



# A Guide to Curricular Integration

by Robert C. Morris

A school's curriculum can appear unrelated, fragmented, or somewhat disjointed if not done with an end in mind. This fragmentation or disjointedness often affects students and their views of the experiences being given them in school (Beane 1991). Various curriculum-integration techniques, however, can be used to help make the big picture more understandable to students; and these have the added benefit of allowing teachers to focus better on teaching and student learning.

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*Lessons can become more meaningful to students and save teachers valuable time when subjects are integrated properly, not superficially.*

## What Does Integrating Curriculum Mean?

Jacqueline Anglin's (1999, 3) insight that "integrating curriculum correctly requires more than combining two subjects, or turn teaching" was right on track. The notion of integrating a curriculum is more than connecting pieces so that students can see the bigger design. In effective curriculum-integration models, knowledge is meaningfully related and connects in such a way that it is relevant to other areas of

learning as well as real life. Of course, sometimes integration is not the best approach to teaching. Integration just for the sake of integration even can interfere with learning if constructed activities are not meaningful.

To integrate a curriculum is to combine subjects to meet objectives across the curriculum, not just objectives pertaining to one subject. For example, while studying Indians in social studies, reading could be integrated by including both fiction and nonfic-

tion stories about Indians. Viewing and recreating Indian art could meet art objectives. Charting the locations of various tribes and calculating mileage between different tribes or distances tribes traveled could meet geography and math objectives.

An interdisciplinary or integrated curriculum allows students to make connections among various subjects, while also helping to solve the teacher's dilemma of having so much to accomplish in a limited time. An integrated curriculum, by nature, ties an individual subject to the circle of educational experiences and learning, thus reducing the need for teachers formally to make every lesson a connection to life. The saved time allows teachers more opportunities to accomplish tasks on their ever-growing "required" lists.

## Models of Integration

The current trend to implement an integrated curriculum is not a new idea. Vars (1991) traced the evolving concept of the core curriculum back to Herbert Spencer's writings in the 1800s. By the late 1930s and early '40s, the term "core curriculum" had become part of the literature in various state and national curriculum-reform efforts, most significantly the progressive education movement. In 1942, the concept of core and integrated curriculum was being tested in the famous Eight-Year Study of the Progressive Education Association. By the late 1980s, more than 80 normative or comparative studies had been conducted on the effectiveness of integration (National Association for Core Curriculum 1984). These studies found that programs using integration or an interdisciplinary

curriculum almost always produced equivalent or even better scores on standardized achievement tests than those where students were taught through the traditional discipline-oriented format.

Today, these are some of the more popular curricular models that have evolved and currently are being used:

- The **connected** integration model does not integrate various subjects, but focuses on integrating skills or concepts within a subject. For example, a science teacher can relate a geology unit to an astronomy unit by emphasizing that each has an evolutionary nature (Fogarty 1991).

- The **nested** integration model focuses on natural combinations. For instance, a lesson on the circulatory system can integrate the concept of systems as well as demonstrate "cause and effect" on specific understandings of the circulatory system (Fogarty 1991).

- In the **sequenced** model, units are taught separately, but are designed to provide a broad framework for related concepts. For example, while reading *A Taste of Blackberries* (Smith 1992), a parallel lesson on bees could be taught in science.

- The **shad** model looks for overlapping concepts and involves coordinated planning between two teachers of different subjects. A literature teacher and a history teacher, for example, may team up to teach an historical perspective of the concepts of segregation and desegregation by reading *Roll of Thunder, Hear My Cry* (Taylor 2001).

- The **webbed** model generally uses a theme to connect all subject areas. If the theme were Christmas, for instance, literature classes

might read *A Christmas Carol* (Dickens 2001). In math, students could calculate the costs of their Christmas lists. Social studies classes might research Christmas in other countries. In language arts, students could write about their favorite Christmas. In science, lessons could focus on weather or flying machines.

- The **threaded** model "threads" thinking, social, or study skills to connect learning across the curriculum. For example, sequencing is a skill taught primarily in reading, but can be threaded into the other subjects. In social studies, students could put in order the voyages of Christopher Columbus and the events leading up to them. In math, patterns of numbers could be explored. In science, the steps of succession of a dying or dead forest could be explored. And in health, students could study the steps in digesting food.

- The **integrated** model blends the four major disciplines by finding concepts or skills that overlap. The most popular example of this model is the whole-language approach that is now being implemented in many elementary schools. This method blends the skills of reading, writing, speaking, and listening using literature as a theme.

- The **immersed** model advocates that integration take place within the learner with little or no outside help. For example, a student who has a love for horses reads about horses, writes about them, draws pictures of them, and longs to learn more about them and possibly become a horse trainer or veterinarian.

- The **networked** model allows for exploration, experimentation, and participation. A student's fas-

cination with the solar system and space travel, for instance, directs his or her reading choices or television viewing. Teachers or family members cognizant of this child's interest encourage him or her by allowing the student to go to space camp.

