Chapter 6

IMPROVING THE PROGRAM OF STUDIES

As explained earlier, the program of studies is the total set of organized learning experiences at a given level of schooling—all the courses offered at the elementary, middle, or high school level. From time to time, it is useful for educational leaders to implement a systematic process to assess and to improve the program of studies offered at one or more of these levels. This chapter suggests such a process, after reviewing some recent attempts to reconceptualize programs of study. It should be noted here that the chapter focuses on improving an existing program, rather than developing a completely new program, since few educators have the opportunity to develop new programs of study. With that in mind, this chapter addresses the following questions:

- What basic attempts have been made in the past to reconceptualize programs of study?
- What can current curriculum leaders do to best improve programs of study?

Key to Leadership

Successful curriculum leaders know that improving school studies should involve the interaction of teachers, students and instructional materials with an integrated knowledge base.

RECONCEPTUALIZING PROGRAMS OF STUDY

Before discussing the assessment and improvement strategies, it might be useful to examine briefly some widespread attempts to reconceptualize schools’ programs of study. Those attempts have mostly been motivated by dissatisfaction with the discipline-based curriculum,
which uses the standard disciplines as the fields or organizing centers of learning. There are those who argue that the traditional disciplines, such as science and mathematics, are rigid boxes that fragment knowledge unduly (see Cawelti, 1982, for a statement of this position).

As a consequence, there have been several attempts to break away from the standard academic disciplines as ways of organizing knowledge. Such attempts have a long history. In fact, one of the by-products of the progressive era was widespread interest in developing a curricular mode that transcended or ignored the traditional disciplines. One of the most pervasive models of this period was the core curriculum movement, which flourished in the 1940s and still persists as a curricular model for many middle schools. In one widely disseminated model of the core curriculum, the ninth-grade student would have two periods a day of learning experiences related to personal interests, three periods a day of “common learnings” (one continuous course that would help students develop life competencies), and one period of health and physical education (Educational Policies Commission, 1952). The organizing center of the common-learnings course was not the disciplines, but the needs of youth.

Some of the basic principles of the core curriculum still influence current attempts to reconceptualize the curriculum. While there are many possible ways of categorizing those attempts, most can be classified as attempts either to develop interdisciplinary courses or to achieve a total restructuring of the program of studies.

**Interdisciplinary Courses**

Interdisciplinary courses are courses of study that either integrate content from two or more disciplines (such as English and social studies) or ignore the disciplines totally when organizing learning experiences. Integrated approaches often take the form of “humanities” courses that include content from literature, history, art, and music. Such humanities courses can be organized in terms of cultural epochs (“The Renaissance”), area studies (“American Studies”), ethnic identity (“The Black Experience”), or themes (“The Utopian Vision”). While such courses include material from several disciplines, there is still a strong sense of the disciplines informing the decisions about content and sequence. At the elementary level, while not concerned with “humanities courses,” innovative teachers have always developed interdisciplinary units, such as “Our Animal Friends,” that draw from such subject areas as language arts, social studies, science, and art.

Courses or units that ignore or transcend the disciplines are almost always thematically structured. Thus, a team of teachers might develop a course in “The Nature of Conflict,” which would embody concepts from literature, biology, anthropology, philosophy, and psychology. The planning focuses on key concepts and skills, with no regard for their disciplinary sources. Or an elementary team might cooperatively develop an integrated unit on “Families First,” which would integrate content from social studies, reading, and language arts.

Interdisciplinary courses of both types can be offered either as a substitute for the standard required courses (“take American Studies instead of junior English and American history”) or as enrichment electives (“take our new humanities course in addition to junior English and American history”).

The research on interdisciplinary courses has been neither extensive nor deep. However, the few well-designed studies available suggest that such interdisciplinary courses are as effective as the standard courses in teaching basic skills (see Vars, 1978, for a review of such studies).
Restructured Programs of Study

Reformers who have been critical of the standard discipline-based curriculum have expressed impatience with modest attempts to reform it by adding interdisciplinary courses. They have advocated instead a total restructuring of the curriculum, arguing that only a completely fresh reconceptualization can bring about meaningful change. Typical of such advocates is Mortimer Adler (1982), creator of the *Paideia* proposal. Adler recommends that the school curriculum be perceived as “three columns of learning”—column one, the acquisition of organized knowledge (language, literature, fine arts, mathematics, natural science, history, geography, and social studies); column two, the development of intellectual skills (reading, writing, speaking, listening, calculating, problem solving, observing, measuring, estimating, and exercising critical judgment); and column three, the enlarged understanding of ideas and values (through discussion of books and other works of art and involvement in artistic activities).

Despite the attractiveness of such proposals, most educators believe that the disciplines will persist. One reason for such persistence, of course, is the force of tradition: Curricula have been discipline based for several hundred years, and such time-honored educational traditions are difficult to change. There are the practical arguments: Teachers are trained and certified in the disciplines, and textbooks are written for the disciplines. With the implementation of the No Child Left Behind (NCLB) Act of 2001, those who advocate continuing the emphasis on the disciplines gained national support. The NCLB Act emphasizes the use of “Highly Qualified Teachers” in each school. The NCLB Act requires “new teachers” to have full state certification, a bachelor’s degree, and a state test. In lieu of the state test, middle school and high school teachers could meet the requirement by having a major in the content area or having a graduate degree in the content area. For experienced teachers, the NCLB Act again requires the three basic parts for meeting the criteria as a Highly Qualified Teacher with the option of substituting subject-specific requirements for the state test. School districts will be very cautious in their hiring practices since poor results in the standardized tests will require more and more accountability by schools. Districts who hire teachers outside their major field of study would be hard pressed to explain to the constituents why their children were not given a Highly Qualified Teacher. This trend will keep the disciplines as the driving force for programs of study.

