

Sec- B Readings

DIFFERENTIATED INSTRUCTION

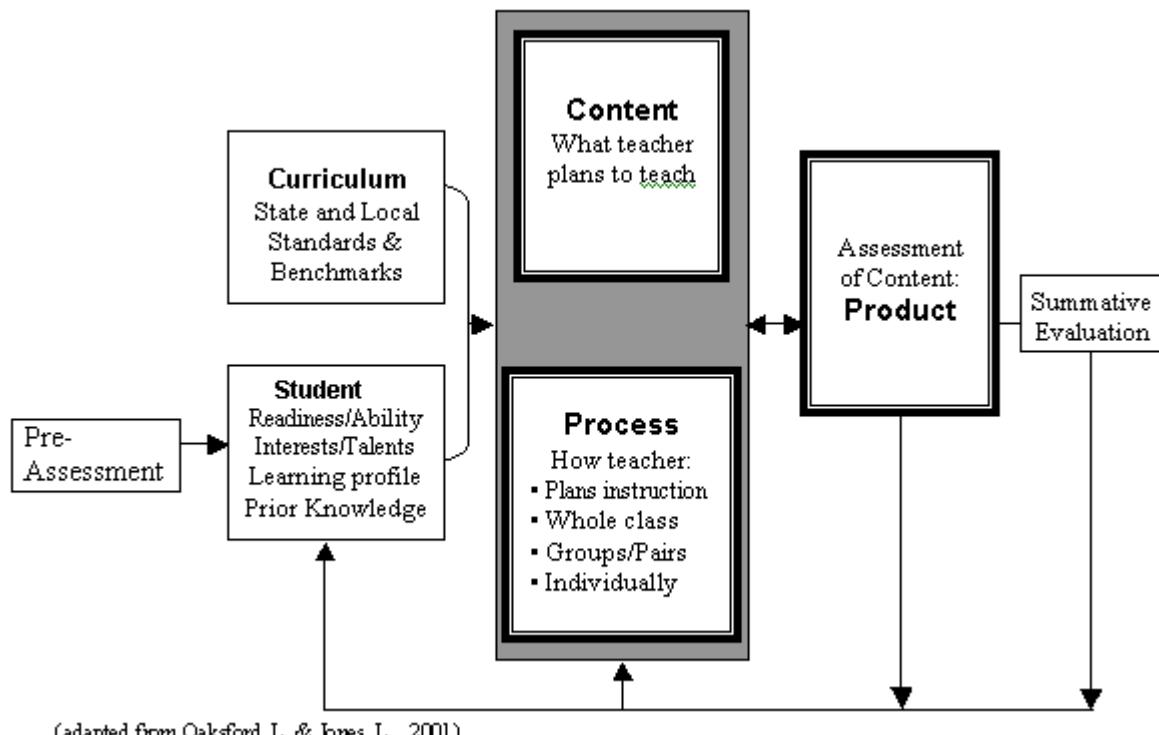
Introduction

Not all students are alike. Based on this knowledge, differentiated instruction applies an approach to teaching and learning so that students have multiple options for taking in information and making sense of ideas. The model of differentiated instruction requires teachers to be flexible in their approach to teaching and adjusting the curriculum and presentation of information to learners rather than expecting students to modify themselves for the curriculum. Classroom teaching is a blend of whole-class, group and individual instruction. Differentiated Instruction is a teaching theory based on the premise that instructional approaches should vary and be adapted in relation to individual and diverse students in classrooms.

Definition

To differentiate instruction is to recognize students varying background knowledge, readiness, language, preferences in learning, interests, and to react responsively. Differentiated instruction is a process to approach teaching and learning for students of differing abilities in the same class. The intent of differentiating instruction is to maximize each student's growth and individual success by meeting each student where he or she is, and assisting in the learning process.

Learning Cycle and Decision Factors Used in Planning and Implementing Differentiated Instruction



(adapted from Oaksford, L. & Jones, L., 2001)

Identifying Components/Features

According to the authors, several key elements guide differentiation in the education environment. Tomlinson (2001) identifies three elements of the curriculum that can be differentiated: Content, Process, and Products. Additionally, several guidelines are noted to help educators form an understanding and develop ideas around differentiating instruction.

