Applying
Differentiation
Strategies 2nd edition

Teacher's Handbook for Secondary

Wendy Conklin
Christi Sorrell

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Foreword

By Kathryn Lenz, Ph.D.

University of Denver, Colorado

Determine that the thing can and shall be done,
and then we shall find the way.

—Abraham Lincoln

New Beginnings with Differentiation

Each new school year offers excitement, hope, anticipation, and for some, apprehension. Students and educators, as well as parents, view the first day of school as a new beginning: a beginning for new learning, new friendships, and new understandings of our places in the world around us.

The first day of school is defined by its sensory story. There are the sights of new and familiar faces in revitalized and comfortable, and sometimes uncomfortable, surroundings. Eyes dart over bright, colorful bulletin boards with suggestions of topics and issues to be tackled. The sights of a new beginning are hints of opportunities for new growth. The warm smile of a favorite teacher and the nervous demeanor of a brand new teacher complete the first-day sights.

The smell of a pencil being sharpened tweaks our noses. The carpet cleaning soap wafts up from underfoot. The tables and desks gleam with furniture polish and the scent of lemon. The smells of school paste and crayons, the acrid smells in the chemistry lab, and the sharp sting of chlorine odor in the locker room all bring us back to the beginning of school. Our noses detect the faint aroma of lunch … Could it be hot dogs on the first day?

Our ears ring with the laughter of friends greeting each other. We hear parents calling out their good-byes. And, of course, bells, chimes, and buzzers round out the sounds of school. Sounds signal us to quiet time, recess, announcements, and learning. The bells summon us to begin the day, to begin the year.

These sensory experiences at the beginning of a new school year include the feelings the students bring. Feelings are very real at school, as real as the smells, the sounds, and the sights surrounding the classroom.

Coming into the school building at the beginning of the year is an alphabet soup of learners. Andy and Audrey bring feelings of disappointment to the first day of school because last year ended without much new learning. Andy finds reading confusing and sees no meaning in the endless letters on a page. Audrey has been reading since she was four years old, but she found no new learning in the textbook chosen by her literature teacher.

Carl and Casita carry the burden of being culturally different from most of their classmates and teachers. Nothing hanging from the walls or in the classrooms resembles anything

they see in their homes. Carl feels alone and alienated. Casita understands little English and sees nobody else who looks like her.

Flora and Franco are ready to learn. Flora tries very hard to understand math, but she gets mixed up when more than one mathematical operation is called for in a problem. Franco loves the patterns in math and cannot understand why he needs to do the repetition of homework when he already knows how to do the problems.

Mario and Maria live for sports. The after-school sports programs are the only reason Mario and Maria tolerate the other happenings during the school day. Making the necessary grade-point average to stay eligible for the team is the only motivation to study. The futures for these two sports-minded students lies in the next game, not career goals after high school.

Zena and Zachary come to school to sing and take part in musical productions. The academic parts of school are not important to them. Neither of them feel math or science will ever play a part in their theatrical lives. They wonder why they should be forced to learn chemistry when they plan to make it big on the stage in New York City.

Students like these will doubtless find their way into our classrooms this year. The positive news is that each learner has strengths that can be assessed and used as a foundation for learning. Using strengths to foster academic growth is key to differentiated instruction.

The beginning of the school year will set the tone for the entire year. New beginnings are chances to connect with students in new ways, listen with unbiased ears, and feel with understanding hearts. We start the new year together with students holding the vision that they can learn and grow. Let us begin!

That our songs are different is nowhere near as important as the fact that we all have a song to sing.

—Frank Siccone in Ford and Harris's

Multicultural Gifted Education (1999)

The Need to Differentiate

By Kathryn Lenz, Ph.D.

Diverse Subpopulations of Learners

Today, public school districts across the country are seeing a huge swing in the numbers of students representing minority populations. Recent research from Jonathan Kozol (2005) suggests that the increasing minority population has become an important issue. Diverse subpopulations of students exist across the country, not just on the coasts. It is a nationwide public school issue.

2005–2006 Enrollment Demographic Information

(Data listed as percentage of total school district population.*)

City	White	African American	Latino/ Hispanic	Asian	Other
Los Angeles	8.9	11.2	73.3	3.8	2.8
Atlanta	8.37	85.98	4.1	0.59	0.96
St. Louis	14.1	81.8	2.3	1.7	0.3
Philadelphia	13.3	64.4	15.8	5.6	0.3
Detroit	3.0	90.73	5.1	0.8	0.3
Chicago	8.1	48.6	37.6	3.2	2.5
Oakland	6.3	40.0	33.2	16.3	4.2
Cleveland	16.7	70.3	10.4	0.3	2.0
New York City	14.3	33.1	39.0	13.5	0.0
Dallas	5.1	29.7	64.1	0.9	0.2

All information was gathered using individual school-district websites.

Such diversity suggests that one-size-fits-all curriculum and instruction will not serve the diverse needs of students populating public schools. Teachers and administrators must work to understand students of varying racial, ethnic, and linguistic diversities. There is no longer a choice over whether or not to serve diverse learners. Now, the decision is *how* to serve diverse learners.