Finally, there is an intellectual basis for continuing discipline-based curricula. As several writers have pointed out, each discipline has its own special way of knowing its own syntax of inquiry; consequently, they assert, attempts to ignore the disciplines might produce students who do not know how to think mathematically or artistically (see Schwab, 1962, for an especially cogent statement of this position).

**IMPROVING THE PROGRAM OF STUDIES**

While it is unlikely that there will be widespread interest in these total reconceptualizations, there is a continuing concern for improving the program of studies. Some of that concern results from external pressures. Accrediting bodies, such as the Middle States Association of Secondary Schools, are scheduled to conduct an evaluation. The federal government, under the auspices of NCLB and state departments of education, continues to issue new requirements for all schools. Local school boards decide to increase graduation requirements, or the superintendent asks each
principal to determine where reductions in the instructional budget might be made with the least
damage to the educational program. In a sense, all these mandates are external demands for
assessing and improving the program of studies. While such externally mandated reviews are
useful and necessary, they are no substitute for an internally motivated assessment that responds
to the special concerns of those directly involved with that school—its administrators and
faculty. This section, therefore, explains a process that a school district can use on a systematic
basis to assess and improve the program of studies in its schools.

**Improving Low Performing Schools**

Many schools are facing major challenges in making school improvement changes as man-
dated by such programs as the No Child Left Behind Act (NCLB) of 2001. According to
University of Montana Research Professor Conrad W. Snyder (2004), this situation is particu-
larly a problem for many schools trying to achieve AYP or annual yearly progress as per NCLB
regulations. Low performing schools with a large number of nonproficient and novice students
are now facing several formidable tasks: to change and improve their curriculum process,
streamline their political institutions, and reform their education systems. Schooling, in these
settings, is often dominated by memorization and lecture. In addition, educators are confronting
serious problems such as low salaries; uncomfortable or unsuitable classroom conditions; and
lack of books, apathetic teachers, and disinterested students. All too often, students only mem-
orize, without having to think and develop knowledge on their own.

**Curriculum Tip**

Two major factors for school improvement are cooperation and buy-in of state
and local educational agencies and the development of some type of specialized
district curriculum team.

For any project involving curriculum improvement to succeed, several factors need to be
addressed. One is the cooperation and buy-in of state and local educational agencies. Another
is the development of some type of specialized district curriculum team that is dedicated to
combining the best of the school’s current curriculum with enhancements based on modern
approaches to knowledge development, curriculum design, and teacher education. The develop-
ment of a Curriculum Development Team (CDT) is an example of how some school districts
are helping to improve the program of studies.

A model CDT is often made up of approximately six CDT members who are highly inter-
ested in helping schools to improve curricular programs. If the model is to be successful, team
members selected must be creative, innovative, contemporary, and visionary. All participants
on the team should have prior experience in teaching and in writing instructional materials.
School districts can recruit a combination of specialists and educators as well as a member of
the community for this important committee.

A major purpose of the CDT is to provide briefings on the status of curriculum within
the district. It is best if these briefings and meetings are held with organizations working in
the education arena, the state educational agency, teachers, students, and so forth. Members
of the CDT can then visit various schools and begin the process of assessing all relevant documents.

An early goal of any curriculum team is to visit selected schools, interview teachers and students, and review materials. This is necessary to conduct preliminary needs assessments. Schools selected for participation in the CDT process should have a means of providing data collection and Internet accessibility. Having access to digitized survey data will be important when noting differences between teaching methods, student involvement, and the like, at schools where only traditional teaching methods are utilized. It is best if CDT members are linked via interactive Internet connections to maintain communication throughout the process.

After data have been collected and analyzed by the CDT, the role of the committee is to select specific topics or subtopics for which curriculum materials and accompanying units in the teacher’s manual can be developed or enhanced. The CDT then has the ability to send different examples of textbooks, supplemental materials, visual aids, curriculum guides, teacher’s manuals, videos, films, evaluation forms, and more, to individual schools and to individual teachers.

Topics to be covered might include examples of other school curriculum, contemporary approaches to knowledge development, new approaches to curriculum design and development, evaluation and assessment, and educational leadership, as well as hands-on training in computers and Internet use, and new technologies for classrooms. Interviews with students, teachers, and administrators can be arranged throughout the process. Meetings and interviews with specialists in state agencies and other educational organizations can be organized as well.

The process for developing a draft of curricular materials and teacher’s manual is primarily the responsibility of the committee. CDT members can meet with each selected school’s principal and teacher(s) to review new concepts, programs to be introduced, to reaffirm CDT’s readiness to provide support throughout the school year and its need for feedback, and that CDT members will regularly visit the schools to talk with teachers and “sit in” on classes to view progress, reaction, interaction, receptivity, and so forth. Information collected and shared with participating schools and individuals is often invaluable. Intensive interactions among all members often lead to strong mentoring relationships and personal ties between the individual administrators and teachers. These ties can be sustained throughout the project, and into future years as well, assisted by communications via the Internet.

Common Findings of Low Performing Schools

In many low performing schools, especially in many large public urban schools, CDT committees are finding that the most common form of instruction is the development of declarative knowledge, facts, and concepts. Trained teachers and relevant curriculum materials serve as the key resources for knowledge development of this kind. Memorization is an enabling goal so that the information is useful in the development and application of procedural knowledge. Without effective teachers and materials, students have no external framework to structure the activities of their schooling experience, and given the wealth of information in textbooks and other learning materials, the most obvious way to learn facts is to memorize them through rote practice. This limits the development of procedural knowledge and devotes instruction to factual memory.