Content

- *Several elements and materials are used to support instructional content.* These include acts, concepts, generalizations or principles, attitudes, and skills. The variation seen in a differentiated classroom is most frequently the manner in which students gain access to important learning. Access to the content is seen as key.
- *Align tasks and objectives to learning goals.* Designers of differentiated instruction determine as essential the alignment of tasks with instructional goals and objectives. Goals are most frequently assessed by many high-stakes tests at the state level and frequently administered standardized measures. Objectives are frequently written in incremental steps resulting in a continuum of skills-building tasks. An objectives-driven menu makes it easier to find the next instructional step for learners entering at varying levels.
- *Instruction is concept-focused and principle-driven.* The instructional concepts should be broad based and not focused on minute details or unlimited facts. Teachers must focus on the concepts, principles and skills that students should learn. The content of instruction should address the same concepts with all students but be adjusted by degree of complexity for the diversity of learners in the classroom.

Process

- *Flexible grouping is consistently used.* Strategies for flexible grouping are essential. Learners are expected to interact and work together as they develop knowledge of new content. Teachers may conduct whole-class introductory discussions of content big ideas followed by small group or pair work. Student groups may be coached from within or by the teacher to complete assigned tasks. Grouping of students is not fixed. Based on the content, project, and on-going evaluations, grouping and regrouping must be a dynamic process as one of the foundations of differentiated instruction.
- *Classroom management benefits students and teachers.* Teachers must consider organization and instructional delivery strategies to effectively operate a classroom using differentiated instruction.

Products

- *Initial and on-going assessment of student readiness and growth are essential.* Meaningful pre-assessment naturally leads to functional and successful differentiation. Assessments may be formal or informal, including interviews, surveys, performance assessments, and more formal evaluation procedures. Incorporating pre and on-going assessment informs teachers to better provide a menu of approaches, choices, and scaffolds for the varying needs, interests and abilities that exist in classrooms of diverse students.
- *Students are active and responsible explorers.* Teacher's respect that each task put before the learner will be interesting, engaging, and accessible to essential understanding and skills. Each child should feel challenged most of the time.

- *Vary expectations and requirements for student responses.* Items to which students respond may be differentiated for students to demonstrate or express their knowledge and understanding. A well-designed student product allows varied means of expression, alternative procedures, and provides varying degrees of difficulty, types of evaluation, and scoring.

Guidelines that make differentiation possible for teachers to attain:

- *Clarify key concepts and generalizations* to ensure that all learners gain powerful understandings that serve as the foundation for future learning. Teachers are encouraged to identify essential concepts and instructional foci to ensure all learners comprehend.
- *Use assessment as a teaching tool to extend versus merely measure instruction.* Assessment should occur before, during, and following the instructional episode, and help to pose questions regarding student needs and optimal learning.
- *Emphasize critical and creative thinking* as a goal in lesson design. The tasks, activities, and procedures for students should require that students understand and apply meaning. Instruction may require supports, additional motivation, varied tasks, materials, or equipment for different students in the classroom.
- *Engaging all learners is essential.* Teachers are encouraged to strive for development of lessons that are engaging and motivating for a diverse class of students. Vary tasks within instruction as well as across students. In other words, an entire session for students should not consist of all drill and practice, or any single structure or activity.
- *Provide a balance between teacher-assigned and student-selected tasks.* A balanced working structure is optimal in a differentiated classroom. Based on pre-assessment information, the balance will vary from class-to-class as well as lesson-to-lesson. Teachers should assure that students have choices in their learning.

Evidence of Effectiveness

Differentiation is recognized to be a compilation of many theories and practices. Based on this review of the literature of differentiated instruction, the "package" itself is lacking empirical validation. There is an acknowledged and decided gap in the literature in this area and future research is warranted.

