

Key Elements of Differentiated Instruction

Differentiated instruction is based on modification of four elements: **content**, **process**, **product**, and **affect/learning environment**. This modification is guided by the teacher's understanding of student needs—the students' **readiness**, **interests**, and **learning profile**.

Let's take a closer look at some key vocabulary related to differentiation.

What Can Teachers Differentiate?

Content

Content means the knowledge, understanding, and skills (KUD) that students need to learn (Tomlinson & Imbeau, 2010). It's important to remember that these learning goals should nearly always remain the same for all students in the differentiated classroom. What teachers can differentiate in terms of content is the “methods that students use to access key content” (p. 15).

For example, students can acquire new information and ideas through reading independently or with a partner, reading a novel or listening to it on tape, doing online research or communicating with experts, participating in group demonstrations, or engaging in small-group instruction (Tomlinson & Imbeau, 2010). Or the teacher can present content in several ways in the classroom—for example, by showing students images of concrete objects illustrating math concepts as a first step in teaching these abstract concepts.

To address individual student needs, teachers also provide appropriate scaffolding when working with content—by teaching prerequisite content to some students, allowing advanced students to move ahead of the class, or even changing the content for some students based on their individualized education programs (Tomlinson & Imbeau, 2010).

Process

Tomlinson and Imbeau (2010) define *process* as “how students come to understand and make sense of the content” (p. 15). By differentiating process, they understand creating sense-making activities that help students “own” the content—by allowing them to “see how it makes sense, and realize how it is useful in the world outside the classroom” (p. 15).

Differentiating process is all about practice based on the content. This involves students trying to figure things out, asking questions, and making mistakes. At this stage, says Carol Ann Tomlinson, “Almost always students will need to work at different speeds, with different kinds of support, in different groupings, and in different modes. And that’s a very important stage because this really is the point where learning happens with kids.”

Product

Products are ways for students to “demonstrate what they have come to know, understand, and be able to do after an extended period of learning” (Tomlinson & Imbeau, 2010, p. 15). According to Carol Ann Tomlinson, “a synonym for a product is an authentic assessment,” which gives teachers fertile ground for differentiation. “Students can propose the way they’d like to show us something, or we might offer them two choices—with the notion that they can make a deal with us to do the third one,” she says.

Even multiple-choice or true/false tests can be differentiated, says Tomlinson: “I am seeing some districts do an interesting thing, especially where they have a lot of second language learners: They’ll have the regular version of the test, and then one that one district called ‘the plain-English version.’ It’s exactly the same thing, but they write it in a more streamlined way—simpler vocabulary, more white space. Kids still have to understand and be able to work with the same things; they’ve just made the format of it more accessible to them.”

Tools for High-Quality Differentiated Instruction: An ASCD Action Tool by Cindy Strickland (2007) includes the following suggestions for differentiating content, process, and product:

Content	Process	Product
<ul style="list-style-type: none"> • Leveled or topical readers • Books on tape • Highlighted text • Varied topics for research • Independent study options • Interest centers • Optional mini-lessons on a specific topic or skill • Compacting the curriculum • Online readings at varied levels of difficulty • Demonstrations 	<ul style="list-style-type: none"> • Opportunity to work alone, in pairs, or in small groups • Group roles when in small groups • Literature circle roles • Varied journal prompts • Choice of review activities • Supportive technology • Amount or kind of teacher help available • Various types of graphic organizers and supporting documents (vocabulary, formulas, key dates, etc.) • Homework options (“Do this section if you need more practice on...” or “Do this section if you feel ready for a challenge”) 	<ul style="list-style-type: none"> • Product options that respond to varied interests or learning profiles • Varied timelines or check-in points • Varied criteria for success (e.g. from novice to professional) • Varied audiences (in age, background knowledge, size, etc.) • Varied roles in a performance assessment • Some choice of questions on tests and quizzes

Source: Strickland, C. (2007). *Tools for high-quality differentiated instruction: An ASCD action tool*. Alexandria, VA: ASCD. Reprinted with permission.

Affect/Learning Environment

Affect/learning environment—the effect of students’ emotions and feelings on their learning—is another element of differentiated instruction. Our emotions and feelings, which are created by our past experiences and our reactions to current experiences, influence our self-concept, as well as motivation to learn and ability to collaborate. All these factors play a key role in the learning process.