If we could shrink Earth's population to a group of precisely 100 people, with all existing human ratios remaining the same, it would look something like this:

► There would be 57 Asians, 21 Europeans, 14 people from the Western Hemisphere (North and South), and 8 Africans.

► Of these, 51 would be female and 49 would be male.

► In total, 70 would be nonwhite and 30 would be white. (Ford and Harris 1999)

Amy Klauke (1989) reports that patterns indicate that by the year 2010 about 38% of people under the age of 18 in the United States will be African American, Asian American, or Hispanic American. With this data in mind, teachers and staff members need

to become familiar with the cultures represented in their classrooms. With a better understanding of differences in the way students learn and live, acceptance of different ways to fairly serve students should evolve.

Student populations do not look or act like they did 50, or even 20, years ago. Educators and parents need to let go of what worked ten years ago in public school settings. Many teachers remember the good old days when one lesson plan per day per grade level was sufficient to meet the needs of all learners. That no longer works (if it really ever did). The torch has passed to a new generation of students, and educators must rise to the challenge of educating a myriad of diverse learners.

One viable way to reach students of various backgrounds is to differentiate the curriculum and instruction to fit new and different needs. The learning styles of Latino/Hispanic students may vary from the styles of white students. For example, many Latino/Hispanic families do not encourage competition among their children. So, the competitive nature of many public education settings does not resonate with these children. They feel bewildered by all the clamor to be the first and the best in the classroom setting. Educators must become aware of how the children of diverse cultures learn and differentiate their teaching styles to match the needs of diverse learners.

Donna Ford and John Harris (1999) describe four approaches to integrating multicultural content into the curriculum. In the first approach, "heroes, cultural components, holidays, and other discrete elements related to ethnic groups are added to the curriculum on special days, occasions, and celebrations." The second approach "consists of additions to the content, concepts, themes, and perspectives to the curriculum without changing its structure." In the third approach, "the basic goals, structure, and nature of the curriculum are changed to enable students to view concepts, events, issues, problems, and themes from the perspectives of diverse groups." Finally, in the fourth approach, "students identify important social problems and issues, gather pertinent data, clarify their values on the issues, make decisions, and take reflective actions to help resolve the issues or problem."

Poverty, Another Type of Diversity

Yet another diverse subpopulation of learners in America's schools is children of poverty. Nearly one-fourth of children in the United States live in poverty. Ruby Payne and her coauthors (2005) outline some key points to remember when working with populations in poverty. Here are five of the most important points:

▶ Poverty occurs in all races and in all countries.

▶ Economic class is a continuum.

▶ Generational poverty and situational poverty are different.

▶ We cannot blame children of poverty for being in poverty.

▶ We cannot support stereotypes and prejudices about the poor.

For teachers to better serve children of poverty, they must be aware of these issues and plan how to adapt environment and curriculum as well as instructional strategies to best

meet the students' needs. Children of poverty do not know formal language; they communicate in casual and intimate language. Therefore, they are often considered inappropriate or rude in school settings. Teachers must teach in formal language and then translate to casual language for better understanding (Payne 2007).

Survival in situations of poverty requires that one be nonverbal, sensory, and reactive. In school, we expect verbal, abstract, and proactive behavior. These are diametrically opposed, so teachers must realize the transitions that these children have to make in school situations. In other words, teachers need to focus more on what may be preventing students from learning (Payne 2007).

Jigsaw Puzzle

If educators look closely at their schools, they will begin to see a jigsaw puzzle of subpopulations. Each teacher, through pre-assessment and ongoing assessment, will see the "people pieces" of his or her classroom puzzle. Some people pieces fit together easily and comfortably, while other people pieces seem destined to stay outside the picture until a clear understanding of their edges and the segment of the picture to which they can contribute are clearly understood. The people pieces of the classroom fit together only when the teacher is aware of the rough edges that need differentiation to allow for a perfect fit and finally for completion of the puzzle.

The demographic changes in the United States necessitate changes in how we educate children. The following are differentiation strategies that promote learning for subpopulation groups:

▶ Content differentiation including curricular resources reflecting multiculturalism

▶ Instructional strategies modified to match learning styles of diverse learners

▶ Product differentiation that allows students to show what they have learned through multicultural modes

▶ Learning environments created to affirm the cultural identities of all learners

The United States is the most diverse nation in the world. Communities across the nation and the school districts that serve them are being drastically affected by changing demographics. Learning to serve the students will require diligence and patience.

"De-tracking" America's Schools

In recent years there has been increased demand to eliminate tracking in America's public schools. The push to stop tracking increases even though some learners, among those designated learning impaired or those assessed with learning needs far beyond their ages or grade levels, demand special attention and even special groupings. Some learners are pulled out during the school day for special experiences either in a remedial fashion or in an enriched mode. But, the majority of any student's school day is spent in the "regular" classroom. The regular classroom is the common setting for most students most of the time. Regular classroom teachers must find ways to serve many different types of learners with many different kinds of needs within the confines of one classroom.

