

EDW 696
Creating Standards-based Curriculum



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Activity 1

Introduce Your Field of Study

*Have you ever been asked to introduce a classmate at the beginning of a course? Well, in this introductory activity we will approach the process from a different perspective. But the goal of this exercise is similar; **you will create a brief presentation to introduce your field of study.** If your professional responsibilities cover a range of professions (e.g. elementary education or special education) you may select the profession you wish from the standards listed. You probably won't feel comfortable with all the issues raised here within the next several minutes. You may have never thought about professions this way. Don't worry; this is a beginning. You may change your perspective on these issues during the week and almost certainly adjust the view of your profession during your career.*

A *discipline* or *field of study* can be described by examining the knowledge, skills and dispositions its members possess and use. We can start our investigation with the practitioner. First we will simply list some pertinent questions:

Knowledge

What does the practitioner (often a college educated person) in this field know?

How is this knowledge organized?

Skills

What kind of work is done by someone who practices this profession? In other words, if we hired someone in this field what would we reasonably expect them to be able to do for us?

Dispositions

What kind of values do people in this profession share?

Are there ethical codes which govern the field?

Creativity

This codified body of knowledge, skills and dispositions not only results in a direct service to society it also changes and grows. What is the nature of this creative endeavor and how does it occur? What do practitioners in this field create? For example, a scientist uses scientific inquiry to investigate why the things in nature behave as they do. She is then expected to share the resulting theories so that other can verify or contest them.

Priorities

Of course, regardless of how we may love our chosen field, not every student will want to make it their life's work. Another vital step is to ask which characteristics of this profession are appropriate requirements for every high school graduate?

Resources for Activity 1

Prepare a brief presentation introducing your field of study to share with the group. Accomplish this by writing as many answers to the guiding questions above as you can within the allotted time. Use state (http://www.pde.state.pa.us/pde_internet/site/default.asp)- select "Standards" under "Find documents" and national standards (<http://www.mcrel.org>) - pull down the quick link for "Compendium – K-12 Standards". In fact, supplement your answers with examples of standards if possible. SCANS (<http://www.scans.jhu.edu/NS/HTML/Index.htm>) maintains a list of 17 competencies employers identify as important skills for high school graduates. Use the "SCANS skills" link from the top menu bar. Of course, you may have other resources –feel free to use them. You may also have other information relevant to explaining your field; use it. Don't feel that you have to be able to answer all of these questions. Remember we are just getting started. Do the best you can and we will all learn from each other.

Activity 2

The Curriculum: Are Standards the Answer?

*In the previous exercise we analyzed each individual's field of study. These often require education beyond high school. After determining these important characteristics you were challenged to narrow your thinking down to only the characteristics appropriate for every high school graduate. The **state and national standards claim to be the essential content we seek.** You probably used them in your efforts regarding activity 1. Let's take a look at how well they identify essential content.*

The Count

Use the state standards and simply make a count of the standards that fit the following categories:

Field of study: _____

Knowledge

Number of standards _____

What knowledge from this field should a high school graduate have?

How is this knowledge organized?

Skills

Number of standards _____

What skills from this field should a high school graduate have? In other words, if we hired a high school graduate what should they be able to do with math, science, communications, etc.?

Dispositions

Number of Standards _____

What kind of values do people in this profession share?

Are their ethical codes which govern the field?

The Research

Heidi Hayes Jacobs (2003) explains,

In the context of our changing world, what should children be learning to prepare them for the future and what parts of the curriculum could be streamlined? Educators are overwhelmed by the mass of standards imposed on them. We can't do everything; we have to make some choices.

Briefly explain whether you agree or disagree with Jacobs and explain your answer. Feel free to change your position as the workshop progresses. Also, in your explanation, don't be afraid to admit the limitations of your information – again, we are just getting started.

In his book, *What Works in Schools: Translating Research into Action*, Marzano (2003) systematically analyzes the need for the priorities Jacobs presents by combining a review of the research (*note the title!*) with his own extensive experiences helping schools improve learning.

Why Do We Need Targets?

Many of us have heard of TIMSS (Third International Mathematics & Science Study). The First International Mathematics Study occurred over 30 years ago and introduced the concept of opportunity to learn (OTL). Not surprisingly, the research showed a very strong relationship between the opportunity to learn a skill and achievement of that particular skill on tests. By the second International Mathematics Study (SIMS) the concept was refined to include three types of curricula.

Table 1 Three types of curricula identified by SIMS

The intended curriculum	content specified by state, district, and schools
The implemented curriculum	content delivered by the teacher
The attained curriculum	content actually learned by students

Let's think about the discrepancy between the intended curriculum and the attained curriculum in your school and subject area.

How is the intended curriculum identified?

And how have the curriculum standards impacted this process?

Is the curriculum coherent horizontally and vertically? In other words:

- 1) *Do the teachers in one subject area (same grade level) cover the same content?*

- 2) *Is there a logical progression from one grade level to the next created by careful planning and the assurance that all students have covered the required material?*

Instructor read Marzano pages 23, 24.