Differentiating student affect means modifying the learning environment to meet student emotional needs. For example, “we differentiate by student affect when we have kids who need a little bit more attention to be able to stick with the task, or when

we understand that this kid really, really likes to have someone acknowledge that he's made a great step forward," says Tomlinson, "whereas this kid is kind of modest and would prefer really that attention not be called to him or her, but rather to the group because it's a cultural thing that the group needs to be acknowledged."

Addressing students' affective needs should be taken into consideration when planning such aspects of instruction as respectful tasks and flexible grouping, explains Tomlinson. "We [may] have some kids who don't work especially well in groups because they have emotional challenges, and we try to help develop groups and help them develop mechanisms for working in those groups to be successful."

For some students, modification of the learning environment is needed to ensure effective learning, says Tomlinson. "There are some kids who simply cannot sit still for an extended period of time, so we make it possible for them to move around the room more. Or we have some kids who just really can't work with noise and so when kids are working in groups we give them ear plugs to work with," she explains.

How Can Teachers Differentiate?

Content, process, product, and affect/learning environment are key elements that form classroom instruction. To effectively address student needs, teachers in differentiated classrooms strive to make these elements pliable, explains Tomlinson. What drives the modification of these elements is a teacher's assessment of students in terms of three characteristics: readiness, interest, and learning profile.

By Readiness

Tomlinson and Imbeau (2010) define *readiness* "a student's current proximity to specified knowledge, understanding, and skills" (p. 16). They warn that readiness differs from *ability*; for example, high-quality teaching leads to regular changes in readiness.

The goal of readiness differentiation is to make the work a little too difficult for students at a given point in their growth—and then to provide the support they need to succeed at the new level of challenge.

By Interest

Interest is defined as “that which engages the attention, curiosity, and involvement of a student” (Tomlinson & Imbeau, 2010, p. 16). When people are interested in something, their motivation to learn about it increases, enhancing learning outcomes as a result.

The goal of interest differentiation is to help students engage with new information, understanding, and skills by making connections with things they already find appealing, intriguing, relevant, and worthwhile. Such things, write Tomlinson and Imbeau, are “typically linked to a student’s strengths, cultural context, personal experiences, questions, or sense of need” (p. 17).

By Learning Profile

A student's *learning profile* is “a preference for taking in, exploring, or expressing content” (Tomlinson & Imbeau, 2010, p. 17). Four factors help form a learning profile: 1) gender; 2) culture; 3) learning style, such as working solo or collaboratively, in a quiet atmosphere or when listening to music, while sitting still or moving around, in a bright or dark room; and 4) intelligence preference—verbal-linguistic, logical-mathematical, bodily-kinesthetic, interpersonal, intrapersonal, musical-rhythmic, spatial, or naturalist preference for learning or thinking (Gardner’s intelligences); or creative, analytical, and practical preference (Sternberg’s intelligences).

The goal of learning profile differentiation is to teach in the ways students learn best—and to extend ways in which they can learn effectively. Many experts in a variety of fields caution against using learning styles surveys to assess students’ preferred modes of learning and against assigning students to a particular learning styles category over time.

Assessing Student Variance

To assess for students' readiness, interest, and learning profiles, *Tools for High-Quality Differentiated Instruction: An ASCD Action Tool* by Cindy Strickland (2007), suggests looking for the following:

Readiness	Interest	Learning Profile
<ul style="list-style-type: none"> • Attitude toward school, subject, or topic • Experience with topic or an aspect of it • Knowledge, understanding, and skills in topic prerequisites or related topics • Misunderstandings about topic or discipline • Overgeneralizations about the topic or discipline • Sophisticated use of related vocabulary • Evidence of skills in the discipline • Insightful connections between the current topic and other topics in the discipline or in other disciplines. • General communication, thinking, reasoning and other pertinent skills 	<ul style="list-style-type: none"> • Passions • Hobbies • Family interests or pursuits • Affiliations—after-school clubs, extracurricular activities • TV viewing preferences • Vacation destinations • Music preferences • Choice of friends • Elective choices 	<ul style="list-style-type: none"> • Learning styles: visual, auditory, kinesthetic, whole-to-part versus part-to-whole, concrete versus abstract, sequential versus random, etc. • Intelligence preferences • Environmental preferences: temperature, light, availability of food and drink, presence or absence of background music, etc. • Gender- or culture-based preferences: competition versus collaboration, emphasis on the individual versus group • Group orientation: work alone or with others, focus on peers versus focus on adults

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Effective teachers wisely ask their students questions and pay attention to what their students say and do, as well as talk to the students' parents to help them know their students as learners.

Even more important, asking students questions and paying attention to anything that students say or do, as well as talking to students' parents, can help teachers to get to know their students as learners.