One of the guiding philosophies for serving students in the regular classroom is the philosophy of differentiation. Using differentiation as a foundation for planning and executing classroom instruction, teachers can serve the needs of students most of the time in the regular classroom. Of course, there are exceptions. Schools and districts also need specialists to serve those students whose needs are so disparate that they require specialized instruction outside of the regular classroom setting.

Using differentiation as the foundation for all school initiatives is a viable way to enhance learning for all students. As a foundation, differentiation may improve reading instruction, math instruction, science instruction, and social studies instruction at the readiness levels, learning style modes, and interest levels of all students. "De-tracking" learners provides regular classroom teachers the environment to serve all learners in one setting.

Drop-Out Situation

In a recent study from Civic Enterprises, it was found that of the nearly 470 dropouts surveyed from across the country, almost 50 percent said they left school because of boredom! Surveyed students revealed that school was not relevant to their lives or their planned career goals. Two-thirds of those surveyed said they would have worked harder in school if more had been demanded from them. And more than half dropped out of school just two years or less before their high school graduation. Many of the dropouts said they felt they could have graduated from high school with more challenging coursework, engaging classroom experiences, and some extra help (Bridgeland, DiIulio, and Morison 2006).

The Civic Enterprises data also showed that nearly half of all African American, Latino/Hispanic, and American Indian students fail to graduate from high school. Dropouts, then, are a national educational problem and a minority issue. Jim Shelton, the program director of the Education Division of the Bill & Melinda Gates Foundation, explains, "Our education system needs to respond by ensuring all students—no matter where they go to school—have access to the challenging, relevant, and supportive education to ensure their success in this tough new economy" (Bridgeland, DiIulio, and Morison 2006).

Differentiation theory promotes the integration of interest-based and learning-profile driven curriculum and instruction. Using interests and learning styles to guide instruction can be very motivating to students, thereby assuaging boredom. Might it be worth a try to hook potential dropouts through differentiated instruction?

Expectations for Students and Their Teachers

Expectations are the objectives and goals teachers hold for their students. Also, teachers have objectives and goals for their own growth as they progress through their careers. The Interstate New Teacher Assessment and Support Consortium states that a teacher who continually evaluates his or her own educational work understands where he or she needs to seek professional development opportunities. High expectations for self-growth may be reflected in high expectations for student growth (Council of Chief State School Officers 2007).

Robert Rosenthal and Lenore Jacobson (1968) first demonstrated the very powerful effect of teacher expectations on student achievement. Their study showed that randomly selected students assigned the label of high-potential learners did indeed show greater gains than their unlabeled classmates at year's end. The high expectations suggested by the false label empowered their teachers to expect more and as a result, the students achieved more! This became known as the self-fulfilling prophecy. Further research has resulted in more evidence to support the theory that when teachers expect all students to learn, all students achieve to a higher level than when teachers do not hold high expectations.

There are a number of potential sources of high or low student expectations. These sources, plus teacher biases, mesh together to yield teacher expectations for a student. The sources include the following: teacher beliefs, perceptions of student abilities and beliefs about intelligence, student characteristics, gender, ethnicity, social economic status, student behaviors, test scores and previous achievement (Alvidrez and Weinstein 1999; Baron, Tom, and Cooper 1985).

With research indicating that teacher expectations can greatly influence student achievement, what are teacher behaviors that are associated with high or low teacher expectations? Thomas Good (1987) suggested four avenues teachers use to convey expectations: socio-emotional climate, input, output, and affective feedback.

The socio-emotional climate of a classroom is deemed positive when the teacher sets up a friendly environment. The teacher feeds the ambiance with a smiling, openly accepting demeanor. If a student is the recipient of a friendly, smiling attitude from the teacher, usually the teacher holds high expectations for learning in that student.

Input deals with the amount of teacher-student interaction. Is the student's desk close to the teacher's desk so that frequent, positive interaction is easily accomplished? Input also suggests that the teacher offers difficult and varied educational opportunities. If lessons are too easy, obviously the teacher has low expectations for the student.

Output is the interaction between teacher and student where the teacher is the originator of the action. For example, is the level of feedback sufficiently detailed with the intent to instigate further student involvement? Output also includes the frequency with which the student is called upon during class discussions. Frequent requests from a student for answers during a class discussion suggests high expectations.

Affective feedback includes the amount of praise and criticism the teacher offers to the student. If a teacher gives solid, well-grounded criticism, the implication is that the teacher feels the student can grow from the suggestions, thereby, holding high expectations for the student.

Ability grouping and tracking can be self-fulfilling prophecies. Expectations, high or low, are implied by the ability group a teacher places a child in. It can be extremely difficult for a student to leap out of an ability-group placement.

Gender expectations enter the picture, too. Some teachers hold lower expectations in math and science for female students. As a result of low expectations in these two subject areas, girls are often treated differently, held to lower expectations, and may be discouraged in their selection of career paths.