Prisoners of time...

The study *Prisoners of Time* was conducted in 1994 by the National Commission on Time and Learning. One interesting finding was that considerable variability existed as to the amount of time available for the student to learn—even within school districts. The study approached calculating the average time by assuming 5.6 hours per day of actual class room time (3.9 hours of which is spent learning/180 days per year and a K-12 career). The result is 13,104 hours of class time with 9,042 hours of actual learning time over a K-12 career.

Let's look at what *should* happen over that time frame...

Researchers at the mid-continent research for education and learning MCREL (<http://www.mcrel.org/>) have compiled a searchable database of K-12 standards which we will be using as a tool several times. Select “Compendium – K-12 Standards” from the pull down labeled “Quick Links.” Then select the “Process” link under the “Background” heading. Begin by answering a few questions:

1. How many subject areas are identified?

2. How many standards does the MCREL analysis result in?

3. How much time would you guess all of this would take to accomplish?

Instructor read Marzano page 24, 25.

Virtually every subject area views their standards as a mandate for more time. While presenting to the state board regarding the then proposed standard for science and technology, I encountered a fellow parent and teacher. The following is a paraphrased part of his statement:

I am a high school physics teacher who has also taught at the college level. As a science educator, I am thrilled to see the emphasis the standards place on physics. Of course, I believe that every student needs physics instruction. However let me share a cautionary note. Currently, less than 50% of the student body at my school takes physics. It is a one year course. All the content identified in the proposed standards for physics will require every student to take two years of physics. Where will all the necessary resources come from?

Briefly describe how you feel about the time required to address the standards in your area.

Activity 3

Coverage

In the last activity we questioned the viability of teaching 15,465 hours of standards on 9,042 hours of instructional time. Should we increase the instructional time? ...decrease the requirements? ...or both? Is it possible increase the instructional time by the 71%, leaping from approximately 9,000 hours to 15,000+ hours?

Should we increase the amount of instructional time? Most students outside the USA have more instructional time. Many have twice as much. Here are a few examples provided by Marzano:

At the same time U.S. teachers could address more content:

- US 4th and 8th grade mathematics textbooks cover between 30 and 35 topics, whereas textbooks in Germany and Japan cover 20 and 10 topics.
- US 4th, 8th, and 12th grade science textbooks address between 50 and 65 topics. Japanese textbooks cover between 5 and 15 topics.
- German and Japanese students significantly outperform US students in Mathematics and science.

Answer Marzano's questions: What can US schools do to improve education and meet the standards if they can't lengthen the school year and should not attempt to teach all the standard content?

Instructor read Marzano #4 pg 27.

Activity 4

Defining Understanding

Private Universe

Before we address the issue of identifying essential content we will define understanding. The term is not quite as straight forward as you might think...

Please visit the Private Universe Project Website (<http://www.learner.org/teacherslab/pup/>), select the “What Are Your Ideas” button from the toolbar at the top of the first page. Complete the exercise: take the quiz your self, try your assumptions using the model, read about using this in your classroom.

Before we can correct student’s misconceptions we must discover them. Then we are faced with how to overcome them. One could simply tell them the answers, but research has shown that this seldom changes student ideas. *Why is this?*

*View the videotape **Private Universe**.*

Three Vignettes

Read Vignettes #1-3 on pages 1-2 of the introduction to the [UBD book](#).

Vignette 1 demonstrates an important limitation of large scale assessment. It is quite difficult to construct such a test that goes deeper than _____. As a result these tests must be interpreted very carefully.

Briefly explain why Vignette 2 may remind you of the famous Wendy’s commercial “where’s the beef?” Why are elective courses likely to suffer from this problem?

Vignette 3 illustrates an important component of understanding. A learner who “understands” a concept can successfully apply it in a new and different _____.

In Bloom’s Taxonomy understanding is the second of the six levels he devised. Does Bloom’s definition of understanding match the UBD definition?

Activity 5

Where Do We Start?

*Academic standards are an important effort to define what every learner should be able to know and do. The goal is seminal. Such focus is essential in the effort to educate. We have learned that a major problem with the standards is that they are too much of a good thing. By trying to teach everything we can miss creating any true understanding. **Focus is essential.** Limiting the amount of content is not the only thing necessary but it is a start. A critical question becomes: **What content is most important and how do we identify it?***

Backward Design for Forward Action

In an article with this title, Jay McTighe and Ronald Thomas (2003) summarize the approach explained in [Understanding by Design](#) (1998) the book McTighe wrote with Grant Wiggins and we use for a reference. The Backward design process has three steps:

Identify Desired Results

McTighe points out that state standards and improving scores on high-stakes tests provide two important motivations when selecting content during the process of designing learning experiences. He warns that a focus on high-stakes testing can lead to incomplete understanding and that standards frequently do not identify the key ideas that are needed to determine essential content – remember we are trying to focus! He offers the following seventh grade history standards as an example: *Compare the early civilizations of the Indus River Valley with those of China's Yellow River region.* He “unpacks” the essential content in this standard by identifying big ideas (resulting essential learning) and essential questions (quests for knowledge worthy of suspending graduation if left unachieved):

- The geography, climate, and natural resources of a region influence how its inhabitants live and work. *How does where people live influence how they live?*
- Cultures share common features while retaining distinctive qualities. *What makes a culture? Are modern civilizations more civilized than ancient ones?*
- The past offers insight into the historical patterns, universal themes and recurring aspects of the human condition. *What can we learn from studying other places and times?*

These concepts do seem important but how does “unpacking” help focus our efforts as educators – this seems like more not less? Hint the author uses the phrase “conceptual lens.”