According to the proponents of differentiation, the principles and guidelines are rooted in years of educational theory and research. For example, differentiated instruction adopts the concept of "readiness". That is the difficulty of skills taught should be slightly in advance of the child's current level of mastery. This is grounded in the work of Lev Vygotsky (1978), and the zone of proximal development (ZPD), the range at which learning takes place. The classroom research by Fisher et al.(1980), strongly supports the ZPD concept. The researchers found that in classrooms where individuals were performing at a level of about 80% accuracy, students learned more and felt better about themselves and the subject area under study (Fisher, 1980 in Tomlinson, 2000).

Other practices noted as central to differentiation have been validated in the effective teaching research conducted from the mid 1980's to the present. These practices include effective management procedures, grouping students for instruction, and engaging learners (Ellis and Worthington, 1994).

While no empirical validation of differentiated instruction as a package was found for this review, there are a generous number of testimonials and classroom examples authors of several publications and Web sites provide while describing differentiated instruction. Tomlinson reports individual cases of settings in

which the full model of differentiation was very promising. Teachers using differentiation have written about improvements in their classrooms. (See the links to learn more about differentiated instruction).

Applications to General Education Classroom Settings

The design and development of differentiated instruction as a model began in the general education classroom. The initial application came to practice for students considered gifted who perhaps were not sufficiently challenged by the content provided in the general classroom setting. As classrooms have become more diverse with the introduction of inclusion of students with disabilities, and the reality of diversity in public schools, differentiated instruction has been applied at all levels for students of all abilities.

Many authors of publications about differentiated instruction strongly recommend that teachers adapt the practices slowly, perhaps one content area at a time. Additionally, these experts agree that teachers should work together to develop ideas and menus of options for students together to share the creative load. As noted previously, studies on the package of differentiated instruction are lacking. However, proponents note that reports of the full model of differentiation are promising.

Links to Learn More About Differentiated Instruction

Guild, P.B., and Garger, S (1998). What Is Differentiated Instruction? *Marching to Different Drummers* 2nd Ed. (ASCD, p.2)

<http://www.ascd.org/pdi/demo/diffinstr/differentiated1.html>

Initially published in 1985, *Marching to Different Drummers* was one of the first sources to pull together information on what was a newly-flourishing topic in education. Part I defines style and looks at the history of style research; Part II describes applications of style in seven areas; Part III identifies common questions and discusses implementation and staff development.

Tomlinson, C.A., (2000). Differentiation of instruction in the elementary grades. ERIC Digest. ERIC_NO: ED443572.

<http://ericir.syr.edu/plweb-cgi/obtain.pl>

To meet the needs of diverse student populations, many teachers differentiate instruction. This digest describes differentiated instruction, discusses the reasons for differentiated instruction, what makes it successful, and suggests how teachers may begin implementation.

Tomlinson, C.A., (1995). Differentiating instruction for advanced learners in the mixed-ability middle school classroom. ERIC Digest E536.

http://www.ed.gov/databases/ERIC_Digests/ed389141.html

The ability to differentiate instruction for middle school aged learners is a challenge. Responding to the diverse students needs found in inclusive, mixed-ability classrooms is particularly difficult. This digest provides an overview of some key principles for differentiating instruction, with an emphasis on the learning needs of academically advanced students.

Tomlinson, C.A., & Allan, S. D., (2000). Leadership for differentiating schools and classrooms. Association for Supervision and Curriculum Development.

<http://www.ascd.org/readingroom/books/tonlinson00book.html>

This Web site contains two chapters from Tomlinson's recent publication: *Leadership for differentiating schools and classrooms*, Association for Supervision and Curriculum Development. This book is designed for those in leadership positions to learn about differentiated instruction.

Web Article: Mapping a route toward differentiated instruction.

<http://www.ascd.org/pdi/demo/diffinstr/tomlinson2.html>

Carol Ann Tomlinson, an Associate Professor of Educational Leadership, Foundations and Policy at the Curry School of Education, University of Virginia, Charlottesville, VA provides an article entitled; Mapping a route toward differentiated instruction. *Educational Leadership*, 57,1.

Willis, S. & Mann, L., (2000). Differentiating instruction: Finding manageable ways to meet individual needs (Excerpt). Curriculum Update.