Deborah Stipek (2002) suggests the following six teacher behaviors to avoid low expectations:

► Clearly communicate high expectations.

► Maintain high standards.

► Base expectations of students on data.

► Continually monitor and adjust expectations.

► Differentiate for high- and low-performing students only when needed.

► Never give up on a student!

Most, if not all, teachers want their students to grow at least a year under their care. Some learners may even grow more than a year. To accomplish this goal, teachers strive to find the right combination of "light" and "heat" to motivate students to strive for excellence. Light is the motivation and positive reinforcement that students need to grow. Heat is the pressure and critique that is sometimes needed to encourage students to keep trying. Expectations for student achievement guide planning and execution of educational planning.

Differentiation may be the key to helping all kinds of learners with different learning styles, diverse interests, and varied levels of readiness work hard and gain success in all the content areas. Adaptations of content, process, product, and environment are made to match a student's readiness level, learning styles, and interests to promote success. Differentiation is the formula to success and excellence. Differentiation reflects teacher and parental expectations.

A research study called Project Breakthrough examined the achievement of lower-income gifted students. Project Breakthrough was funded through a Javits Gifted and Talented Education Grant. The object of the study was to watch for positive student achievement during the application of gifted-education curricular materials. The Center for Gifted Education at the College of William and Mary developed language arts and science curriculum to serve the needs of gifted learners (Swanson 2006).

Too often, low-income minority students are not offered highly rigorous curriculum. Expectations for success in this population of students are low. It was evident that teacher expectations for the subpopulation of minority students were low because students from this group were not being identified as needing gifted education services.

As the teachers received professional development about the curricular materials and began to use the materials with all students in their classrooms, they started to change their attitudes about low-income minority students. As their attitudes changed, so did their expectations about what minority students could learn. Their expectations rose when they saw students could respond positively to the high-level materials. Sometimes "doing" must precede "knowing." Teacher expectations before the research were low for minority children. After the action research, teachers raised their expectations. They saw that achievement improved when students experienced rich, rigorous curriculum. The power of expectations is important in a classroom. What we expect, in many incidences, is what we get (Swanson 2006).

A professor named Mihaly Csikszentmihalyi has been studying happiness in people for many years. After interviewing countless professionals in different fields of study, he came up with a description of the time when people are most happy. He calls it *flow*. Csikszentmihalyi describes flow as "being completely involved in an activity for its own sake. The ego falls away. Time flies. Every action, movement, and thought follows inevitably from the previous one, like playing jazz. Your whole being is involved, and you're using your skills to the utmost" (Geirland 1986).

This description of happiness is easily applied to educational settings as well. In a classroom setting, teachers should strive for their students to be in the *flow*. That means there is an even balance between the challenge of a task and the skill of the student. If the task is too easy or too difficult, flow cannot happen (Csikszentmihalyi 1990).

The figure below illustrates the concept of flow as it applies to the classroom setting. In the classroom, it is the teacher's job to try to help as many students as possible stay in the *flow*. Helping teachers with this difficult task is the goal of this book.
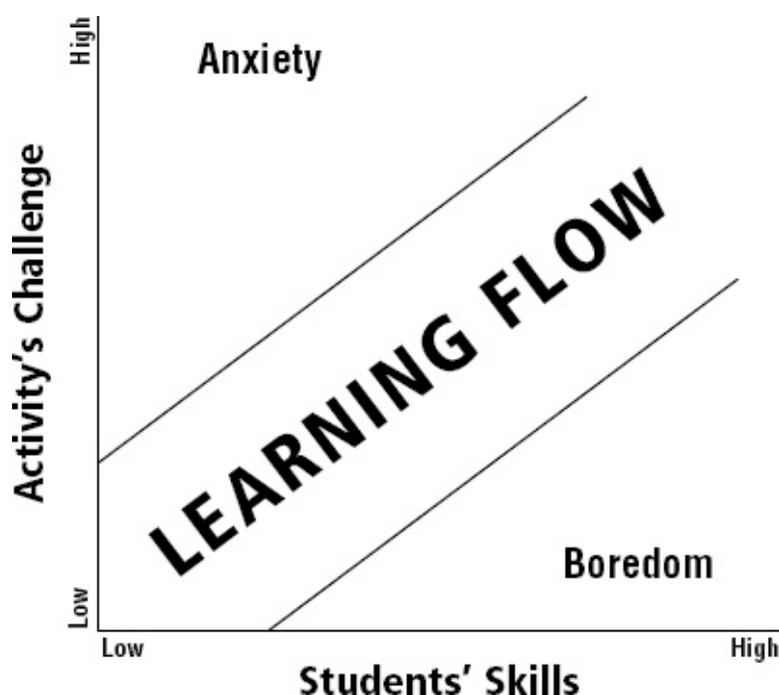
Lev Semenovich Vygotsky, a Russian psychologist, wrote about the Zone of Proximal Development. This theory states that good instruction must fill the gap that exists between the present knowledge of a child and the child's potential. Scaffolding instruction is an important component when planning and teaching lessons. Students, especially English language learners, cannot jump stages of language and content development. Teachers must determine where the students are in the learning process and teach to the next level using several small steps to get the desired outcome. Setting high expectations and guiding students so they can reach their potentials may be the most important part of being a teacher.