More effective methods, such as those labeled “elaboration,” can be used to enhance memorization and help the student develop semantic or graphic representations of information so that more mental links enable efficient recall, or analogical thought. The links also help provide clues for application with knowledge already acquired at other times, thus increasing
the complexity of the schemas that engage the world and laying the groundwork for the development of procedural knowledge. A trained teacher, a textbook, and other instructional materials can present declarative information in ways that aid the process of memorization and encourage application, but they can also assist in the development of dynamic knowledge.

Developing Dynamic Knowledge

Dynamic knowledge refers to metacognitive strategies, cognitive processes, thinking skills, and content-area procedural knowledge. In dynamic knowledge, curricula and teachers no longer serve solely as static knowledge options, but assist in the development of a knowledge base that is student centered and enhances effective thinking on the part of the individual learner. Lessons are comprehensively planned and developed, and both the teacher and the materials become key resources in the instructional strategy menu to build the cognitive base for greater student understanding and application.

Curriculum Tip

A goal of curriculum planning is to increase the knowledge and levels of understanding that students take from the instructional events embedded in learning and instructional materials.

Developing Learner Interaction and Curriculum Integration

Improving school studies involves the interaction of teachers, students, and instructional materials with an integrated knowledge base, an extended understanding of that knowledge in the ability to use the knowledge meaningfully, and the proper development of attitudes, perceptions, and effective habits of cognition that enable complex reasoning and effective applications of that reasoning. These processes are embedded in declarative knowledge, but enable the student to extend that base and operate successfully in an increasingly complex world where learning is a lifelong endeavor. The problem is that dynamic knowledge is often absent from education in low performing schools. Many teachers require their students simply to repeat verbatim the lessons assigned. The key to effective thinking about problems of history, civics, and government (including law and constitution) is the development of deep understanding, in terms of both declarative and procedural knowledge.

The goal is not to define intelligence in terms of the apprehension of truths or fact in these areas, but to explicate instead the apprehension of truths in terms of intelligence. Under this type of approach, students develop the capacity to find and organize facts, and to exploit them in application. Understanding, then, is more than mere knowledge.

Operationalizing Change and Reform

When curriculum questions are operationalized in an effective package, the roles of a teacher, textbook, and other instructional materials are changed from the articulated, comprehensive
curriculum framework to an outline of possibilities. Both the teacher and the materials are more of a resource and reference book that lies in the background of the instructional program. Lecturing teachers and printed materials, by their very nature, provide linear presentations, and due to the inherent development limitations, both time and finance, they reflect the sequential perspective of one or a few people (and not that of the student). For this reason, a lot is not covered in textbooks and other materials that are part of a content area. A successful classroom can add the richness that is needed to build deeper understanding and encourage effective habits of the mind by including important and uncovered aspects as an intentional part of the instructional strategy.

Developing the Assessment Agenda

The first step is to develop the assessment agenda. District administrators, school administrators, key faculty members, and parent leaders should meet to discuss these issues:

- How often should program assessment be undertaken?
- Which program-assessment issues should be addressed?
- What levels of schooling should be examined?
- What resources are available?

These questions should be answered, of course, by weighing assessment priorities ("Are we most concerned with our middle school?")", by noting any forthcoming external reviews ("When is the high school scheduled for its next accreditation visit?"), and by reflecting on the importance of program assessment ("How much time and effort should we really be putting into this process?").

One of the key components of the assessment agenda is the set of assessment issues. The five major issues that might be considered are listed briefly here and then discussed at length in the following sections:

1. Goal-curriculum alignment: To what extent does the program of studies reflect and respond to the school district’s goals?

2. Curriculum correlation: To what extent do learning experiences in the various subjects correlate with each other at a given grade level?

3. Resource allocation: To what extent does the district’s allocation of resources to the program of studies reflect district priorities and provide for equity of opportunity?

4. Learner needs: To what extent does the program of studies respond to present and future needs of the students?

5. Constituent satisfaction: To what extent are teachers, students, and parents satisfied with the program of studies?

The decisions about the assessment agenda can be formalized in a program-assessment calendar, such as the one shown in Exhibit 6.1.
Using Standards and Outcome Statements

Practically speaking, this approach involves turning content standards and outcome statements into question form, and then designing assignments and assessments that evoke possible answers. Only by framing our teaching around valued questions and worthy performances can we overcome activity-based and coverage-oriented instruction and the resulting rote learning that produces formulaic answers and surface-level knowledge. The benefit of a modern curriculum development training model is that it serves as the core of the content coverage for topics while tending to uncover concerns. Reinterpreting textbook information within the same instructional objectives will add to instructional effectiveness by taking students into the realm of cognitive understanding. The curriculum materials and teacher’s manual will help structure learning episodes that include both declarative and procedural knowledge and that enable students to think thoroughly and deeply about enduring and changing schemas. What is learned in the classroom will relate to life and enhance the understanding of individual students of their world. Interactive learning and the incorporation of standards, outcome statements, and databased forms of assessment will give students the ability to think for themselves and generate a better understanding of its relevance to their lives.

Aligning District Goals and the Curriculum

In the previous chapter, the process of aligning goals with specific fields of study was explained as a critical step in the goal-based planning model. This chapter suggests a slightly different procedure to use when the focus is on improving a program of studies.

The first step is to identify the school’s curriculum goals—those educational goals to which the curriculum is expected to make a major contribution. As indicated in Chapter 5, too often educators assume that all educational goals are curriculum goals. Such an assumption ignores the fact that some goals might best be met through noncurricular means. Consider this goal, one found in many goal statements:

### Exhibit 6.1 Program-Assessment Calendar

<table>
<thead>
<tr>
<th>Year</th>
<th>Level</th>
<th>Assessment Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004–2005</td>
<td>Middle schools</td>
<td>Goal-curriculum alignment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource allocation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Learner needs</td>
</tr>
<tr>
<td>2005–2006</td>
<td>Elementary schools</td>
<td>Goal-curriculum alignment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource allocation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Constituent satisfaction</td>
</tr>
<tr>
<td>2006–2007</td>
<td>High schools</td>
<td>Goal-curriculum alignment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource allocation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Curriculum correlation</td>
</tr>
</tbody>
</table>
The student will develop a positive self-image.

