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# 3

## **Reviewing, Analyzing, and Developing Curriculum Maps**

A curriculum map is like a school’s manuscript. It tells the story of the operational curriculum. With this map in hand, staff members can play the role of manuscript editors, examining the curriculum for needed revision and validation.

This chapter describes six tasks faculty members can carry out with maps to create a workable, vibrant, overall picture of the curriculum. While reviewing the map, faculty members can gain information about ongoing work throughout the building, identify curricular gaps, find repetitions, target potential areas for integration, match assessment with standards, and review for timeliness.

### **Task 1: Read Maps to Gain Information**

As educators, we are only as effective as what we know. If we have no working knowledge of what students studied in previous years, how can we build on their learning? If we have no insight into the curriculum in later grades, how can we prepare learners for future classes? Reading and examining curriculum maps enables us to create a database for making important decisions.

At a minimum, if mapping is used to simply find out what is really being taught in a building, staff members are better off than they were without maps. It is always a striking experience when a school staff first reviews maps. It's common to hear colleagues tell each other, "I didn't know you taught that!"

Students are the prime beneficiaries of even a simple read-through of maps. Staff members find that maps expand their perspective and increase the quality of their educational decisions. A curriculum map provides a powerful context for many different people: a grade level team dropping a unit of study, a high school department changing its reading list, a media specialist ordering software, or a new teacher beginning work at a school.

It is crucial to have a broad audience for any read-through of maps. It is tempting only to look at the map of a colleague who deals with similar situations, such as a grade-level teammate or a fellow department member. This kind of communication is certainly important, but the most revealing work occurs when educators read the maps of teachers several grades away or in departments with which they rarely have contact. All students deal daily and through the years with all teachers in a building—although the teachers themselves do not always interact with each other.

## **Task 2: Identify Gaps**

We often assume that all teachers within a discipline address the same curriculum. This isn't always the case. We frequently find gaps between goals and what is actually taught, and these gaps can have a lasting impact on a child's learning. If a middle school science teacher wrongly assumes that entering 6th graders have studied basic physics concepts pertaining to force—and then proceeds to build lessons on those concepts—students might get lost. There is probably a good reason why the 5th grade teachers did not address force, and communication between teachers is obviously critical for the sake of the learner.

Appendix III contains an elementary science map with corresponding skills showing a sequence from kindergarten through 8th grade. It was used to identify and

address gaps in a program. Such vertical articulation of the curriculum fosters smoother transitions for students as they move toward secondary school programs.

Coordinators and supervisors cannot and should not be expected to know what transpires in each classroom. It is unrealistic to expect them to interview and observe every classroom teacher with ongoing regularity. Instead, we need to recognize that the operational curriculum committee is composed of each and every classroom teacher in the building (see Chapter 6). The maps they study will reveal missing pieces in vertical and horizontal articulation: years past, years to come, and in the current year. With these data, gaps in content, skills, and assessment can be identified.

### **Task 3: Identify Repetitions**

Too often, teachers assume that they are introducing a book or concept to students for the first time. In fact, many units are repeated over the course of a student's K–12 experience. Maps can reveal such repetition, showing where the same novel or unit is repeatedly addressed.

It is curious to hear teachers defend the teaching of *Sarah, Plain and Tall* in the 4th grade and then again in 7th, or to hear 8th and 9th grade English teachers rationalize *Romeo and Juliet* being taught two years in a row. There are so many other novels and plays to present to young readers! I have heard a teacher claim that he "does the book differently," but this is questionable since it is unlikely that the 4th grade teacher speaks with the 7th grade teacher to be certain they're each taking a unique approach. It also is questionable to justify a district's five units on the rain forest and six units on dinosaurs with the need for "review."

Maps reveal not only content repetitions but also skill repetitions, which should be distinguished from skill spiraling. Without question, students need to practice, review, and drill skills, but they should do so only in the spirit of working toward more complex mastery of those skills. Redundant drill of skills is inherently boring and insulting to the learner, and it is one of the most effective methods for turning students off to learning.