<http://www.ascd.org/readingroom/cupdate/200/1win.html>

Based on the concept that "one size does not fit all" the authors describe the teaching philosophy of differentiated instruction. More teachers are determined to reach all learners, to challenge students who may be identified as gifted as well as students who lag behind grade level. This article excerpt describes the essential components of differentiated instruction beginning with three aspects of curriculum: content, process and products.

The Association for Supervision and Curriculum Development (ASCD) Web site

www.ascd.org/pdi/demo/diffinstr/differentiated1.html

A site by ASCD (2000) which discusses differentiated instruction. Page links to other pages with examples from a high school* and elementary school*, key characteristics of a differentiated classroom, benefits, related readings, discussion, and related links to explore. *might be good to look at for case story ideas

Educational Leadership Research Link

www.ascd.org/readingroom/edlead/0009/holloway.html

This Web site, provided by Educational Leadership, links the reader to a brief summary of an article by Holloway. The author has provided a bulleted summary regarding the principles and theories that drive differentiated instruction.

Holloway, J.H., (2000). Preparing Teachers for Differentiated Instruction. *Educational Leadership*, 58 (1).

<http://web.uvic.ca/~jdurkin/edd401su/Differentiated.html>

This site is from an education course by Dr. John Durkin. It includes a diagram with suggestions for approaches to differentiated instruction. It also includes a listing of what differentiated instruction is and is not, rules of thumb on how to instruct, and management strategies.

Theroux, P. (2001). Enhance Learning with Technology. Differential Instruction.

www.cssd.ab.ca/tech/oth/learn/differentiating.htm

Theroux provides a thorough site on differential instruction for a Canadian school district. Provides links to teacher attitudes, learning strategies, teacher resources, integrating technology, integrating outcomes,

exploring projects, sample lesson plans*, planning projects, thinking skills, developing Web pages, assessing, and tutorials.

Web Site: for Teachers, Administrators, and Higher Education

www.teach-nology.com/litined/dif_instruction/

This web site is designed for educators and uses technology to inform teachers about current practices, literature, the law in education, as well as professional development. Additionally, links to articles including research on educational practices including links to information on differentiated instruction are included.

Citation

Hall, T. (2002). *Differentiated instruction*. Wakefield, MA: National Center on Accessing the General Curriculum. Retrieved [insert date] from http://www.cast.org/publications/ncac/ncac_diffinstruc.html

HOW TO DIFFERENTIATE INSTRUCTION

How to Plan For Differentiate Instruction

After having read what the research has to offer on differentiated instruction, specifically, brain-based research on learning, learning styles and multiple intelligences, and authentic assessment, you are now ready to plan.

Step 1- Know Your Students

Determine the ability level of your students.

This can be done by surveying past records of student performance to determine capabilities, prior learning, past experiences with learning, etc.

Survey student interests.

It is also important to get to know your students informally. This can be done by an interest inventory, an interview/conference, or asking students to respond to an open-ended questionnaire with key questions about their learning preferences (depending on the age group).

Is behavior management a problem?

This is key when planning for activities that require less structure. However, it is still important to determine learning styles and preferences for students who may have a hard time controlling their behaviors. Sometimes knowing preferences can help to motivate students to attend to any tasks that are presented.

Step 2- Have a Repertoire of Teaching Strategies

Because "one size does not fit all," it is imperative that a variety of teaching strategies be used in a differentiated classroom. Among many teaching strategies that can be considered, there are four worth mentioning: direct instruction, inquiry-based learning, cooperative learning, and information processing models.

