Differentiating Content

It is difficult and somewhat unnatural to carve apart the curricular elements of content, process, and product, because students process ideas as they read content, think while they create products, and conjure ideas for products while they encounter ideas in the materials they use. Nonetheless, thinking about how to differentiate instruction is more manageable by examining one element at a time. Just proceed with the awareness that these elements are more interconnected than they may sound here.

Content is the "input" of teaching and learning. It's what we teach or what we want students to learn.

Differentiating content can be thought of in two ways. First, in differentiating content, we can adapt *what* we teach. Second, we can adapt

grade, while others are working hard to master division, I have differentiated *what* the students are learning. Similarly, I may elect to assign students to spelling based on their current spelling skills rather than having all students work with a 4th grade spelling program when some of the learners spell at a 1st grade level and some at a high school level. On the other hand, I keep what students learn relatively the same and change how I give them *access* to it if I encourage advanced students to read a novel rapidly and with independence while I find additional time for struggling readers to read the same novel, and use peer partners to support their reading as well.

In general, there is benefit to holding *what* students learn relatively steady, while changing how we give access to the content to match student needs. Sometimes, however, it seems to

Differentiating Content for Student Need

Content can be differentiated in response to a student's readiness level, interests, or learning profile. It can also be differentiated in response to any combination of readiness, interest, and learning profile.

- **Readiness differentiation** of content has as its goal matching the material or information students are asked to learn to a student's capacity to read and understand it. For example, it is a poor use of time to ask a 5th grade student who reads independently at a 9th grade-level to do most of her work in a grade-level reading series. It is equally inappropriate to ask a student who speaks and reads little English to read independently from a grade-level U.S. History book. One way of thinking about readiness differentiation of content is to use "The Equalizer" (Figure 8.1, page 47) as a guide, asking yourself if materials are at an appropriately challenging level of complexity, independence, pacing, and so on.

- **Interest differentiation** of content involves including in the curriculum ideas and materials that build on current student interests or extend student interests. For example, an English teacher encourages a budding young comedienne to read selections that involve humor. A history teacher helps a student find Web sites that feed his curiosity about the role of Native Americans in the Civil War.

- **Learning profile differentiation** of content implies ensuring that a student has a way of "coming at" materials and ideas that match his preferred way of learning. For instance, some students may handle a lecture best if the teacher uses overhead transparencies as well as talk—linking visual and auditory learning. Some students will comprehend reading far better if they can read aloud—whereas other students need silence when they read. Reading the science text may be just the ticket to help one student understand the concept of "work," while another student may grasp the idea better by watching a demonstration that uses exemplars of "work" and "not work."

By way of example, students in a middle school science class are beginning work on the characteristics of mammals. Today, the teacher has planned several approaches for introducing her students to key concepts, terms, and ideas about mammals. First, students selected which of five vertebrates they'd rather investigate (differentiation of content based on student interest). Then the teacher gave each investigation team several ways to learn about the mammal selected by group members. For each mammal, there is a small box of books at varied reading levels (differentiation by readiness). In addition, there are either audio or video tapes about each mammal, and bookmarked Web sites as well (differentiation according to student-learning profile).

Further, students can take "freelance" notes on their reading, or use a teacher-provided matrix to guide note taking (differentiation in response to student readiness). This is an example of a teacher who is differentiating content in several ways. Here, she is holding steady the key concepts, ideas, and skills (*what* she wants her students to learn), and modifying how she ensures effective *access* to the "input" she has defined as essential.

Strategies for Differentiating Content

Here are some strategies for differentiating content. Some of them are useful in differentiating what we need students to learn. Many are useful in differentiating how we ensure appropriate access to what we need students to learn. Most can be used to differentiate content by readiness, interest, and learning profile.

Concept-Based Teaching

In many classrooms, students "cover" lots of facts, vocabulary words, names, dates, and rules. Unfortunately, they also forget much of what they "learn" as they leave that information behind and move on to another topic or lesson. Much of this "memory loss" occurs because they never really understood or saw the purpose of what they learned. Rather than slogging through a swamp of facts, you can help your students better understand and see utility in an area of study by emphasizing its key concepts and principles. Concepts are the building blocks of meaning.

Instead of spending a month memorizing categories of animals or studying penguins, students can use that same time to study patterns in the animal kingdom, talk about traits, use traits to identify and classify animals, and learn how to predict traits from habitats or vice versa. "Patterns" is a concept that undergirds how scientists look at and classify things. Having students become adept at determining and predicting patterns and using those patterns to think about various forms of life helps them (1) understand rather than memorize, (2) retain ideas and facts longer because they are more meaningful, (3) make connections between subjects and facets of a single subject, (4) relate ideas to their own lives, and (5) build networks of meaning for effectively dealing with future knowledge.