Of greater concern is the repetition of assessments. It is worrisome to see high school students working on reports when their counterparts in 3rd grade also write reports. Too often the “reports” are fundamentally the same request: a summary and identification of key factual information on a topic. I have even seen the same length requirement for both primary and secondary levels. High school students should work on developmentally appropriate assessments (see Chapter 5). Instead of reports, they should create legal briefs, position papers, critiques, original research, action plans, and other outcomes that imitate what will be asked of them throughout their adult lives.

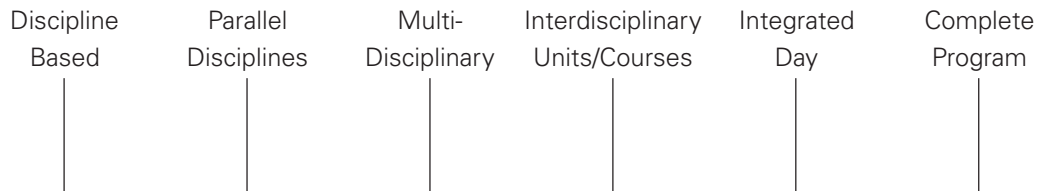
It is the educator’s job to study a curriculum map and recommend whether the content, skills, and assessments it details are to be validated or revised. While purposeful spiraling of skill and knowledge is a necessity, needless repetition is a waste of everyone’s time.

#### **Task 4: Identify Potential Areas for Integration**

When appropriate, merging concepts from two or more disciplines can make for a powerful and lasting learning experience. By perusing the maps for potential linkages among subject matter, teachers discover possibilities for interdisciplinary units of study. Whether the focus is a topic, theme, issue, or problem-based study, elementary and secondary teachers can use maps to find natural connections that will expand and underscore students’ learning.

Figure 3.1 shows a continuum of options for selecting the degree and nature of integration (Jacobs 1989), which can help curriculum designers choose the most fruitful type of content delivery system. As individual teachers or team members look over their maps, they can determine which option best serves their learners. Perhaps working directly through a discipline will be the most powerful. This is certainly true when we give the disciplines true integrity, so that students act as “scientists” rather than simply study “science.”

**FIGURE 3.1**  
**CONTINUUM OF OPTIONS FOR CONTENT DESIGN**



Another option is to reconfigure when mutually compatible subjects or units are taught so that they run concurrently. A study on statistics and demographics could be resequenced to run in a parallel discipline format with a unit on immigration in social studies. In this instance, teachers are not cowriting the unit; they are coplanning for optimum timing. If, however, the teachers wish to collaborate on the design of a unit and integrate two or more disciplines, then the option is interdisciplinary. At their best, these integrated units are designed around a common organizational structure such as essential questions, which connect key concepts shared by the various disciplines (see Chapter 5).

Not all disciplines need to be involved in the design of a unit, just those that seem applicable. Common examples are humanities studies or math and science fusions. In one 9th grade global studies program, an English teacher, a social studies teacher, and an art teacher have collaborated on a unit of study of Japan and its people. Other disciplines need not participate if their perspective is not naturally applicable, thus making it a multidisciplinary design. Another teacher designed a 2nd grade unit on weather to have primarily a science focus, with opportunities for measurement in mathematics. Interdisciplinary units also can incorporate a wide array of all disciplines. The point is that interdisciplinary designs are best when sensible, not strained, integration is planned.

Educators who wish to have their students initiate and select the total focus for a study might choose a student-centered option, whether in a primary classroom or a senior independent project. In the previous examples, teachers packaged the

disciplines around concepts, topics, themes, problems, or issues. With the Integrated Day, the student's problems and points of fascination are the focus.

Setting-based integration describes an environment that is integrated into the study. The learner leaves the classroom walls behind and centers learning on that environment whether it is a school-to-work program, a field study at a conservation area, or a museum trip. The program is a complete integration of the learner in a specific place and time.

When groups are just starting to work in teams, the curriculum map can become a unifying agent. The many opportunities for interdisciplinary work become evident when teachers look at the map, considering what is taught, when it is taught, the concurrent teaching of subjects, and the interplay of skill development among disciplines. Sensible integration is a natural outgrowth of mapping.