Direct Instruction

This is the most widely used and most traditional teaching strategy. It is teacher centered and can be used to cover a great amount of material in the amount of time teachers have to cover what students need to learn. It is structured and is based on mastery learning. More information can be found on:

<http://www.teach-nology.com/teachers/methods/models/>

Inquiry-based Learning

Inquiry-based learning has become very popular in teaching today. It is based on the scientific method and works very well in developing critical thinking and problem solving skills. It is student centered and requires students to conduct investigations independent of the teacher, unless otherwise directed or guided through the process of discovery. For more information, go to:

<http://www.teach-nology.com/currenttrends/inquiry/>

Cooperative Learning

Probably one of the most misunderstood strategies for teaching is "cooperative learning." Yet, if employed properly, cooperative learning can produce extraordinary results in learning outcomes. It is based on grouping small teams of students heterogeneously according to ability, interest, background, etc. However, one of the most important features of cooperative learning is to pick the best strategy that will be used to assign the task for students to accomplish. The more popular strategies include JigsawII, STAD-Student Teams, or Group Investigation. For more information, go to:

http://www.teach-nology.com/currenttrends/cooperative_learning/

Information Processing Strategies

Teaching students "how to" process information is a key factor in teaching students how to strategically organize, store, retrieve, and apply information presented. Such strategies include, but are not limited to, memorization, KWL, reciprocal teaching, graphic organizing, scaffolding, or webbing. More information on this topic can be found at:

http://www.teach-nology.com/teachers/methods/info_processing/

Step 3- Identify a Variety of Instructional Activities

Engaging students in the learning process using activities that motivate and challenge students to remain on task is probably one of the most frustrating events in the teaching learning process. But if you know your students' profiles, you have a better chance at keeping them on task to completion of any given assignment or activity. In a differentiated classroom, activities are suited to the needs of students according to the mixed ability levels, interests, backgrounds, etc. For example, if you have English language learners in your class, you need to provide activities that are bilingual in nature or that provide the necessary resources for students to complete the activity with success. Good activities require students to develop and apply knowledge in ways that make sense to them and that they find meaningful and relevant. Ideas for activities can be found at:

http://www.teach-nology.com/teachers/lesson_plans/

Step 4- Identify Ways to Assess or Evaluate Student Progress

Once again, we cannot assume that "one size fits all." As a result, varying means of student assessment is necessary if students are to be given every opportunity to demonstrate authentic learning. Authentic assessment has been around for a long time and is now taking the limelight as we attempt to measure students' progress in a fair and equitable way. A variety of assessment techniques can include portfolios, rubrics, performance-based assessment, and knowledge mapping. For more information on this topic go to:

http://www.teach-nology.com/currenttrends/alternative_assessment/

Sec A

MARCHING

TO

DIFFERENT DRUMMERS



REFLECTIONS ABOUT THE THREE CLASSROOMS

Mrs. Saxena's class is not differentiated. She does not appear to notice or respond to student differences. Mrs. Bhatia's is differentiated—at least by some definitions. Each class has serious flaws in its foundations, however, and for that reason, Mrs. Bhatia class may not be any more successful than Mr. Saxena's—and perhaps less so. Successful teaching requires two elements: student understanding and student engagement. In other words, students must really understand, or make sense of, what they have studied. They should also feel engaged in or “hooked by” the ways that they have learned. The latter can greatly enhance the former and can help young people realize that learning is satisfying. Mrs. Saxena's class appears to lack engagement. There's nothing much to make learning appealing. She may be satisfied by his lecture, but it's doubtful that many of the students are impressed. It is also doubtful that much real

student understanding will come from the teaching-learning scenario. Rather, the goal seems to be memorizing data for a test. Memorizing and understanding are very different. The first has a short life span and little potential to transfer into a broader world. However, at least Mrs. Saxena appears clear about what the students should memorize for the test. Mrs. Bhatia's class lacks even that clarity.

Students in Mrs. Bhatia's classroom are likely engaged. It is a lively, learner-friendly place with opportunity for student movement, student choice, and peer work. Further, Mrs. Bhatia's list of project options draws on different student interests or talents—and she is even open to their suggestions. Although Mrs. Bhatia succeeds to some degree with engagement, a clear sense of what students should understand as a result of their study is almost totally missing. Thus her careful work to provide choice and to build a comfortable environment for her learners may not net meaningful, long-term learning. Her students are studying "something about ancient Rome." Nothing focuses or ties together the ideas and information that they encounter. Activities are more about being happy than about making meaning. No set of common information, ideas, or skills will stem from completing the various projects. In essence, she has accomplished little for the long haul. Her "differentiation" provides varied avenues to "mush"—multiple versions of fog. Her students work with different tasks, not differentiated ones. Mrs. Saxena's class provides little engagement, little understanding, and scant opportunity for attending to student differences. Mrs. Bhatia's class provides some engagement, little understanding, and no meaningful differentiation.

