# Content, Process, and Product: Modeling Differentiated Instruction

**Article** *in* Kappa Delta Pi Record · January 2015

DOI: 10.1080/00228958.2015.988559



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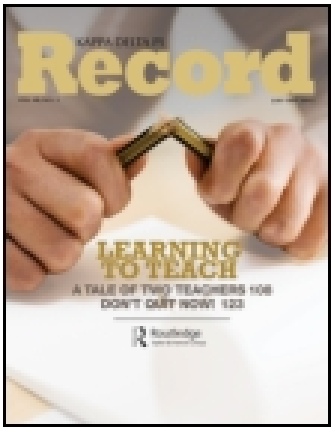
**1** PUBLICATION **19** CITATIONS




Kappa Delta Pi Record
Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/ukdr20

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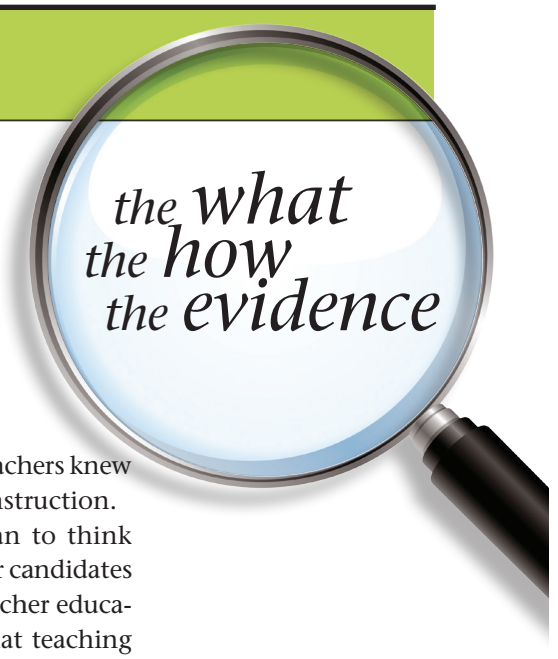
Published online: 14 Jan 2015.




*Kappa Delta Pi Record,* 51: 13–17, 2015

ISSN: 0022-8958 print/2163-1611 online
DOI 10.1080/00228958.2015.988559

# Content, Process, and Product: Modeling Differentiated Instruction

**by Barbara Kline Taylor**

**Abstract**
*Modeling differentiated instruction is one way to demonstrate how educators can incorporate instructional strategies to address students' needs, interests, and learning styles. This article discusses how secondary teacher candidates learn to focus on* content*—the "what" of instruction;* process*—the "how" of instruction; and* product*—the "evidence" of instruction.*
**Key words:** *curriculum instruction, differentiated instruction, secondary education*

I received an email from a former teacher education student who was feeling decidedly defeated before she had even begun the school year. Her principal had scolded all the teachers because the school had not made annual yearly progress (AYP) the previous year under the No Child Left Behind guidelines. He accused them of using only rote learning methods with their diverse population of students in classes that required a variety of instructional methods.

My former student, now a middle school language arts teacher, told her principal that her university training opposed the idea of rote memory learning and focused on meeting diverse student needs through a variety of instructional strategies. The principal replied, "Professors and colleges are made up of theorists and not practitioners." He made her feel as though her knowledge and the practices she was using weren't appropriate for her diverse students. She was sure, however, that the student-centered methods she used regularly were engaging students in active learning designed to meet every student's needs. Yet she didn't know how to convince her principal because he was adamant that his teachers knew only how to use one-size-fits-all instruction.

As I read her message, I began to think about the uniqueness of the teacher candidates in our program and what I, as a teacher educator, needed to do differently so that teaching candidates would not only learn a variety of instructional strategies, but also experience instruction that focused on their individual needs (Gregory & Chapman, 2013). My Secondary Curriculum and Instruction class always has covered differentiated instruction, and I have emphasized how important it is for teachers to get to know their students' interests, learning styles, and needs. However, I believe I had failed to sufficiently demonstrate a variety of ways in which to differentiate for the diversity of subjects and teacher candidates in the class.