Determine Acceptable Evidence

McTighe and Thomas argue that a wide variety of types of assessment are necessary to provide the of evidence true understanding. As we have learned, learners “understand” when they can “apply their learning to a new situation and explain their responses rather than make a selection from a list of given alternatives. These performance-based and constructed-response assessments

can work in combination with the multiple choice items to provide robust evidence of student understanding” (2003).

Plan Learning Experiences and Instruction

Once the learning targets have been identified and the instructors have determined what evidence will be acceptable the learning activity is simply the answer to the question: **What do we need to provide to help the learner achieve this goal?**

Action steps

Marzano (2003) identifies the need to establish a guaranteed and viable curriculum. He means a curriculum which focuses the myriad of state, national and local standards so that learners can progress to understanding. The entire process must be achievable within the time constraints. He suggests that a district follow this sequence:

1. identify the essential instructional concepts,
2. organize these into big ideas or topics and
3. establish a sequence for the topics or big ideas.

Activity 6

Curriculum Tools

Using McRel (www.mcrel.org)

McRel provides several important tools for helping to create curriculum. A searchable data-base of standards provides an incredibly powerful tool. Another important tool involves “topics.” “Topics” also referred to as “strands,” provide insight into the often challenging process of selecting “big ideas.”

Use the article *Topics: A roadmap to standards* (2000) –[see attached](#)– by Kendall to give at least two examples of topics that apply to a discipline – only two are listed as examples, your discipline may not be there.

Discipline:

Example Topic 1:

Example topic 2:

Using the UBD Approach

Backward Design

Use page the [UBD book](#) as a reference and create an example of each of the following stages in the backward design process to develop a unit which are appropriate for your field of study.

Identify Desired Results:

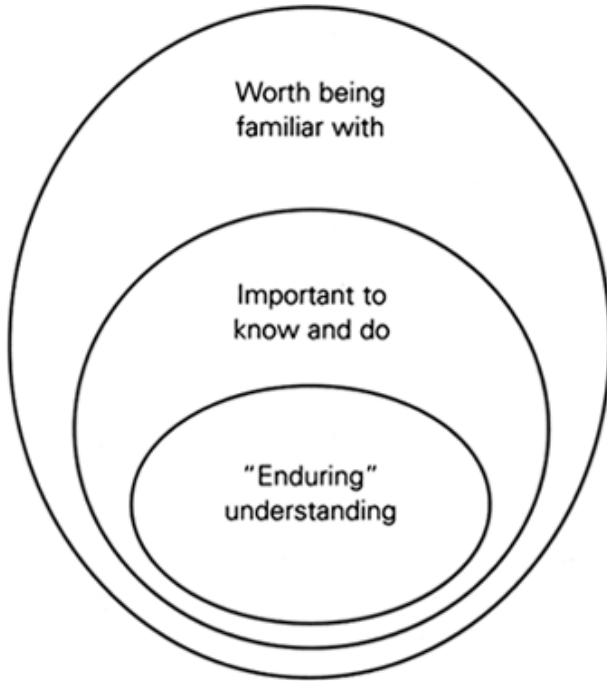
Determine Acceptable Evidence:

Plan Learning Experiences and Instruction:

Wiggins and McTighe use three rings (page 10, Figure 1.2) to describe a framework for establishing curricular priorities. *Give some examples of each level which are pertinent to your subject area expertise.*

Establishing Curricular Priorities (Diagram)

Examples (write some in)



One of the most important contribution Wiggins and McTighe make in their book is to establish a method of determining which goals are “essential.” They involve four filters. List the four filters here and give examples which apply to your content area.

Four UBD “filters” used to identify “essential content

Examples

- 1.
- 2.
- 3.
- 4.

On page fifteen of the [UBD book](#) the relationship between assessment strategies and curricular priorities is explained. *What does this suggest about the use of large scale assessment as a technique in evaluating “understanding?”*

UBD Exchange (www.ubdexchange.org)

ASCD has developed an on-line tool to assist in the process of designing learning activities with the goal of true understanding.

On-line demonstration of UBD Exchange

Access, open and read the PowerPoint presentation on the UBD curriculum framework.

Access the UBD exchange

The login key for students is `ubdjmcade9`. Go to the UBD site, then click on "Sign up now", then click on the second line about "first visit". That will take you to the sign up screen. That's where you put the login key and then give your own information. That will take you into the MU account.

References

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