Curriculum Mapping

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Curriculum mapping breaks with traditional curriculum practices by focusing on what is really being taught.

Some attempts to improve learning in the schools have involved the preparation of precise prescriptions of the intended outcomes of a curriculum. Developers write statements of what is to be learned and then make or purchase tests that reflect these choices. When test results show discrepancies, the usual response is to create "tighter" documents. Developers decide the problem must be ambiguity because they assume that teachers are following the curriculum guide. But what if that is not the case?

The actual curriculum is the one the teacher employs in the classroom. That is the one students encounter. If the teacher doesn't teach what is in the guide, the guide may be totally misleading as a base for improving student learning.

Many school districts appear not to have grasped the rather fundamental fact of life that "the guide ain't the curriculum!" Therefore the cycle of writing curriculum guides and buying or writing tests based on them may never influence the behavior of the teacher who controls the real curriculum.

Curriculum mapping is a process that makes a simple but profound break with traditional procedures for curriculum development. Not part of curriculum development as such, mapping supplies an important ingredient that can make curriculum more effective.

A curriculum map is a reconstruction of the real curriculum teachers have taught. It is descriptive rather than prescriptive.

While mapping formats may vary, most maps have at least two constants: content taught and time spent. Content may include not only conventional subject matter but anything children are expected to learn: processes, activities, or methods. The intent is to portray time devoted to each major learning task within each classroom or other functional unit. A functional unit may be smaller than a classroom group or might be an entire grade level.

Mapping provides the curriculum developer with a glimpse of how much time teachers spend on each major topic. When the data is compiled it can give an indication of the real order in which students encounter various topics (in contrast to the intended sequence shown in the guides) and permit an estimate of the amount of variance from teacher to teacher.

Figure 1 shows a curriculum map that might be completed by an elementary teacher. Time devoted

Figure 1. Sample Classroom Curriculum Map
Fifth Grade Social Studies

General Description: U.S. history

My fifth grade social studies program began with the early explorers of our nation. These included the Portuguese explorers and Columbus. We studied the conquest of Mexico and the Incas. We examined the evolution of religious freedom in the U.S. by studying Lord Baltimore's development of Maryland and the Act of Toleration of 1649. We also modeled for a week a mock House of Burgesses of Virginia. We set up a unit on the old Southern plantation to study its economy.

Time* A .50

Concepts	Skills	Attitudes	
—Realization of the impact on the New World of the Puritan Migration of 1629-40; —Understanding of the trials of Roger Williams in moving to Rhode Island	—Wrote stories —Used the proper resources to research the stories —Intergroup skills/making motions	—Developed respect for religious diversity —Developed awareness of the need for a proper forum for dialogue about sensitive issues	Time B 4
Time 1.50	Time 2.00	Time .50	Total: 4

General Description: geography

I taught the geography of the U.S. by working with four different kinds of maps; relief, landform, political, and historical. The students worked in committees and developed one of each for a time period they selected.

Time A .50

Concepts	Skills	Attitudes	
—Utilized time belts —Used longitude and latitude to locate cities and places as a concept —Was able to utilize the International Date Line	—Used string to measure distances on the globe —Made time estimates of how long it took to reach a place by various methods	—Developed an awareness of the need for international agreement on dates/ times —Realized the need for uniformly understood map symbols	Time B .50
Time .20	Time .25	Time .05	Total: .50

* Time A is the total time for the topic which should be equal to Time B, the total time sub-divided into three categories. Time is expressed as the number of hours per week per school year. This teacher spends about one half hour per week teaching social studies.

to each topic is shown as the number of hours per week per school year. If all teachers in a school completed similar maps, the principal could piece together a picture of the actual fifth grade curriculum in that school.

From this data suppose the results showed that in the fifth grade:

1. The actual social studies curriculum comprises 20 topics;

2. Only five of the 20 were taught by all five teachers;

3. Three topics were taught by only two teachers;

4. Twelve topics were taught by only one of the five teachers.

If the curriculum content variance (time would be another type of variance) is represented in the actual absolute difference between two or more students, then at the end of the fifth grade it would be possible for the curriculum to have had a 60 percent variance or a nonoverlapping difference of 12 topics between any two students.
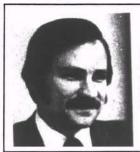
The actual content variance may be much higher because less than half the fifth-grade teachers taught an additional three topics, and mapping may reveal that of the five topics taught by all five, there may be significant differences in treatment of similar topics.

All variance is not necessarily bad. To make the curriculum more effective it may be necessary to decrease variance of content (by defining minimum competencies, for example) and increase the variance of time (so that mastery occurs). Decisions about content, time, and sequence of topics will depend upon the situation.

The Functions of a Curriculum

A curriculum deals with the essentials of any formal educational program. It establishes the content of teaching, the time to be spent teaching it, the amount of repetition desired, and the sequence of instruction. Whether or not there is a written curriculum, teachers cannot avoid making decisions about these matters, even if their decision is not to decide but to pass the decisions on to students. The existing curriculum, therefore, is the sum total of decisions made about which activities are included or excluded in each classroom. A reading list, for example, is part of the curriculum.

The original Latin meaning of the word *curriculum*, which loosely translated means "the course, the path, the road," suggests a highway of consensus for instructional personnel. Curriculum is necessary to focus the energies of teachers in a common direction even though most of those employed to carry it out

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are isolated in self-contained classrooms.[1] The governing structure is responsible for defining direction and ensuring that it is followed. This organizational dilemma is not unique to schools, but school districts often ignore it as they attempt to improve learning with curriculum development.

The Issue of Reductionism

Those who object to the idea of curriculum as control sometimes refer to "reductionism," by which they mean the narrowing of possible options for what students might learn in school. Curriculum is by nature reductionist. Decisions about content, degree of repetition, and sequencing must be made. Even if a district does not formally decide such matters, informal decisions are made about them. Even if the district passes the decisions on to the students, they are not avoided but merely transferred from one group to another.

Anytime a teacher determines in some way the focus of a learning event, decides the order of classroom events, or rules upon the appropriateness of pupil responses by feedback mechanisms such as report cards, a curriculum can be assumed, because any such determination inevitably rules out other possibilities. A curriculum, then, is a response to the real limitations on time available for formal education within a person's total lifetime.

What Mapping Tells a School District

Curriculum mapping reveals to a staff, principal, or supervisor what is actually being taught, how long it is being taught, and the match between what is being taught and the district's testing program. Curriculum mapping invents or creates no "new" curriculum. Rather it attempts to describe the curriculum that currently exists. The curriculum developer can use the results to gradually make the written curriculum and the real curriculum more congruent with one another. *EL*

[1] Fenwick W. English, "Untieing the Knots in Public School Curricula," *Management Focus* 26 (May-June 1979): 32-38.