In my earlier classes, we discussed and developed instructional strategies for each of the candidates' disciplines using time, materials, classroom space, and student groupings as the differentiating factors, as indicated in the literature (Levy, 2008; Metropolitan Center for Urban Education, 2008; Tomlinson & McTighe, 2006). University students are accustomed to this type of whole group instruction. However, when I began to put candidates into small groups based on their teaching discipline or their individual needs, they questioned why. They were concerned that students in their classrooms would feel uncomfortable in these prearranged groups. I continued with this strategy until the teacher candidates could see how these groups helped them to improve in an area where they were weak. But it still was not enough to convince them of the benefits of differentiating.

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**Figure 1.** Curriculum Choice Board.

| Visual | Auditory | Tactile |
|---|---|---|
| Write a paragraph of no less than five sentences defining curriculum. | Make an oral presentation on your definition of curriculum. | Develop a graphic organizer on the definition of curriculum. |
| Write a letter to a parent explaining what curriculum is. | Sing a song about your definition of curriculum. | Create a mural depicting your definition of curriculum. |
| Write a one-page persuasive essay on your definition of curriculum. | Demonstrate through a commercial your definition of curriculum. | Sketch a cartoon depicting your definition of curriculum. |

## Get to Know Your Students

In subsequent classes, I decided to approach my teaching in the same way I was suggesting for these teacher candidates—that is, to use a variety of instructional strategies to differentiate their lessons. I tested and have now adopted these teaching methods in my Secondary Curriculum and Instruction course. During the first week of the semester, I inventory my students about their interests, learning styles, and knowledge of differentiated instruction (Northey, 2005; Turville, 2007). Then I share this information with the class so they can see that we have a diversity of students in the university setting in the same way that they will have a diversity of students in their classes at the high school.

One of our first discussions in class revolves around a definition of *curriculum*. In the past, I had each student give his or her definition, write it on a sticky note, and place it on the board; but now I use a choice board (Allen, 2006) for their responses to this question (see Figure 1). A choice board looks like a tic-tac-toe game with options in each column that correspond to the three major learning styles: visual, auditory, and tactile.

From this informal survey of teacher candidates' learning styles, I find out that some students are visual learners, some are auditory learners, and generally a few are more kinesthetic or tactile in their learning style. By way of their responses, which they present to the class, I have gleaned the most complete definitions I had ever received for this question, and my students are surprised to learn that I allow them to make their own choices.

## Content, Process, and Product

When we finish with the definition responses, I inform the teacher candidates that they have just had a form of differentiated instruction using the same instructional objective for the whole class. I point out that we generally differentiate in three ways: *content*—the "what" of instruction; *process*—the "how" of instruction; and *product*—the "evidence" of instruction. We also differentiate by levels in the class: below target, on target, and above target.

Differentiating *content* means that teachers can vary the level of complexity. For example, in an English class, students can read textbooks or other literature at different reading levels addressed to their specific needs. Because most classes have only one set of textbooks at grade reading level, the teacher must provide other reading materials at various levels. The teacher candidates use the Teacher Learning Center at the university, where books and other learning resources are available, to find alternate materials; but school librarians or reading teachers also can be of help in identifying other reading materials.

Differentiating *process* means that teachers can vary the learning activities based on the students' interests or learning styles. For example, in a history class, students could conduct Internet research, interview community members, draw maps, or construct models. While all students have similar content to cover, they may choose from an array of activities or processes that are of interest to them or that address their various learning styles.

Differentiating *product* means that students have a choice in how they demonstrate what they have learned. For example, in a science class, students can write a paper, conduct a lab and report the procedures and results, or

present a PowerPoint® on the topic. Any one of these choices also can be used to differentiate target levels. For example, everyone in the science class can conduct a lab, but the requirements for writing the procedures and results can be varied for each target group.