In general, the research suggests (see, e.g., Brookover & Erickson, 1975) that self-image is chiefly affected by the expectations of others, such as peers, parents, and teachers, and by the role one chooses for oneself. Since the curriculum makes only a relatively minor contribution, this educational goal probably should not be identified as a curriculum goal.

One useful way of making such a determination is to survey the faculty, using a form such as the one shown in Exhibit 6.2. Rather than simply distributing and collecting the forms without discussion, it makes more sense to provide time at a faculty meeting for a general discussion of the issues, to let teachers meet in small groups for fuller discussion, and then to ask them to complete the survey after such analysis and reflection. After the surveys have been completed, the faculty should meet again to discuss the results in an attempt to achieve a consensus. In general, any educational goal that at least half the faculty believes should be met primarily through the curriculum should be considered a curriculum goal for the school.

The next step is to determine to what extent and in what subjects these curriculum goals are being met. The objective here is to develop a matrix that shows in graphic form each goal and the contributions of each subject, grade by grade.

Part of such a matrix is shown in Exhibit 6.3 to illustrate the format and content desired here. The curriculum goals are listed down the left-hand side. Across the top are the required subjects offered by the school (note that only required subjects are listed; since not all students take electives, the contributions of electives should not be assessed here). Each subject column is further subdivided into grade levels, since it is important to analyze grade-level progression. The entries note major curriculum units, which make a major contribution to each goal.

How can the data for this matrix best be obtained? Two ways are possible. One method is to do a goal analysis of the curriculum guides for all major subjects. A member of the leadership team can go through a guide systematically, entering in the matrix the titles of units that relate to a particular goal and listing any units that do not seem directly related to any of the goals. One drawback to this process is that the matrix reflects only what is in the written guides, not what is actually taught. For that reason, districts may prefer to build the matrix by surveying teachers. The form can be a simple one, with these directions:

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**Exhibit 6.2 Identification of Curriculum Goals**

*To the Faculty:* Listed below are the educational goals of the school. In your opinion, to which of these educational goals should the school’s curriculum make a major contribution? Write the letter C after each educational goal to which you think the curriculum should make a major contribution. We should note here that not all these educational goals necessarily have to be curriculum goals. Some goals, for example, might be achieved primarily through the extracurricular program, with the curriculum making only a minor contribution.

1. Develop a positive self-image.
2. Value own ethnic identity and accept people of other ethnic groups.

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*The student will develop a positive self-image.*
Listed below are our school’s curriculum goals. Consider each goal. If you teach a unit of study that relates directly to or makes a major contribution to that goal, enter the title of the unit. Please keep in mind that we are trying to identify only major units of the curriculum that make major contributions; therefore, you should not note any incidental attention you give to this goal.

Since the objective is to get valid data from individual teachers, individuals should probably complete this survey without consultation or discussion with colleagues. Teachers working in groups often claim to be teaching a particular unit because they sense pressure from colleagues to be doing so.

The results collated in the matrix should then be reviewed by the leadership team, keeping these questions in mind:

1. Is each curriculum goal adequately addressed in at least one of our required subjects? This question examines the basic goal-curriculum relationship to ensure that every goal is dealt with in at least one subject.

2. Are complex curriculum goals reinforced appropriately in two or more subjects? This question is concerned with reinforcement across the curriculum. A complex goal, such as the development of critical thinking, should appear as a focus in several subject areas.

3. Is each goal appropriately developed and reinforced from grade to grade? This question examines the developmental sequence from grade to grade to be sure that each goal is sufficiently reinforced.

4. Are we avoiding unnecessary duplication and overlap from subject to subject and from grade to grade? This question focuses on the particular units to be sure that unnecessary duplication is avoided.

5. Does each required subject seem to be making an adequate contribution to the curriculum goals of the school? This question focuses on a given subject and examines its contributions to all the goals.

The results of the alignment process can lead to several responses. One response is to reconsider the set of curriculum goals. If it turns out that a curriculum goal is not adequately treated in at least one of the required subjects, then perhaps that goal might better be assigned to some other aspect of the educational program, such as the activity program. A second response is to add a new required course or sequence of courses specifically designed to

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Exhibit 6.3  Curriculum Goals and Subject Contributions

<table>
<thead>
<tr>
<th>Goal</th>
<th>Grade 4</th>
<th>Grade 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Think critically and solve problems</td>
<td>Solving personal problems</td>
<td>Solving school problems</td>
</tr>
</tbody>
</table>

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address a particular goal. Thus, if it appears that critical thinking is not sufficiently stressed in any of the subjects, a required course could be developed that students would have to take at some point in their program. The third response to a perceived deficiency—and perhaps the most effective—would be to determine with teachers in each department how they could develop new units in their courses that would specifically relate to goals not receiving adequate treatment.

**Curriculum Tip**

Correlating curricula is a process of aligning the contents of two or more subjects.

**Correlating Curricula**

Correlation of curriculum is most essential in schools with a departmentalized structure. An elementary teacher in a self-contained classroom is probably able to achieve whatever correlation is necessary without special intervention. In the same way, a group of teachers working closely together in an interdisciplinary team are probably able in their own way to effect the correlation they consider desirable. In departmentalized schools, however, teachers in each subject often go their own separate way, so that what is taught in one subject has no relationship to what is taught in the rest of the program.