Early in the unit, Ms. Manasi's students begin work, both at home and in class, on two sequential tasks that will extend throughout the unit as part of their larger study of ancient Rome. Both tasks are differentiated. For the first task, students assume the role of someone from ancient Rome, such as a soldier, a teacher, a healer, a farmer, a slave, or a farmer's wife. Students base their choice solely on their own interests. They work both alone and with others who select the same topic and use a wide variety of print, video, computer, and human resources to understand what their life in ancient Rome would have been like. Ultimately, students create a first-person data sheet that their classmates can use as a resource for their second task. The data sheet calls for the person in the role to provide accurate, interesting, and detailed information about what his or her daily schedule would be like, what he or she would eat and wear, where he or she would live, how he or she would be treated by the law, what sorts of problems or challenges he or she would face, the current events of the time, and so on.

Ms. Manasi works with both the whole class and small groups on evaluating the availability and appropriate use of data sources, writing effective paragraphs, and blending information from several sources into a coherent whole. Students use these skills as they develop the first-person data sheets. The teacher's goal is for each student to increase his or her skill level in each area. The second task calls on students to compare and contrast their own lives with the lives of children of similar age in ancient Rome. Unlike the first task, which was based on student interest, this one is differentiated primarily on the basis of student readiness. The teacher assigns each student a scenario establishing his or her family context for the task: "You are the eldest son of a lawmaker living during the later years of the period known as Pax Romana," for example. Ms. Manasi bases the complexity of the scenario on the student's skill with researching and thinking about history. Most students work with families unlike those in their first task. Students who need continuity between the tasks, however, can continue in a role familiar from their first investigation. All students use the previously developed first-person data sheets as well as a range of other resources to gather background information. They must address a common set of specified questions:

- How is what you eat shaped by the economics of your family and by your location?
- What is your level of education and how is that affected by your status in society?
- How is your life interdependent with the lives of others in ancient Rome?

- How will Rome change during your lifetime?
- How will those changes affect your life?

All students must also meet certain research and writing criteria. Despite the common elements, the task is differentiated in several ways. It is differentiated by interest because each student adds questions that are directed by personal interests:

- What games did children play?
- What was the practice of science like then?
- What was the purpose and style of art?

Readiness differentiation occurs because each student adds personal research and writing goals, often with the teacher's help, to his or her criteria for success. A wide range of research resources is available, including books with varied readability levels, video and audiotapes, models, and access to informed people. The teacher also addresses readiness through small-group sessions in which she provides different sorts of teacher and peer support, different kinds of modeling, and different kinds of coaching for success, depending on the readiness levels of students. Finally, the teacher adds to each student's investigation one specific question whose degree of difficulty is based on her most recent assessments of student knowledge, facility with research, and thinking about history. An example of a more complex question is,

How will your life differ from that of the previous generation in your family, and how will your grandchildren's lives compare with yours? A less complex, but still challenging question is, How will language change from the generation before you to two generations after you, and why will those changes take place?

Learning-profile differentiation is reflected in the different media that students use to express their findings: journal entries, an oral monologue, or a videotape presentation. Guidelines for each type of product ensure quality and focus on essential understandings and skills established for the unit. Students may work alone or with a "parallel partner" who is working with the same role, although each student must ultimately produce his or her own product.

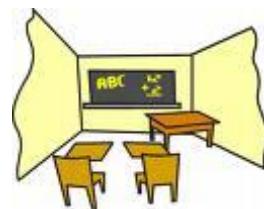
At other points in the study of ancient Rome, Ms. Manasi differentiates instruction. Sometimes she varies the sorts of graphic organizers that students use when they read, do research, or take notes in class. She may use review groups of mixed readiness and then conduct review games with students of like readiness working together. She works hard to ask a range of questions that move from concrete and familiar to abstract and unfamiliar in all class discussions. She sometimes provides homework options in which students select the tasks that they believe will help them understand important ideas or use important skills best. Of course, the class also plans, works, reviews, and debates as a whole group.

