Overview of Differentiation

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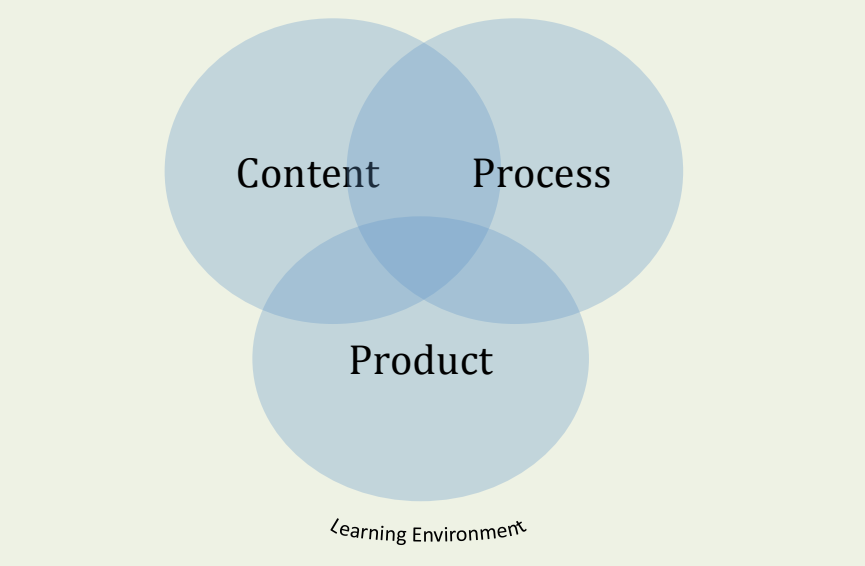
Curriculum is composed of learning activities that are aligned to standards, and has four dimensions; content, process, product, and learning environment. It is within these four dimensions that we can make changes to accommodate the unique needs of students.



We can change the content: what we plan to teach. We can change the process: the way we plan to teach it or the way we think students will learn it. We can change the product: the way students show us what they know. And, we can change the learning environment: the place or time learning happens. Each of these four dimensions is embedded in the lessons you teach, and they need not be fixed. Sometimes they can be addressed in isolation, and sometimes they overlap. Most importantly, they can always be changed to suit student need.

The key to differentiation is a willingness on your part to change what you do within these dimensions to better suit students, and the real battle will be finding time to change curriculum for just *some* students. Ideally we would be able to work one-on-one with each student, but that doesn't seem plausible given classroom constraints. You will probably agree with me; I am not sure it ever makes much sense for public schools to be engaged in one-to-one planning and teaching, as a rule. At the upper grades, you're likely to have a class of more than forty students; that is a long way from one-on-one. Differentiation strategies help you to tailor your lessons, in any or all of the four dimensions, when one-on-one instruction is not possible. With differentiation, you can adapt lessons to take into account some of our students' unique attributes and characteristics, and to better encourage critical thinking.

Content

The content is the substance of what you teach, and is typically determined by a set of learning standards. There are several strategies you can use to differentiate the content.

You might begin by changing the level of abstractness or complexity. Instead of presenting factual type data, you may deliver content in concert with a broader theme or concept driven idea. For example, knowing when Napoleon invaded Russia is factual. Trying to understand his rationale requires critical thinking. Considering the concept of revolution is far more abstract an idea – and can be rooted in the same factual type information.

You might also consider changing the degree of *connectedness* in your content. You can have students draw connections between other school subjects or their own personal interests. It may be a stretch to ask students to draw parallels between their new knowledge of three-dimensional shapes and contemporary literature, but can we not have more full and multidimensional characters? What shape is Harry Potter, and why? How is that different than Draco Malfoy?

For some students, adding real life stories will enrich the content. Perhaps it was Napoleon's inferiority complex that drove him to brave the Russian winter. Adding the personal dimension is a great way to engage students who are empathetic. For some students, the history is not complete until they read a biography. Be willing to introduce real life controversies. Students who are particularly sensitive to global issues and injustice want desperately to tackle these complex ideas.

The ultimate step in content differentiation means letting students choose their own content. This can be a scary idea in a standard driven curriculum, but there are some good strategies you can use to manage this kind of content. Effective teachers know of a few already. Things like learning contracts, concrete deliverables, and using Gantt charts to manage scaffolded content are just a few of them.

Process

Process refers to the way we teach, or the way students learn. You are probably familiar with Bloom's taxonomy of learning from the 50s. The idea that there are many ways to learn about something, and those ways can be arranged into a hierarchy. Bloom thought simply knowing something was low-level learning. In contrast he and his colleagues felt being able to critically evaluate something was relatively high-level learning. I think we can all agree there are different ways to learn about things – maybe we can call it depth, maybe complexity, but whatever the words we use – we can recognize differences. In terms of teaching strategies, this means varying the way students can learn about something, while being careful not to rest too long in factual/memory type learning. There are several strategies you can use to differentiate the process.

A nice way to encourage different ways of learning is to let students explore something on their own or in small groups. A popular strategy is "Experts Methods of Inquiry", which calls for students to take on the role of an expert in the field as they think about subject matter. For some students working with peers will make sense here, for others working alone will yield the best results.

Letting students learn in more open ended and inquiry based lessons may also work well. In these kinds of lessons, students may be trying to solve a problem that has no single solution. Making time for students to reflect upon the process may also be important as they develop their inquiry skills.

The ultimate expression of a differentiated learning process lies in pace; cutting out parts of a lesson in which students demonstrate proficiency, or speeding up the delivery of

content yet to be learned. Some high schools offer curriculum at an accelerated pace. Grade skipping is another good example of changing the pacing of the process. Letting students choose from these approaches is not a bad idea. Better to let them make the effort and spend the time.

Product

Differentiating the product means changing the way a student lets you know they understand content. This might mean you evaluate different students in different ways. If students come to us already knowing subject matter, it is likely we will differentiate the content and process. If this occurs, we will necessarily need to change the way students are evaluated. There are several strategies you can use to differentiate the product.

One strategy you might choose is to employ is using a real audience to whom the student will demonstrate his or her knowledge. Perhaps a panel of engineers can evaluate student projects in your calculus class, or a banker can hear presentations in your economics class.

Not only can products be presented to real people, but they can also be rooted in the community, in reality. A student can write a letter to the editor, can help prepare the architectural plans for a new building, or can design a class for other students. Like with differentiating process, I think it is ok to empower students to control their own destiny here - to choose from one or many types of products, or even to invent their own.

Learning Environment

The learning environment is the place or time learning takes place. More than this, it is the culture of learning in that place. There are several strategies you can use to differentiate the learning environment.

Creating open learning environments can suit some students. Environments that are accepting of abhorrent thinking, of humor and intellectual antics, of high flexibility and few rules, and ones where change is the norm are all possibilities. Now, in your class of forty you are going to need to be careful, obviously. You may need to have different physical spaces for some students to achieve this kind of learning environment. Clearly it will not suit all students.

Varying grouping methods is a strong strategy for managing this kind of differentiation. Creating learning *stations* is another. Creating an online learning space is also a great example of a different learning environment.

Summary and Conclusions

You can change the way you teach your lessons from the perspective of four dimensions: content, product, process, and learning environment. In many respects, the dimensions are interconnected. It doesn't matter so much what we call them; the idea is to systematically break apart your curriculum and look for ways you can adapt it to engage students in higher order, or critical, thinking. Your students need the opportunity to think critically about the content they are learning, and doing nothing to encourage that seems insufficient, especially when there are so many ways to make a difference.