Some good reasons exist for a closely correlated curriculum, as long as the integrity of individual disciplines is not violated. Teachers in one subject can call upon and develop the skills students have learned in another discipline, without having to take the time to teach those skills themselves. So the chemistry teachers know that they can expect students to be able to handle quadratic equations. Important skills that transcend a given discipline, such as retrieving and evaluating information, can be reinforced from subject to subject without excessive repetition. The sense of isolation that seems endemic to departmentalized teaching can be reduced as teachers discuss their curricula and develop correlated units of study. Consequently, students begin to see more clearly how their learning is related.

There are some obvious drawbacks, however, to excessive or misdirected correlation. In some cases, misdirected efforts to correlate can impose unduly restrictive constraints upon teachers. Consider, for example, the problems in trying to correlate American history and American literature. The period of the American Revolution is vitally important in American history, deserving intensive treatment from a historical perspective, but the literature of that period is considered by most experts to be insignificant as literature and merits only brief consideration. A second drawback is that some attempts to impose correlation can result in a situation where one is perceived as a “service” subject that exists chiefly to serve the needs of other disciplines. English often suffers this fate: “That’s the English teacher’s job” is the common cry across the disciplines.

For these reasons, a problem-solving approach to correlation is emphasized, where school leaders work with classroom teachers in determining subject by subject how much correlation is needed. The process begins with a survey, using a form such as that shown in Exhibit 6.4. Notice that it first asks about five general sets of skills and concepts that seem to have applicability across
### Department/team

**Directions:** Our school has decided to undertake a study of curriculum correlation to determine how what is taught in the various subjects can be mutually reinforcing. Consider the subject you teach and answer the following questions based upon your knowledge of your own subject.

1. **What library/study skills do you think your students should have in order to perform more successfully in your subject?**
   - Grade 10
   - Grade 11
   - Grade 12

2. **What special reading skills (other than comprehension skills) do you think your students should have?**
   - Grade 10
   - Grade 11
   - Grade 12

3. **What academic writing skills do you think your students should have?**
   - Grade 10
   - Grade 11
   - Grade 12

4. **What mathematics skills do you think your students should have?**
   - Grade 10
   - Grade 11
   - Grade 12

5. **What knowledge of English grammar (parts of speech, parts of the sentence) do you think your students should have?**
   - Grade 10
   - Grade 11
   - Grade 12

6. **List below any units of study you presently teach that you think could profitably be correlated with units in other subjects, or any new units with a correlated approach that you might be interested in developing.**
   - Grade 10
   - Grade 11
   - Grade 12
the curriculum: library and study skills; reading skills other than basic comprehension; academic writing skills, such as summarizing an article; mathematics skills; and English grammar. The data from this section of the survey can be collated and shared with the faculty to help them determine how to proceed.

These data will usually indicate two sorts of problems in correlation. One problem occurs when one or more departments indicate that the curriculum requires the intensive development of one of the basic skills. Suppose it happens, for example, that several departments indicate that their students should know certain basic library skills. There are essentially three options available to administrators. One would be to develop a new course that would teach the required skills; such a new course would serve the needs of all departments. A second option would be to ask one department (in this case reading/language arts) to assume primary responsibility, with each department then adding its own special content. The third option would be to decide that each department should teach in its own way the library skills its students need. A fuller discussion of these options as they relate to academic writing and critical thinking is presented in Chapter 14.

In some cases, the problem is misalignment of content: The ninth-grade science curriculum requires a mathematics skill that the mathematics curriculum places in tenth grade. In such instances, the two departments should confer to determine which adjustment seems more feasible—to change the science curriculum so that the skill is not required until the later grade, or to change the mathematics curriculum so that the skill is taught in the earlier grade.

In the same manner, the responses to the last question, dealing with the possibilities of developing correlated units, can be shared with the appropriate departments or teams to see if such units might be cooperatively planned. It might happen, for example, that the mathematics teachers, learning about a unit in logical thinking taught by the English teachers, would suggest a correlated unit that would include an analysis of valid and invalid uses of statistics in reasoning.

Thus correlation is achieved through a problem-solving process of determining need, assessing the options, and making decisions that seem best for the students.

Analyzing Resources Allocated to Curricula

The third process for assessing and improving the program of studies is to analyze the resources allocated to the several curricula. The resource allocation analysis provides data relevant to these related issues:

- Does the school’s allocation of resources reflect its educational priorities? The assumption here is that the manner in which resources are allocated should reflect the system’s priorities.
- Does the school’s allocation of resources seem adequate for achieving the outcomes desired? If certain important educational outcomes are desired, then those classes will need adequate time, appropriate staffing, and suitable class size.
- Does the allocation of resources seem to be cost-effective? This question essentially examines the relationship between the number of students served and the resources required to serve them.
- Is the allocation of resources equitable? This question is concerned with whether the needs of all students are being met in an equitable fashion. In too many instances, less-able students receive less than their share.
The examples shown in Exhibit 6.5 illustrate the types of data that might be analyzed in answering those questions. Obviously, additional data could be included, such as classroom space, instructional costs, noninstructional costs, and overhead and indirect costs. However, that additional information would contribute only some refinements to the basic data presented in Exhibit 6.5 and therefore might be omitted without harm to the analysis.

A special note might be made about the importance of analyzing time allocations. Several studies (see, e.g., Stallings, 1980) indicate quite clearly that the time allocated to a particular area of the curriculum is directly related to student achievement in that area. One useful standard for assessing time allocations has been provided by John Goodlad (2004). After reviewing the time allocations in the numerous schools he studied and assessing his own extensive experience in curriculum development, he concluded that the following allocations would be desirable for the three upper grades of elementary school: language arts, 1.5 hours a day; mathematics, 1 hour a day; social studies, 2.5 hours a week; science, 2.5 hours a week; health and physical education, 2.5 hours a week; arts, 3.5 hours a week. In many states, of course, minimum time allocations are stated in the school code; where the district has some flexibility, however, allocations should be closely examined.