Robin Fogarty (1991, 61–64) made a wonderful analogy of these models by comparing them to visual devices:

*The connected model of the integrated curriculum is the view through an opera glass, providing a close-up of the details, subtleties, and interconnections within each subject area. . . . The nested model views the curriculum through three-dimensional glasses, targeting multiple dimensions of a lesson. . . . The sequenced model views the curriculum through eyeglasses: the lenses are separate but connected by a common frame. . . . The shared model views the curriculum through binoculars, bringing two distinct disciplines together into a single focused image. . . . The webbed model views the curriculum through a telescope, capturing an entire constellation of disciplines at once. . . . The threaded model views the curriculum through a big magnifying glass: the 'big ideas' are enlarged throughout all content with a metacurricular approach. . . . The integrated model views the curriculum through a kaleidoscope: interdisciplinary topics are rearranged around overlapping concepts and emergent patterns and designs. . . . The immersed model views the curriculum through*

*a microscope. It filters all content through the lens of interest and expertise. . . . The networked model views the curriculum through a prism, creating multiple dimensions and directions of focus.*

## Planning for Curriculum Integration

Integrating the curriculum of a school takes planning. Jacobs (1991) developed a four-phase plan that can be accomplished in three years:

- **Phase I** (six months to one year) is research. Internal research is conducted to plot the units of study taught on a monthly basis—to find out when students are studying certain subject matter, to reduce repetition of material from year to year and to identify units of study that lend themselves to an interdisciplinary approach. Staff members conduct external research by attending conferences, making on-site visits, or arranging in-service activities.

- **Phase II** (two to four months) is development of a proposal. Potential areas for interdisciplinary units are assessed, and an existing unit of study is upgraded to include integration of various subjects. On completion of the proposal and its review at higher levels, classroom implementation of a pilot program may follow.

- **Phase III** (two to six weeks) is implementation of the pilot program. This phase includes assessment by the teaching staff involved in the pilot. The program is monitored and evaluated, and feedback is given.

- **Phase IV** (third year of plan) is adoption of the program based on the feedback and evaluation

from the pilot phase. Adding the program to the existing curriculum is often constrained by time; replacing the curriculum with the new one is much more common. For example, English, social studies, and art are replaced by humanities.

Planning for curriculum integration on a daily basis for individual classrooms is equally important as planning integration at the system level. To assist teachers in curriculum integration, Palmer (1991, 58) suggested the use of a “planning wheel”—a device that “allows for teachers to focus on a specific subject area while identifying appropriate connections with other content.” Palmer's steps for implementing the planning wheel follow:

- **Step 1:** Identify common goals, objectives, themes, and skills among the different subjects.

- **Step 2:** Develop a sample planning wheel to illustrate the kinds of connections to be made. The focus of the unit, such as nutrition (in a health class), is listed in the middle of the wheel. On the outside of the wheel are other subjects, and under each are listed activities related to the focus—for example, under math, calculating calories for dietary planning; under language arts, writing about foods from other cultures; under music, singing songs about food; under physical education, determining correct amounts of exercise to burn calories.

- **Step 3:** Planners of curriculum use the wheel as an aid to organizing and planning new curricula.

- **Step 4:** In-service activities are held to train teachers on how to implement the proposed integrated curriculum.

## Will Integrating Make a Difference?

Integration may not work, especially when curriculum integration is implemented merely for the sake of integration. In fact, integration can be counterproductive when activities originally intended to combine subject matter and objectives in a meaningful way lack educational value, or meet objectives in one subject while failing to satisfy objective requirements in the other subjects (Brophy and Alleman 1991). Activities such as alphabetizing state capitals or counting states in a geographical region are not valuable lessons in the area of social studies. These activities would be done just for the sake of integration and are more or less busywork (Alleman and Brophy 1993).

Not only are some activities meaningless, but they also may be time-consuming or costly—for example, carving pumpkins to look like U.S. presidents. Too often, teachers integrate superficially with activities devoid of curricular value. One teacher attempted to integrate math and social studies by having students fill a matrix with the actual numbers of the constitutional amendments, thinking this represented a math objective because the students were “using” numbers (Alleman and Brophy 1993).

## A Design for Success

To make integration meaningful and successful in a classroom, activities must be assessed by their educational value and meet curricular objectives in two or more subject areas. When implemented properly, not superficially, integration can be a more meaningful approach to

learning for students, as well as a time-saver for teachers.

Brophy (Alleman and Brophy 1993) suggested testing each proposed activity with the following questions before integrating it across the curriculum:

- Does the activity have a significant educational goal as its primary focus?
- Would this activity be desirable even if it did not feature across-subjects integration?
- Would an outsider clearly recognize the activity as relating to the subject?
- Does the activity allow students to develop meaningfully or apply authentically important content?
- Does it involve authentic application of the skill from other disciplines?
- If the activity is structured properly, will students be able to understand and explain its educational purposes?

• If students engage in the activity with those purposes in mind, will they be likely to accomplish the purposes as a result?

Some of the most famous and successful examples of curriculum integration come from Wigginton's *Foxfire Experience* (1985). In attempting to reach a group of students who were basically failing in school, Wigginton searched for a way to teach that would motivate students and give them a meaningful educational experience. He coordinated students to develop the *Foxfire* publication, letting them write, edit, and even negotiate book contracts. He obviously achieved the motivation he desired, but time constraints and particular curricular requirements were constant hindrances.

Wigginton (1991, 49) wrote:

*Keeping the curriculum requirements in mind, I initiated a unit in formal letter writing. If I could just figure out ways of this sort to make the curriculum work for the magazine instead of against it, I could kill two birds with one stone. I could fulfill the state requirements and at the same time give those requirements an added dimension of reality for the students that would make their internalization and mastery far more likely. . . . Classes had come together as one. Teaching was beginning to make sense.*

If integrated teaching can help a school's curriculum “make sense” to the teacher, then consider how much more sense it can make for the student if it lives up to the ideals that form a basis for meaningful educational experiences.

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