Mission Statements

Mission statements for most organizations are lofty visions of what can and probably should happen for the people served by the organization. School district mission statements are no different. A typical school mission statement might read, "Our school

challenges all students so they can reach their maximum potentials to become productive members of society." Several key words in mission statements should lead educators to the realization that only through differentiation can they possibly strive toward fulfilling the mission.

A discussion of some of those words will further our understanding of the need for differentiation in schools. Challenging students may seem to be an easy task. However, remembering the alphabet soup of students in classes reminds us that one lesson aimed at average-achieving students will not challenge the struggling students nor the high-ability learners.

The tiny word *all* may be the most provocative word of a mission statement. *All* means all students. The mission calls for challenging every single student, not just students who seem to like the subject matter, not just the brightest students, not just the students who are motivated to learn the topic of the month. Very seldom will one typical, undifferentiated lesson serve the needs of all learners.

Helping each student reach maximum potential is a lofty goal that is difficult to measure and difficult to address in schools. Finding the maximum level of work aimed to challenge every student in a specific topic is challenging for teachers. Teachers often ask themselves: Is this material too difficult for students? Is the topic too mature for some students to understand? Am I asking students to do too much or too little in striving to challenge their understanding? Is there too much homework or not enough homework?

Students in the classroom are so different in their abilities, interests, and styles of learning that differentiation must be part of the plan to enhance reaching students' potentials. Asking teachers to launch learners to their maximum potentials in life is almost unreasonable. But the mission statements across the country often state this as a goal.

The phrase *productive members of society* is a mission-statement favorite that leads educators to question their teaching techniques. Being productive in the classroom may or may not be the same as being productive members of society. Products should be demonstrations of learning. Since learning varies in pace, quantity, and quality, products must be differentiated to serve the purpose of showing growth for different types of learners in the learning process.

Educators should review mission statements annually with the intent that each year's mission will be achieved. With this goal in mind, new mission statements should be focused and more narrow in scope.

A mission statement that promotes ideas that suggest maximum learning opportunities for all students must embrace teaching in different ways at different paces. This means differentiation is the key to meeting the mission statements of many school districts in this country. Rather than seeing differentiation as an umbra, view differentiation as a foundation. It can serve as a foundation for most other school initiatives as well.

Conclusions

Teachers have many internal and external resources to draw upon. One of the most important resources is the inner drive to serve students. This drive motivates educators to

keep searching for the right mix of challenge and excitement that makes learning interesting.

Diversity in America's public schools is a fact. Learning to meet the needs of diverse learners is important and vital to helping each student grow. Dropout rates are high and climbing. Differentiation may certainly be part of the solution to reaching diverse learners and supporting those students who are at risk for leaving the school system before high school graduation.

"De-tracking" learners in the classroom implies that all students are placed in the same classroom setting. Because all learners do not have the same needs, it is imperative that all learners are not treated the same. Fairness is an issue. Being *fair* to each learner means serving learner needs in a differentiated manner.

From the research, it is clear that teacher expectations play a vital role in student achievement. It is in the best interest of each student for teachers to expect excellence.

All of these concerns should be reflected in the mission statements of schools and school districts. Keeping a mission statement focused enhances the probability of success in meeting the goals stated in the mission. Annual revision of the mission statement is recommended.

Another Look Into the Classroom

As November arrives in the elementary-school classrooms of the alphabet soup of students who started the year with us, we see some successes, some coasting, some frustrations, and a lot of waiting. Audrey is still waiting for the teacher to find appropriate reading materials for her. Her reading skills are no further developed than they were on the first day of school. A teacher skilled in differentiation strategies could have moved Audrey along the continuum of reading proficiency.

Andy is waiting too. There have been many testing sessions with special teachers. The letters on the page still look confusing to him, and he does not see why more tests are necessary to find out what needs to happen for him. A teacher skilled in differentiation strategies could have moved Andy forward in his quest to learn to read.

We see Carl and Casita have been placed in a class that meets for two hours a day with other second language learners. They are beginning to make friends. The English language learner teacher is friendly and is helping Carl and Casita to learn English. But, the regular classroom teacher does not seem to connect with Carl or Casita. A teacher skilled in differentiation strategies might be able to partner with the English language learner teacher and plan some learning activities for the regular classroom day that would meet the needs of Carl and Casita.

Peeking into Flora's classroom, we find her looking bewildered and almost ready to cry. Flora is floundering in formulas and frustrating assignments. It feels to her like nobody is listening when she says math is boring. She probably means that math is too hard and makes too many demands on her limited mathematical skills. A teacher skilled in differentiation strategies could make mathematics relevant to Flora by helping her use her strengths in math to develop her weaknesses.

Franco is bored, too, but he is bored because he understands the formulas and dreads the repetition that homework offers. Franco is seeking more depth in mathematics and cannot understand why more students do not love the concepts that reveal themselves to him. Differentiation may be the answer for Franco, also.