I inform the class that I will be differentiating their instruction as we continue through the semester. Doing so, I explain, will allow them to build a repertoire of strategies useful for differentiating instruction in a variety of subjects.

## *Differentiating Content*

As the class progresses, I continue to add other differentiated instructional activities. In this class, I use *Understanding by Design* (UbD; Wiggins & McTighe, 2005) as the basis for curriculum development. Teacher candidates work in interdisciplinary teams to develop a thematic unit that they all can use regardless of their subject or content area. A team is generally composed of three teacher candidates from three different disciplines. We begin with a team-building exercise so that team members get to know one another and discover how they can work together. Each team member is given a task and, collectively, the team completes an activity.

Following this exercise, each team discusses potential ideas for its thematic unit. For example, one team identified Traveling to Europe as a unit. Team members for that unit represented social studies, language arts, and business technology. Another example is the Albuquerque Balloon Fiesta unit. Team members for that unit included teacher candidates in art, science, and math. As they continue to work in interdisciplinary teams, they assist one another throughout Stage 1 of *Understanding by Design* to identify goals, enduring understandings, and essential questions. Because they are at different schools, unfortunately they do not have opportunities to see how their different subjects are integrated; so each candidate's integrated unit also has to stand alone.

As we move through the stages of the UbD process for the thematic units, I incorporate cubing (Dirksen, 2010), another instructional strategy in differentiating content. Cubing is similar to rolling dice in that students roll a paper cube and respond to what it says on the face block that appears on top. After presenting the Six Facets of Understanding (Wiggins & McTighe, 2005) and showing a video about how the facets demonstrate understanding, I use a cube with each side displaying one of the facets, which include explanation, interpretation, application, perspective, empathy, and self-knowledge. Each student rolls the cube, and whatever facet appears on top requires that student to present a definition of the facet and provide one or more examples of how to use that facet in the team's unit plan. For example, a social studies teacher candidate rolled the cube and "empathy" was on top. He gave a definition of the facet and then, in his unit plan, assigned students to write what it felt like to be a soldier in the Civil War.

This use of cubing helps teacher candidates improve their critical thinking skills by requiring them to think about how a facet of understanding can be used in multiple disciplines. It also addresses levels of readiness. Some candidates present one way they will use the facet and others present more than one way, depending on their level of readiness. Additionally, by employing three strategies to help the teacher candidates develop a deeper understanding of how to use the facets (making an oral presentation, watching a video about the facets, and using the cube as a tactile object to reinforce understanding), I also address their learning styles.

## *Differentiating Product*

In Stage 2 of the UbD process (Determine acceptable evidence), I also use cubing to help teacher candidates identify and describe vari-

ous ways to determine acceptable evidence or the variety of products they can use for assessment. Each side of the cube has a different type of assessment or product. They roll the cube twice and describe how they will use the two particular types of assessment for one of their unit plan objectives. For example, "observation checklist" may show up on the top block, and they describe how the observation checklist is used for one of their unit objectives and what will be included in the checklist. "Rubric" may show up on another top block, and they relate what elements need to be in the rubric and for what objective the rubric will be used. Then they actually develop these various forms of assessment for their unit plans.

Teacher candidates also may determine that they want to vary the assessments to match the readiness levels of the students. For example, some students may submit an inquiry-based project as the assessment of their learning, some may write a research paper, and others may take a paper-and-pencil test. In my class, I use both paper-and-pencil tests and projects to demonstrate learning. These assessments give teacher candidates opportunities to demonstrate their knowledge of the content as well as their ability to perform.

### *Differentiating Process*

In Stage 3 of the UbD process (Plan learning experiences and instruction), the teams develop learning experiences for their unit plans. I introduce several ideas they can consider for student-centered learning experiences that will equip students to demonstrate they are moving toward the desired results. Among these are tiered instruction and readiness levels.