In examining those data in relationship to the questions noted above, the leadership team might decide that certain reallocations would strengthen the overall program. Such reallocations might take several forms: increasing or decreasing time allotments, increasing or decreasing section size, increasing or decreasing the number of teachers assigned.

### Curriculum Tip

In the current world of technology and education, data analysis is fast becoming one of the most important aspects of assessment and of improving programs of study.

### Importance of Data Analysis in Assessment

Victoria L. Bernhardt (1998), in her book *Data Analysis for Comprehensive Schoolwide Improvement*, helps school leaders learn how to deal with curricular data that will inform them of where they are, where they want to be, and how to get there. Her pioneering work reveals that data analysis is a major help in identifying and uncovering powerful curriculum...
solutions to some of our schools’ biggest problems. Data analysis, however, has not always been well received in the study of school improvement. Some of the reasons that schools may not use data regularly include the following:

- Work culture does not focus on data
- Gathering data is difficult and often perceived as a waste of time
- Teachers are trained to be subject oriented, not data oriented
- Data are often not used systematically

Supporters of data analysis, however, note that data collection and analysis provide curriculum leaders with the power to make good decisions, work intelligently, work effectively and efficiently, change in better ways, understand the impact of hard work, help prepare for the future, and know how to make work benefit children. The collection of data can make a major difference in school reform by

- Replacing hunches and hypotheses with facts concerning changes that are needed
- Identifying root causes of problems
Assessing needs to target curriculum services and issues
- Determining if goals are accomplished

The key is that schools gather data correctly and use the data appropriately. According to Lynn Olson (2004), writer for *Educational Week*, officials should inventory the data currently stored by their district, assess the quality of that information, and estimate the cost of correcting or “cleaning” the data. Schools also need to evaluate their data and analytical needs, and must weigh how much outside or third-party help they require to set up the system, including inventorying the initial data, cleaning the data, merging data sets, and housing the data over time. Districts also need to consider how long it will take to get the system up and running, as well as its cost. Olson goes on to state that schools and districts would be well advised to contact other schools using the software, query them thoroughly, and visit as many as possible to get practical feedback on the types of products and levels of services each vendor offers.

**Assessing Learner Needs**

One of the most important analyses of the program of studies involves the extent to which the curriculum seems to respond to both present and future needs of the learners. However, to argue for the importance of such an analysis is not to assert that learner needs must always be the primary determiner of curriculum. As explained in Chapter 3, other sources might be just as or more important, depending upon the orientation of curriculum planners. Yet even curricula that have been influenced primarily by other sources should give some attention to present learner needs if they are to be successful in eliciting student interest. In addition, all curricular orientations seem to accept the importance of preparing students for the future, even though they construe that preparation differently.

If such an assessment is therefore important, it must be done carefully and conscientiously; it should not be perceived as a meaningless exercise undertaken just to satisfy administrators or some external group. The process should begin by involving the faculty in a systematic study that results in an explicit statement of present and future learner needs. How this is done will obviously vary with the local situation; however, the process explained below is one that should work well in most systems.

Begin by setting up a small task force or committee composed of one district administrator, one or more school administrators, and several key faculty members. Their first task should be to develop a tentative draft of present learner needs. Two points should be stressed about this needs analysis. First, it should focus on the developmental needs of the age group enrolled in that school, not on the needs of all children and youth. The assumption is that the district’s goals speak to the broader needs of all students; the needs analysis is concerned solely with the age group served by that school. Second, it should be concerned primarily with those needs that might best be served through the curriculum, since the emphasis is on assessing the educational program, not other aspects of schooling.

The task force should use two general sources of information: publications and people. First, task force members should undertake a systematic examination of current publications dealing with that age group. For each age level—the children in elementary schools, the preadolescents, early adolescents in middle schools, and the youth in high schools)—numerous sources synthesize the research on the psychological, physical, social, and intellectual needs
of that population. The task force would be wiser, perhaps, to limit themselves to a careful study of a smaller number of the best sources (perhaps no more than five or six), rather than attempting a comprehensive survey. They should also use whatever expert advice they can get from both district personnel (such as school nurses, counselors, social workers, and psychologists) as well as from professionals in the community.

Their draft report might take the form of the one shown in Exhibit 6.6. This document synthesizes the most current and reliable information about middle school learners. Observe that it first states the need and then suggests a curricular response.

Their second major task is to identify future needs of the learners. Here, the intent is not to play the role of futurist and attempt to develop elaborate scenarios about the 21st century. Instead, the goal is to identify rather predictable features of the next 20 years that should influence the kind of education provided for today’s students. Here, the task force can turn to two types of documents for assistance. First, there were several commission reports written during early 2000 that both examined the present performance of schools and addressed specifically the issue of future curricular needs. Two that seem worth checking are the National Science Board report, *U.S. Losing Ground in Science Education* (Ashton, 2004) and the Education Commission of the States (American Association of Colleges for Teacher Education [AACTE], 2004) study, *No Child Left Behind*. Second, several reports are available that look more broadly at the issue of planning for the future. While some of these seem unduly speculative, one that seems especially worthwhile is the Secretary’s Commission on Achieving Necessary Skills (SCANS) report (Northwest Mississippi Community College, 2004), which defines competencies.

**Improving the Program of Studies**

This section of the draft report might take the form shown in Exhibit 6.7. Again, a future development is indicated and then a curricular response is suggested. The draft report on present and future needs should then be analyzed and discussed by the faculty, meeting in small groups, with perhaps a member of the task force leading each group. Out of these discussions should emerge a final draft reflecting a faculty consensus. That process results in a final document that can then be used in assessing the programs of study. The process obviously is a time-consuming one, but the commitment of large amounts of time seems warranted. Not only will the faculty have produced a highly useful document, but teachers will also have had an opportunity to analyze and discuss some very critical issues.