In the center of the district is the middle school. Mario and Maria both had their pictures in the local paper for being the most valuable players on their sports teams. Maria is the star player on the middle school soccer team. Her teammates admire her soccer skills and praise her constantly about how wonderful she is as a team member. However, Maria cares very little about academic success. She is fidgety and restless in the classroom and finds the constant talking and lecturing annoying. She wishes she could stay home and read. It is quiet at home and much easier to concentrate.

Mario's height promises even more success in high school basketball than he now enjoys in middle school. The struggle for Mario is keeping a C average so he qualifies to play basketball each week. Differentiation may be the answer for Mario and Maria as well. Making academic content relevant to different kinds of learners is possible for a teacher skilled in differentiation.

Moving to the high school across town, we observe that things are not going so well for Zena and Zachary. Zachary hides a script behind his chemistry text and tries to memorize his lines for the upcoming school musical. When called upon, he shrugs his shoulders and says, "I don't know." His chemistry teacher is very concerned about Zachary's lack of interest in science. She muses that Zachary will never succeed and never contribute to society.

Zena is singing in a community production of *Annie*. Rehearsals for the production last until 11:00 P.M. almost every weeknight. So, during school hours, she fights off sleep. Zena's counselor called her into the office a week ago and tried to boost her interest in school. Zena has no idea how she will graduate from high school. Finding a reason to care about high school credits seems a chore in futility to Zena. Zena and Zachary need differentiation of instruction and curriculum to hook them into content and ways of learning that will make academics come alive for them while they continue to grow in their areas of musical interest.

Teachers who use various differentiation strategies and activities find that more of their students are engaged more of the time. No teacher can keep every student fully engaged and motivated 100 percent of the time. But, if every student has at least a few moments to shine and succeed in a classroom throughout the day, the classroom will be a more positive environment for all students.

Basics of Differentiation

By Wendy Conklin, M.A.

What Is Differentiation?

What is differentiation? Carol Ann Tomlinson (2000) at the University of Virginia says, "Differentiation is simply a teacher attending to the learning needs of a particular student or small group of students, rather than teaching a class as though all individuals in it were basically alike." Today, teachers' bookshelves are lined with books on differentiation. Although many teachers have attended countless workshops telling them how beneficial it is to differentiate curriculum, few actually feel comfortable with implementing it in their classrooms. Most teachers know what differentiation is; they just do not know how to apply it in a practical way. This book is a how-to manual. It will show teachers how to differentiate lessons across content areas using a variety of strategies, implement flexible grouping techniques, and tailor learning styles while managing a differentiated classroom.

Over the past few years, classrooms have evolved into diverse pools. Gifted students, English language learners, special education students, high achievers, underachievers, and average students all come together to learn from one teacher who is expected to meet their diverse needs in one classroom. It brings back memories of the one-room schoolhouse during early American history. Not too long ago, lessons were designed to be one-size-fits-all. It was thought that students in the same class learned in similar ways. Today, we know that viewpoint to be faulty. Students have differing learning styles, come from different cultures, experience a variety of emotions, and have varied interests. For each subject, they also differ in academic readiness. At times, the challenges teachers face can be overwhelming. They struggle with knowing how to create learning environments that address the differences among their students.

Differentiation has multiple faces depending on the particular students and teachers involved, the outcomes of these learners, and the structure of the classroom environment (Pettig 2000). In other words, differentiation encompasses what is taught, how it is taught, and the products students create to show what they have learned. When differentiating curriculum, teachers become the organizers of learning opportunities within the classroom environment.

- ► **Content:** Differentiating the content means to put more depth into the curriculum through organizing the curriculum concepts and structure of knowledge. This includes offering similar materials at various levels of difficulty.

- ► **Process:** Differentiating the process requires the use of varied instructional techniques and materials to enhance learning for students.

- ► **Product:** When products are differentiated, cognitive development and the students' abilities to express themselves improve.

Tomlinson (2005) writes that differentiation is proactive, more qualitative than quantitative, filled with multiple approaches to content/process/product, student centered, a blend of grouping techniques, an opportunity to implement meaningful learning for

everyone, and "organic," meaning it is an ongoing process. However, there are many misconceptions about differentiation, too. Tomlinson goes on to say that differentiated instruction does not assume each student has a separate ability level. Some students are grouped together because they have similar academic needs. Another misconception about a differentiated classroom is that they are disorderly and chaotic. Although teachers must manage a variety of activities at the same time, there are tried-and-true ways to establish expectations for behavior, monitor activities, and direct the learning experience in their classrooms.

Diane Heacox (2002) says differentiation is "changing the pace, level, or kind of instruction in response to learners' needs, styles, and/or interests." Teachers should differentiate content, process, and product according to students' characteristics. These characteristics include students' readiness, learning styles, and interests.

> ► **Readiness Levels:** If a learning experience matches closely with their skills and understanding of a topic, students will learn better.