Students find Ms. Manasi's class engaging—and not just because it's fun. It's engaging because it shows the connection between their own lives and life long ago. It helps them see the interconnectedness among times in history and make links with other subjects. It tickles their curiosity. And it provides a challenge that pushes each learner a bit further than is comfortable—and then supports success. Sometimes those things are fun. Often they are knotty and hard. Always they dignify the learner and the subject.

Ms. Manasi's class is highly likely to be effective for her varied learners, in part because she continually attempts to reach her students where they are and move them on—she differentiates instruction. The success of the differentiation, however, is not a stand-alone matter. It is successful because it is squarely rooted in student engagement plus student understanding.

This teacher knows where she wants her students to arrive at the end of their shared learning journey and where her students are along that journey at a given time. Because she is clear about the destination and the path of the travelers, she can effectively guide them, and she varies or differentiates her instruction to accomplish this goal. Further, her destination is not merely the amassing of data but rather the constructing of understanding. Her class provides a good example of the close and necessary relationship between effective curriculum and instruction and effective differentiation.

REFLECTION ABOUT THE THREE CLASSROOMS



Mrs. Saxena's Class

Mrs. Bhatia's Class

Ms. Manasi's Class

An Alternative Approach

To make differentiation work—in fact, to make teaching and learning work—teachers must develop an alternative approach to instructional planning beyond “covering the text” or “creating activities that students will like.”

The First Step Is the Compass

Mrs. Saxena's may have a sense of what he wants her students to know at the end of the road, but not about what her students should understand and be able to do. She teaches facts, but no key concepts,

guiding principles, or essential questions. With a fact-based curriculum, differentiating instruction is difficult. Perhaps some students could learn more facts and some, fewer. Perhaps some students could have more time to drill the facts, and some, less. It's difficult to envision a defensible way to differentiate a fact-driven curriculum, probably because the curriculum itself is difficult to defend.

Mrs. Bhatia also appears to lack a clear vision of the meaning of her subject, of the nature of her discipline and what it adds to human understanding, and of why it should matter to a young learner to study old times. There is little clarity about facts—let alone concepts, guiding principles, or essential questions. Further, she confuses folly with engagement. She thinks that she is differentiating instruction, but without instructional clarity, her activities and projects are merely different—not differentiated. Because there is no instructional clarity, there is no basis for defensible differentiation.

Ms. Manasi plans for what students should know, understand, and be able to do at the end of a sequence of learning. She dignifies each learner by planning tasks that are interesting, relevant, and powerful. She invites each student to wonder. She determines where each student is in knowledge, skill, and understanding and where he or she needs to move. She differentiates instruction to facilitate that goal. For her, differentiation is one piece of the mosaic of professional expertise. It is not a strategy to be plugged in occasionally or often, but is a way of thinking about the classroom. In her class, there is a platform for differentiation. Ms. Manasi helps us see that differentiated instruction must dignify each learner with learning that is “whole,” important, and meaning making. The core of *what* the students learn remains relatively steady. *How* the student learns—including degree of difficulty, working arrangements, modes of expression, and sorts of scaffolding—may vary considerably.

Differentiation is not so much the “stuff” as the “how.” If the “stuff” is ill conceived, the “how” is doomed.

*The old saw is correct: Every journey does begin with a single step. The journey to successfully differentiated or personalized classrooms will succeed only if we carefully take the first step—ensuring a foundation of best-practice curriculum and instruction. **

WHAT DIFFERENTIATED INSTRUCTION IS.....	WHAT DIFFERENTIATED INSTRUCTION IS NOT.....
BY LEARNER READINESS AND LEARNING STYLE	BY LEARNER READINESS AND LEARNING STYLE

BY CONTENT	BY CONTENT
BY PROCESS	BY PROCESS
BY PRODUCT	BY PRODUCT