How can this document be used in assessing the program of studies? Two processes might be considered. The first is a mapping of what may be called the “needs-responsive curriculum”—those aspects of the curriculum that specifically respond to the needs that have been identified. A form similar to the one shown in Exhibit 6.8 should be distributed to departments or teams of teachers, who should meet in small groups to discuss the questions and respond to the survey. The results can then be reviewed by the leadership team to determine areas of strength and weakness.

It might be useful here to distinguish between the goal-curriculum alignment process and the mapping of the needs-responsive curriculum. Goals are usually very general statements that apply to all levels of schooling and are ordinarily produced at the state or district level. The goal curriculum alignment process attempts to align larger curriculum entities, such as units of study, with these very general outcomes. The statement of needs is produced at the
school level and focuses on the more specific needs of a given age level, and the mapping process seeks detailed evidence of how a given curriculum responds to those needs. Because the alignment and mapping processes are somewhat similar in approach, however, it might be desirable to use only one, not both, during a given assessment project.

Exhibit 6.7  The Future and the Curriculum

The experts predict that the future will be marked by these developments:

1. The world becomes a “global village.”

2. New immigrant groups continue to arrive in this country in large numbers.

3. The information age arrives: a glut of information made available by computers.

4. Television becomes increasingly dominant as a medium of communication and entertainment.

5. The family continues to change; more family instability, more one-parent families.

6. The technology continues to change, with the job market changing frequently and unpredictably.

The curriculum should probably respond in these ways:

1. Units in social studies and English that increase students’ awareness of national interdependence; foreign language study made available to all students.

2. Units in English and social studies that emphasize our immigrant past and the contributions of immigrants.

3. Units in all appropriate subjects on information retrieval, evaluation, and application.

4. Units in English that emphasize critical viewing.

5. Units in social studies that put such changes in perspective.

6. Units in English and social studies that emphasize career-mobility skill, rather than examining particular careers.

Exhibit 6.8  The Needs-Responsive Curriculum

Directions: The following curriculum characteristics have been suggested by our analysis of our students’ present and future needs. Consider each characteristic. If you feel that the curriculum in your subject in some way reflects that characteristic, then indicate specifically how it does.

Department: English language arts

A needs-responsive curriculum should have these characteristics:

1. Helps students develop a global perspective

Our curriculum reflects these characteristics in these ways:

1. Students read some contemporary literature written by European and Asian writers.
The other process for assessing the needs-responsive curriculum takes an entirely different approach. Each homeroom or adviser-room teacher is asked to identify three students from that homeroom and conduct an in-depth interview with them to ascertain the students’ perceptions of how well the program of studies responds to the needs identified. If the homeroom group is heterogeneous in abilities, the teacher should choose one student from each ability level. The interview might open with a statement of this sort:

The teachers in our school have been thinking about students your age and the kinds of things they should be learning. We’d like to find out from some of our students how they feel about what they are learning. You’ve been selected because I think you have some good ideas about what you’re studying. I’m going to read a statement about what our faculty believes you should be learning. I would then like you to answer in two ways. First, tell me if you agree that those things are important to learn. Then tell me in which subjects, if any, you are learning those things.

The teacher, of course, should caution students not to be critical of particular teachers, since the intent is not to evaluate teachers, but to examine the program of studies.

Each teacher should then be asked to prepare a written summary of results of the interviews. Time should also be provided for small groups of homeroom advisers to meet together to discuss their findings. The written summaries should be reviewed by the leadership team to identify specific ways in which the program of studies does not seem sufficiently responsive to learner needs.

Both these processes will have identified certain needs-based deficiencies in the existing program of studies. The leadership team can then decide how to respond to those deficiencies. One response, obviously, is to determine that a particular need should not be addressed in the curriculum. Upon further reflection, the leaders might determine that a particular need can better be satisfied through some other educational means or through some other agency. The more likely response is to suggest to appropriate teams or departments that they spend more time deciding how they could make the curricula more responsive. Thus, if it is apparent that none of the school’s courses is concerned with, for example, the need to develop a global perspective, several departments might be asked to examine how their curricula might be suitably modified. The social studies, English, music, art, and family and consumer science (formerly home economics) departments would need to be involved in this instance.

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**Curriculum Tip**

The curriculum leadership team should decide which groups should be surveyed, and whether the total population or only a sample should be included.

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**Assessing Constituent Satisfaction**

The last assessment process involves measuring constituent satisfaction; *constituent* is used here as an umbrella term that includes students, teachers, and parents as constituents.
whom the curriculum serves. This is not to suggest that all groups need to be surveyed, especially at the elementary level. Measures of pupil perceptions tend not to yield valid results. Curriculum leaders might decide to survey all teachers, a stratified sample of 20% of the students, and all parents.

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**Exhibit 6.9  Student Survey**

*To the Student*: Below you will find several statements about the subjects you are studying this year. Consider each statement and decide how much you agree with it. Circle one of these responses to show how much you agree or disagree with that statement:

- SA = strongly agree
- D = disagree
- A = agree
- SD = strongly disagree
- ? = uncertain

Remember also to read the question at the end of this survey.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Your Response</th>
</tr>
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<tbody>
<tr>
<td>1. I am learning things that seem useful to me now.</td>
<td>SA A ? D SD</td>
</tr>
<tr>
<td>2. I am learning things that will be helpful to me in the future.</td>
<td>SA A ? D SD</td>
</tr>
<tr>
<td>3. I am learning things that seem interesting to me.</td>
<td>SA A ? D SD</td>
</tr>
<tr>
<td>4. I think I should have a chance to take more electives.</td>
<td>SA A ? D SD</td>
</tr>
<tr>
<td>5. The things I am studying seem much too difficult for me.</td>
<td>SA A ? D SD</td>
</tr>
<tr>
<td>6. The courses I am taking make me think and develop my abilities.</td>
<td>SA A ? D SD</td>
</tr>
<tr>
<td>7. The courses I am taking seem connected with each other; what I learn in one course ties in with what I learn in the other courses.</td>
<td>SA A ? D SD</td>
</tr>
<tr>
<td>8. The bright students in our school have better courses than students who are not so bright.</td>
<td>SA A ? D SD</td>
</tr>
</tbody>
</table>

Is there some course not offered by our school that you would like to see offered? If so, list it below. You may list more than one course if you wish.