> ► **Learning Styles:** Teachers should create assignments that allow students to complete work according to their preferences and strengths.

> ► **Interests:** If a topic sparks excitement, then students will become involved in learning and better remember what was taught.

Why Should We Differentiate?

The more we understand how students learn, the more we understand why curriculum needs to be differentiated. According to the National Research Council (1990), students make meaning out of what is taught in classrooms based on their prior understandings, learning styles, attitudes, and beliefs. Differentiated curriculum takes these factors into account. Research has shown that students need to be pushed just a little beyond their independence levels for real learning to take place (Csikszentmihalyi 1990). Differentiated curriculum provides an avenue by which lessons can challenge, but not overwhelm, students based on their ability levels. Both emotions and movement enhance the learning process, and when students have opportunities to study their interests, their motivation for learning increases (Piaget 1978). A differentiated classroom takes interests into account. And finally, we know that everyone learns in a variety of ways (Strong, Silver, and Perini 2001). Curriculum that is differentiated allows for a variety of grouping techniques and assignments so that teachers can reach students regardless of their backgrounds.

How to Begin Differentiating

Teachers need not dread the idea of differentiating their classroom curricula. This book will show teachers that they are already differentiating curricula. Some teachers already offer open-ended activities and let students choose their own activities. Others have learned how to adapt the theory of multiple intelligences into their curricula. Many will see that they have already learned to use flexible grouping techniques. This book will not only provide the instruction teachers need to implement differentiation, but also provide the encouragement and reassurance they need as well. It will encourage teachers to know how they should continue differentiating their curricula, slowly adding to what they are

already doing.

When first starting out, teachers should take baby steps when differentiating curricula. For example, they can begin with differentiating the content for just one student. If a student already knows how to multiply two-digit numbers, he or she should not have to do 25 practice problems for homework. Instead, have the student complete the five most-difficult problems first. If all of those are right, the rest of the homework is not necessary. In other words, the student has proven understanding of the concept.

Teachers should offer a variety of differentiated activities. Having students produce brochures is fine for one lesson, but students will easily become bored if brochures are the products for every lesson all year long. Instead, create a list of products that students can choose from like video documentaries, taped radio shows, maps, drawings, cartoons, or historical fiction stories based on real events.

Teachers should also be wary of assigning additional busy work to those who finish early. For example, gifted students do not need to complete 40 division problems if the rest of the class is only completing 20. Often, these students already know how to do division. So in truth, they should receive fewer problems. Giving them more work is a punishment, not a differentiated strategy. In no time, the high achievers will learn not to work so hard if their reward is busy work.

Steps to Differentiated Instruction

- ▶ Get to know your students. Make sure you know their readiness levels, learning styles, and interests.

- ▶ Become familiar with this notebook and the strategies throughout. Familiarize yourself with the models and decide which ones match your content.

- ▶ Identify instructional activities that you think you can easily differentiate using the models and examples provided in this book. Try the activities with your class.

- ▶ Branch out on your own. Try to differentiate a lesson using what you've learned. Do not take on more than you can handle at one time. Practice makes perfect!

Vocabulary Development

It is important for all students to be familiar with the specialized academic and content vocabulary embedded within lessons. Content vocabulary words are used within the subject matter you are teaching (e.g., fractions, decimals). Academic vocabulary is the higher-level language needed to understand the content (e.g., analyze, identify). These words are "very generalizable to other contexts and should be part of students' academic vocabulary tool kits" (Kinsella 2006).

It is not enough to give the students a list of words and have them look up the definitions in dictionaries. Students who are learning a new concept need context-embedded activities that acquaint them with the words necessary for comprehending the content. Within these activities, students need opportunities to practice these words in the four areas of language development: listening, speaking, reading, and writing.

English Language Learners

It is especially vital for English language learners to have vocabulary as a primary focus of every lesson. Adrienne Herrell and Michael Jordan (2004) identify the following basic principles of teaching English language learners:

► Learning must be supported with realia, visuals, and contextualized language.

► Emphasizing vocabulary, fluency, and background knowledge is key for comprehension.

► Teaching should actively engage students and contain authentic tasks.

All teachers should know the levels of language acquisition for each of their English language learners. Knowing these levels will help to plan instruction. (These category titles vary from district to district or state to state, but the general descriptions are common.)

► **Beginning level**—Students are able to respond to some simple communication tasks.

► **Early-intermediate level**—Students respond with increasing ease to varied communication tasks.

► **Intermediate level**—Students tailor their language skills to meet their immediate communication and learning needs. They are able to understand and be understood in many basic social situations, but they may make some errors in conventions.

► **Advanced level**—Students combine elements of the English language and use them in cognitively demanding situations. They are able to use English as a means for learning in other academic areas, although some minor errors of conventions are still evident.

► **Fluent level**—Students communicate effectively with various audiences on a wide range of familiar and new topics for both social and academic purposes. Students speak, understand, read, write, and comprehend English without difficulty and display academic achievement comparable to native English-speaking peers. Further linguistic enhancement and refinement may be necessary.