Differentiated instruction is so powerful because it focuses on concepts and principles instead of predominantly on facts. Teachers who differentiate instruction offer minimal drill and practice of facts (as these practices tend to create little meaning or power for future learning); they focus instead on essential and meaningful understandings to create transferable learning power.

One elementary teacher uses a differentiated unit to study the concept of extinction. Her class explores two key principles: (1) extinction can come about because of natural changes in the environment, and (2) extinction can come about because of human-made changes in the environment. One group uses dinosaurs as an example of extinction and investigates changes that may have caused their extinction. Another group compares the dinosaurs' extinction to today's rain forests, looking for similarities and differences in extinction patterns. Both groups encounter powerful scientific principles, specific examples, and a need to hypothesize and draw conclusions. But one group studies this content in a more foundational, concrete, single-faceted way, while the other group conducts an exploration that is more transformational, abstract, and multifaceted. The teacher proactively matches the "equalizer buttons" of the tasks and materials to each group's current learning needs.

Being sure of key concepts and principles in what you teach is a great way to begin thinking about differentiation. It also makes your teaching more relevant and potent in general.

Curriculum Compacting

This strategy was developed by Joe Renzulli at the University of Connecticut and is specifically designed to help advanced learners maximize their use of time for learning (Rezis & Renzulli, 1992). Compacting is a three-stage process.

In **Stage 1**, the teacher identifies students who are candidates for compacting and assesses what they know and do not know about a particular topic or chapter. Students may request compacting or the teacher may decide to "compact" a student.

Initial assessment occurs either prior to or early in the study. Assessment may be formal, such as a written post-test; or informal, such as the teacher and student having a focused conversation about the subject being studied. Following this assessment, the teacher notes which skills and understandings each student

has reasonably mastered (i.e., knowing 70–75 percent or more of the content). Students who are compacting are exempt from whole-class instruction and activities in content areas they have already mastered, thus "buying time" for learning more challenging and interesting material.

In **Stage 2**, the teacher notes any skills or understandings covered in the study in which the student did not demonstrate mastery, and then lays out a plan to make certain the student learns those things. The plan may require the student to join other classmates for particular portions of the study, do homework that provides practice on missing skills, or demonstrate mastery of those skills in a product that is created in the third and final stage of the compacting process.

At the beginning of **Stage 3**, the teacher and student design an investigation or study for the student to engage in while others are working with the general lessons. The teacher and student together agree on the project's parameters, goals, time lines, procedures for completing the tasks, criteria for evaluation, and any other necessary elements. The student does not have to reinvest freed-up time in the same subject from which he was compacted. One student who compacts out of math, for example, may elect to spend his time working on a project in a special interest area such as science fiction. Or, if he especially likes math, he might want to develop a plan for using advanced mathematics software available in class.

Keeping records when using compacting has three benefits: (1) teachers demonstrate accountability for student learning, (2) parents understand why it is advantageous for their children to work with an alternate task, and (3) students develop awareness of their specific learning profiles.

Advanced learners gain little by continuing to relearn the known, but they gain much from the expectation that they will continually engage in challenging and productive learning in school. Compacting helps eliminate the former and facilitate the latter.

Using Varied Text and Resource Materials

Grade-level texts are often far too simple for some students in a given class, and yet too complex for others. Using multiple texts and combining them with a wide variety of other supplementary materials increases your chances for reaching all your students with content that is meaningful to them as individuals. You can develop valuable differentiation resources by building a classroom library from discarded texts of various levels (or requesting that textbook money be used to buy three classroom sets of different books rather than one copy of a single text for everyone), and by collecting magazines, newsletters, brochures, and other print materials.

The rich array of materials available through the Internet makes it far easier than once was the case for a teacher to differentiate materials based on student need. Other things being equal, advanced learners will usually use advanced resources, but may occasionally find it helpful, when beginning a complex study, to find out about a topic in the more straightforward presentation found in a less-challenging source. Likewise, struggling learners may from time to time grasp an idea better by looking at diagrams or pictures in a more advanced source.

As students' task needs vary, so should their use of resources. Many computer programs present increasing levels of challenge and complexity. In math or science, some students may need to use manipulatives to understand a concept, while others can move directly from an explanation or reading to abstract use of that concept without working with manipulatives. Some videos present key ideas with clarity, others extend explorations with greater breadth

and depth than may be desirable for students less advanced with that topic. For students learning English while they learn other curriculum, it would be of major assistance to read ideas first in their native language, then in English. The key is to match the levels of complexity, abstractness, depth, breadth, and so forth of the resource materials with the student's learning needs. Don't forget that text and other materials can also be used in response to a student's interests as well as in response to current learner readiness or learning profile.

Learning Contracts

Learning contracts between teachers and students come in several varieties. One allows students some freedom in their use of class time in exchange for doing responsible and effective work. Contracts can contain both "skills" and "content" components, and are helpful in managing differentiated classrooms because the components of a contract can vary with a student's needs.