**Tiered Instruction.** I introduce tiered instruction (Kingore, 2004; Levy, 2008) using reading as an example. Tiered instruction can be based on interests or readiness. I remind teacher candidates that, regardless of their subject areas, they are responsible for helping students improve their reading. Each teacher candidate reads an assigned article on student-centered instructional strategies. Then I break the class into three groups: Group 1, those who don't think reading is their responsibility; Group 2, those who believe they need to help students improve their reading; and Group 3, those who already have demonstrated in their lesson plans how they will help students improve their reading skills.

Group 1: I provide an 8 1/2 × 11-inch piece of card stock that is folded in half as well as other supplies for drawing. On sheets of paper, they must draw examples of the various strategies they read about in the article, and then cut and glue them to the inside of the card stock so that they have a display to show and describe to others.

Group 2: I provide paper lunch sacks and tell the group to find three things to put in the bag that will be used in one of the student-centered instructional strategies described in the article they read. On the outside front of the bag, they must identify the strategy by name; on the back of the bag, they write how they will implement the strategy.

Group 3: I provide a manila file folder and explain that they must use all four sides to show how they will use one of the instructional strategies in their course content. They can draw, write, or even use objects related to their content to demonstrate what they will do to incorporate the strategy.

Following this activity, as a class of future teachers, we discuss how tiered instruction can be used in their content area or for reading and writing. We also discuss how we can develop tiered instruction using technology software such as Inspiration®, Wordle™, and Animoto®. I remind teacher candidates that they need to adjust this strategy for students who are below grade level, students who are at grade level, and students who are above grade level.

**Readiness Levels.** Focusing on readiness levels within a classroom is critical for meeting

students' needs. Yet sometimes understanding readiness is an issue for new teachers (Pham, 2012). So I require each team to develop at least one activity for its unit plan that would address students' needs for those below target level, at target level, and above target level. Most of the activities focus on reading and writing, with variations in the expectations. Several use RAFT activities, which are designed to vary the level of writing assignments and to increase students' writing proficiency (Buehl, 2001). In a RAFT assignment, a choice of *Roles* is presented, such as child, adult, workshop participant, or student. The writer takes on the persona of the person and writes in that voice. *Audience* describes to whom the person is writing. *Format* describes how the writing will convey the idea. *Topic* specifies the content for the writing. If the teacher candidate is focusing on readiness levels, students can be assigned to a specific RAFT depending on their readiness. See the example social studies RAFT assignment in Figure 2.

Both the tiered instruction and the RAFT assignment learning activities focus on process. However, they also provide a way to check on students' understanding and determine whether they need remediation or can continue moving forward.

**Figure 2.** Social Studies Raft Assignment.

| Role | Audience | Format | Topic |
|---|---|---|---|
| Talk Show Host | Television Public | Talk Show | Health Issues in the Early 20th Century |
| Newspaper Reporter | Public | Newspaper Article | Upcoming Elections |
| Advertiser | TV Audience | Public Service Announcement | Importance of Voting |
| Student | Advice Columnist "Dear Abby" | Advice Column | Voting Rights and Responsibilities |
| Constituent | U.S. Senator | Letter | Need for Changes in Voting Laws |

Adapted from Buehl (2001).

## Preparation

Many other differentiated instructional strategies can be incorporated into a lesson or unit of instruction, or when work is completed and there is extra time. Because new teachers tend to be overwhelmed when starting out, I choose a few strategies to model in my Secondary Curriculum and Instruction class that can address students' learning styles, interests, needs, and readiness levels. I suggest to the teacher candidates that they be well prepared when incorporating these strategies so that their students reap the benefits. The basic premise behind differentiated instruction is to keep students moving forward regardless of their readiness level (Roberts & Inman, 2007). As the teacher candidates become full-fledged teachers in their own classrooms with a diversity of students, they can use these differentiated strategies or develop skill in using others. By providing multiple paths to a learning goal using a variety of strategies to address students' learning styles, interests, needs, and readiness levels, teacher candidates can engage all students in differentiated instruction that is appealing, developmentally appropriate, and motivational.

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