Suggestions for English Language Learners Support

Students at the beginning level will need a lot of language support in all the activities, especially during instruction. Using visuals and pictures to support oral and written language will help make the language more comprehensible. These students "often understand much more than they are able to express." And it is the teacher's job to move them from just listening to language to expressing language (Herrell and Jordan 2004).

Students at the intermediate levels will benefit from pair work in speaking tasks, but they will need additional individual support during writing and reading tasks.

Students at the advanced and fluent levels may "trick" teachers into thinking that they are fully proficient in the English language. However, because they are still English language learners, they may struggle with comprehending the academic language used during instruction. They may also struggle with reading and writing.

Strategies for Developing Vocabulary

The following are strategies that can be used to help all students become proficient in the language of learning. These strategies can be used with the whole class or with small groups to differentiate instruction.

▶ **Total Physical Response (TPR)**—Apply actions with oral language to concepts and procedures. Teachers have students perform the action while chorally saying a word or sentence related to it. One such game that uses TPR is Simon Says. "Simon" says a concept or vocabulary word and students perform an action that goes with that word.

▶ **Gouin Series**—Prepare a series of six to eight short statements describing a logical sequence of actions related to a concept. These statements should include concrete action verbs using the same tense and person throughout. Discuss the language structures in the statements and chorally say them together as you act them out. It may be useful to have props and visuals to support student understanding of the statements.

▶ **Sentence Frames**—Provide students with sentence frames for oral and written responses to questions. This is a great scaffold for supporting students' use of academic vocabulary and language structures. This is an example for the question, "What does the equal sign represent in the mathematical statement below?"

"In the mathematical statement, the equal sign represents _____."

▶ **Cloze activities**—Create a paragraph explaining a concept. Put blanks in place of the academic or content vocabulary and have students fill in the blanks. This, like the sentence frame, serves as an excellent scaffold for using the language structures appropriately.

▶ **Realia**—Bring in objects and artifacts related to the concepts you are teaching. These items can bring a problem or concept to life and can help facilitate a discussion about the content.

▶ **Music**—Have students make up songs or sing songs about learning concepts. This is a fun way to use content language in context. When students are making up the songs, be sure they are using the language accurately, rather than in nonsensical ways.

▶ **Children's Literature**—No student is too old to enjoy being read a children's book that is tied to content. These books serve as good models of language in context and can facilitate discussions in which students use the language. Students can then write their own versions of the books or reenact these stories as skits or plays.

▶ **Simulations**—Have students simulate a specific career or profession. Present them with a type of problem that a person in a specific profession (such as an accountant, engineer, or salesperson) would have to solve. While solving the problem, the students must act as if they are adults working in that profession.

They must use the language and behaviors of professionals.

Implementing the Vocabulary Activities

There are 10 vocabulary activities included in Appendix C (pages 293–299). These types of activities should be used 3–5 times per week with English language learners, students struggling with new concepts, or any students who have not shown mastery of the vocabulary. These activities may be modified, adapted, or expanded to meet students' individual needs.

The suggestions below will facilitate implementation of these activities.

► These activities often cover the four domains of language: listening, speaking, reading, and writing. It is important for students to practice using new vocabulary in all four domains in order to take ownership of the words and use them independently. Such repetition will provide students with multiple exposures to a word and give them opportunities to practice the word in a variety of contexts.

► During these activities, actively monitor the processes students are using. For example, in a speaking activity, ensure that students are orally practicing and clarify any vocabulary misconceptions or misunderstandings.

► Every vocabulary activity varies in the amount of instructional time it will take. Choose different activities to meet the allotted classroom time.

► A vocabulary activity will take less time as students become familiar with the procedures and expectations. When introducing a new activity, plan extra time.

► Use the vocabulary activities before teaching the lesson. This "frontloads" the words students will need to access the content. This is a tremendous scaffold for English language learners.

► Sometimes an activity will flow better with more vocabulary words. Use this opportunity to combine lists and revisit past vocabulary words.

► An activity may need to be practiced a few times before the students can carry it out correctly. If the students struggle with an activity, it may be helpful to repeat it the following day with the same words or new words.

► It may be helpful to team with other teachers and use the same vocabulary-building activities. This will familiarize students with the activities and increase their effectiveness and timeliness.

► Before doing any activity where the students are out of their seats, clearly state the purpose of the activity, the behavior expectations, and the consequences for not following the expectations.

► Many of these activities can be used as centers or work stations, with small groups, for independent practice, or anchor activities. (See pages 38–39 for more information on anchor activities.)

► Give students positive reinforcement as they acquire and master the content and academic vocabulary words.

Differentiating Mathematics

The suggestions in Appendix D (pages 300–301) are specifically designed to help teachers differentiate for varying levels of mathematics students. Page 300 lists three levels of students with suggestions for differentiating the curriculum for each level. Page 301 divides the struggling students into three tiers for more intensive intervention. Tier 1 students need differentiation within the core curriculum. Tier 2 students need small-group intervention. Tier 3 students need one-on-one intervention.

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