' learning as a direct result of their decisions and at a level not easily attained through nondifferentiated practices. The concrete overshoes of cynicism and settling for less are cast off, replaced by hope and by students achieving every day.

Think back to the difficult grading decisions you've made in the past. Which paths do we take? The choices are rarely easy, but having a differentiated mind-set can illuminate the way. We sort through competing priorities and choose the most effective response.

If you are still struggling to accept the rationale for differentiation, this book will be difficult to embrace. However, if you have seen or are beginning to recognize the wisdom of practices that have been around since the Ancient Greeks, reading this book will be like visiting a good friend, one who affirms our efforts yet also pushes us to explore new territories in pursuit of our cause—student growth. Differentiated instruction is not a passing fad. It's good teaching, and it's here to stay. Let's hope we're wise enough to use it.

As Dr. Haim Ginott (1993) said two decades ago:

> I have come to the frightening conclusion that I am the decisive element in the classroom. It is my personal approach that creates the climate. It is my daily mood that makes the weather. As a teacher, I possess tremendous power to make a child's life miserable or joyous. I can be a tool of torture or an instrument of inspiration. I can humiliate or humor, hurt or heal. In all situations, it is my response that decides whether or not a crisis will be escalated or de-escalated, and a child humanized or dehumanized. I am part of a team of educators creating a safe, caring and positive learning environment for students and teaching them in a manner that ensures success because all individuals are capable of learning.

With this mind-set, let's connect the dots between our principles of differentiation, assessment, and grading and our practices in the classroom.