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Ordinarily, the survey should focus on the entire program of studies, not on individual subjects or the instructional processes; a faculty committee should be charged with the responsibility of developing the specific items to be included. The items shown in Exhibit 6.9 suggest types of items that might make up the survey. Observe that the survey shown in Exhibit 6.9 attempts to assess satisfaction with several dimensions of the program of studies: present relevance, future value, interest, the required/elective balance, difficulty and challenge, subject correlation, curricular equity. These seem to be the aspects where constituent satisfaction is most salient.

The results of these surveys require careful analysis before steps are taken to improve the program of studies.

The leadership team should examine the data with these questions in mind:

1. Do major discrepancies exist in the extent to which teachers, parents, and students seem satisfied with the program of studies? If so, what do those discrepancies mean?

2. Where general dissatisfaction is expressed with some dimension of the program of studies, what changes might best be made?

It should be stressed here that constituent satisfaction is only one standard by which a program of studies should be assessed. The leadership team and the faculty should use one or more of the measures discussed above to supplement this particular analysis.

Taken together, then, these five assessment processes can yield some highly useful data that the leadership team and the faculty can use in improving the program of studies.

**CHAPTER OVERVIEW**

Educational leaders periodically need to implement a systematic process to assess and to improve each program of studies. The process usually involves improving an existing program rather than investing in developing new programs of study. Value is gained from examining past attempts to reconceptualize programs of study. Curriculum leaders can improve existing programs of study by developing an assessment agenda, aligning district goals and the curriculum, correlating curricula, analyzing resources allocated to curricula, and finally assessing constituent satisfaction.

**CHAPTER TERMS**

- Discipline-Based Curriculum
- Core Curriculum Movement
- Interdisciplinary Courses
- Curriculum Development Team
- Dynamic Knowledge
- Standard and Outcome Statements
- Correlating Curricula
APPLICATIONS

1. Compare a process from this chapter with a process recommended by one of the accrediting bodies. What do you perceive to be the advantages and disadvantages of each? List at least two advantages and two disadvantages. What local factors might affect the one you would recommend to a school district?

2. Some argue that speculating about the future is a futile pursuit, since the future is so unpredictable. Many also point out that if we teach students how to think, how to communicate, how to read, and how to solve problems, there is no need to worry about the future. How would you respond to such arguments? What are some specific recommendations you would give curriculum leaders when speculating about future educational events?

3. Try your hand at reconceptualizing the curriculum. Choose a level of schooling you know best (elementary, middle, high). Identify the way you would organize learning (using some of the disciplines, if you wish) and indicate what percentage of time would be devoted to each broad field.

4. Develop a detailed program-assessment calendar for a school that you know. Include the following: the program-assessment issues to be analyzed, the individuals primarily responsible, and the dates by which the final assessments should be made.

5. What implications do you see the No Child Left Behind Act of 2001 having for curriculum development?

6. Since the standards and regulations of NCLB are the driving force in the creation of state standards, and these standards will be tested for school accountability, what impact will this have regarding schools’ flexibility in curriculum?

CASE STUDY

A Pennsylvania principal talks to her fifth-grade teacher about ways to teach difficult material that will help improve student achievement.

“Ron, I know that you use a lot of high level math curriculum in your classroom and your student test scores are always high. Is there a way we can use some of your strategies with other fifth-grade teachers?” asks Susan Neal, Principal of Cecilia Hazelton Intermediate School. “I had a few of the other fifth-grade teachers in my office and they are very upset about the standards and what is expected. They think the material is too difficult. As you know, many of our students are far below the math proficiency standard set by the state. I sure hope that you can help me with this problem.”

“I’ll be glad to help,” says Ron. “I’m in the process of meeting with our fifth-grade teaching team this afternoon. I know that they’re concerned, but I can share what I’m doing to improve student scores in the area of Number Sense and Operations. The teachers have been pretty frustrated with student test results in that area. For example, our textbooks emphasize Standard Rounding while the test items call for Front Ending.”
“That sounds like just what we need,” notes Principal Neal. “I’m sure that the teachers will respond better to your suggestions rather than just hearing from me all the time.”

THE CHALLENGE

Developing an active Web site for each grade level as a way to improve programs of studies is becoming an important component of the school curriculum. Analyze this process and propose other strategies that Principal Susan Neal could use to get more teachers involved in building grade-level and/or classroom Web sites.

Key Issues/Questions

1. Judging from your own experience, how do you feel about Ron Bender’s classroom Web site approach being used to help develop interdisciplinary courses?

2. Restructuring curriculum may involve a great deal of resistance. What types of problems might Principal Susan Neal experience when she proposes that all teachers should be developing their own classroom Web sites?

3. What are some ways that Principal Neal can use technology and Web site development to enhance program assessment?

4. How do you think the parents of Cecilia Hazelton Intermediate School will react to their children’s work and grades being posted on the Internet? How might Principal Neal deal with this concern?

5. How can Principal Susan Neal use Ron Bender’s Web Site approach to help develop and assess constituent satisfaction of her school?

REFERENCES