### **Task 5: Match Assessment with Standards**

We need evidence of learning to find out if we are effectively meeting our targeted goals for students. The only evidence we have is in what they write, what they say, what they build, what they design, and what they compute—not what we cover. The thoughtful rethinking of assessment has swept the United States as we prepare our children for a more demanding world. Focusing on assessment through the course of the year deepens accountability. For example, if a school is attempting to fulfill a state standard in mathematics, then from September to June, what do students perform and produce that gives evidence of meeting that standard?

Both tangible products and observed performances can serve as the basis for assessing student growth (Jacobs 1996). Whenever major benchmark assessments or cumulative portfolio collections are gathered, there should be a corresponding notation on the map. For example, if a middle school team collects writing samples across the disciplines for a portfolio collection and formally reviews them every eight weeks, the map should show the eight-week marker for monitoring progress.

This task is of particular note because of the current focus on standards. Currently, standards in the United States are being established on four levels: one level is national, primarily through professional organizations representing curricular areas; the second level is state, as seen through state frameworks and standards; the third level is district and school, as each local site translates the national and state standards to its unique community; and the fourth level is the most critical, the classroom, where the operationalization of all standards occur.

It is in the classroom that the student and the standard meet. Mapping becomes the monitoring device to check whether there is sufficient evidence to match a standard in the classroom. The reverse is true as well. Without evidence through student assessment, the standard is a shell. In a sense, the two together complete the equation.

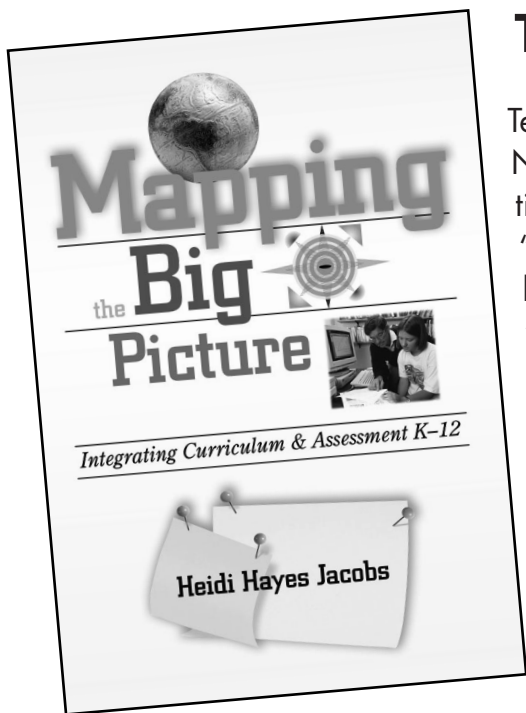
### **Task 6: Review for Timeliness**

With the constant proliferation of knowledge, all who create curriculum maps must update their plans vigilantly. Every day brings new books, ideas, technology, and breakthroughs to the classroom. As teachers scrutinize their maps, they should look for dated materials and possible replacements.

Timeliness also deals with examining the map for best current practice. There are new breakthroughs in all fields of pursuit including education. As a teacher learns a new strategy, he or she should place this strategy on the map. When teachers add the writing process to their repertoire, there will be obvious changes in the assessment section of the map.

By editing, shaping, and adding to our curriculum, there is a genuine sense of collaboration in a school. Stagnation is replaced by growth. With a map there is also an opportunity for refining work, where we go deeper into the curriculum. Rather than simply stating the title of a unit, we can declare the focus and purpose of the unit through essential questions, which are described in the next chapter.





## Techpaths and Curriculum Mapping

Teachers have always used the school calendar to plan instruction. Now, using a standard computer program, they can collect real-time information about what is actually taught to create “curriculum maps.” These maps provide a clear picture of what is happening in their classes at specific points during the school year.

The benefits of this kind of mapping are obvious for integrating curriculum: when curriculum maps are developed for every year level, educators see not only the details of each map, but also the “big picture” for that school or cluster. They can see where subjects already come together—and where they don’t, but probably should.

In *Mapping the Big Picture*, Heidi Hayes Jacobs describes a seven-step process for creating and working with curriculum maps, from data collection to ongoing curriculum review. She discusses the importance of asking “essential questions” and of designing assessments that reflect what teachers know about the students in their care. The book concludes with more than 20 sample curriculum maps from real schools, all of which were developed using the process described in this book.

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