For example, students in a 4th grade class are all using contracts. Jake's specifies that during contract time in the week ahead he must complete his next two spelling lists, master two levels on the computer program on division by one digit, and work with the characterization project from a novel of his choosing. Jake's spelling lists are a bit above grade level, reflecting his comfort as a speller. Because his math work is below grade level, extra time with the computer may help him move along more confidently. The novel Jake selects can be based on his interests, and his task with it—thinking and writing about himself in comparison to the main character—has been designed to help him think through the key strategies a writer uses to build characters.

Jenny has also made a contract that includes spelling, computer work, and a novel. Rather than a spelling list, she uses an advanced vocab-ulary strategy because she spells several years above grade level. Jenny will use the computer program to practice division by three digits. She will also select a novel that she likes, analyze the main character, and create an opposite or mirror image character by applying traits of characterization.

Both students get to map out their plan of action for the week, decide which tasks will be done in school and which at home, and progress at a rate and depth of content challenging for them. Both are accountable for their time and self-management, and understand that their teacher will assign them work if they violate their contract obligations. Jake and Jenny share a table with two friends whose contracts differ somewhat from theirs.

Contracts combine a sense of shared goals with individual appropriateness and an independent work format. They also give the teacher time for conferences and small-group or individual work sessions based on progress and needs.

Minilessons

When a teacher introduces a concept to the whole class, chances are that some students will grasp it instantly (or could have skipped the lesson because they already have mastered the idea, skill, or information). On the other hand, some students will be foggy or lost in relation to the "input" the teacher had given them. In such cases, minilessons can be a valuable way to differentiate content.

Based on assessment of student understanding, the teacher may reteach a part of her students, find another way of teaching a group of students, or meet with yet another group to extend their understanding and skill. Minilessons can be quite effective in targeting content to students' readiness, interests, or learning profile.

Varied Support Systems

You can make content of varying complexity levels more accessible to your students by using a variety of support systems, such as study buddies, reading partners, audio and video recorders, and peer and adult mentors. These strategies can help many students stretch their capacities as learners.

Reading Partners and **Audio/Video Recorders.** A 5th grader can be great at audio-taping books for 2nd graders who need assistance with their reading. A 3rd grader who records a grade-level book can help create enriching materials for a classmate who has trouble decoding or reading long passages. High school students can create tapes summarizing journal articles on a particular topic to give advanced 6th graders access to materials beyond the scope of their classroom or school library. Some of those 6th graders can help 4th graders learn how to make a speech by making a video on the subject. An advanced 4th grader can make a video on the types of buildings in the community, which could then be used in a kindergarten learning center.

Note-Taking Organizers. Some students, even of older ages, find it very difficult to read text or listen to a lecture and come away with a coherent sense of what it was all about. For such students, it can be quite useful to work with a visual organizer that follows the flow of ideas from the text or lecture. Not only might such organizers help them focus on key ideas and information, but they may also help some learners see how a teacher or author develops a line of thought. Remember, however, that students who read independently may find it restrictive to have to use such organizers. The point is always to provide individual learners with a support system that helps the student grow—not one that feels like an impediment.

Highlighted Print Materials. A teacher can highlight critical passages in text or supplementary materials, keeping several copies of the highlighted materials in the teacher's desk. When a student has difficulty managing an entire chapter or article, the teacher can easily provide that student with a highlighted version. From the outside, the material looks like everyone else's, but because of the highlighting, the student can expend energy on reading and understanding essential portions of the chapter rather than becoming discouraged with what seems like an insurmountable amount of print.

Digests of Key Ideas. Most effective teachers could, with minimal expenditure of time, create a one- or two-page capsule of ideas in a unit. Such a digest can be of great assistance to students who struggle with print materials, lectures, or even organization of information. The digest could be in the form of sentences and paragraphs, a flow chart or concept map of the unit or topic, or a combination. It might also spotlight key vocabulary and provide essential questions the unit is designed to address. Such digests also help teachers clarify their own thinking about the core of a unit or topic.

Peer and Adult Mentors. Adults often volunteer to help youngsters who are behind with their work and in need of additional guidance. All learners—not just those who are struggling—benefit from time with adults who can answer questions about shared interests, sharpen their thinking, or give them access to advanced research skills. A bright 5th grader can also be a great mentor for an advanced 3rd grader who shares similar interests. You can create extensive support systems by using the people and technologies in your classroom, school, and community, thus giving everyone a chance to reach higher, learn more, and contribute to one another's learning.

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No doubt you have other ways to match content to learner readiness, interest, and learning profile that work well for you and your students. The goal when differentiating content is to offer approaches to "input" (information, ideas, and skills) that meet students individually where they are and vigorously support their forward progress. The next chapter provides ideas for using varied processes in instruction.