PART ONE

A Frame of Reference

CHAPTER 1

A Learning-Centered Approach to Course and Curriculum Design

Too many Americans just aren't getting the education that they need—and deserve.

United States Department of Education, 2006, vii.

As a faculty member, you can undertake very few activities that will have a greater impact on students than your active involvement in the design of a course or curriculum. As a direct result of these efforts, learning can be facilitated, your students' attitudes toward their own abilities can be significantly enhanced and, if you're successful, students will leave better prepared for the challenges they will face after graduation. In addition, because major course and curriculum designs tend to remain in place for years after the project has been completed, your efforts will impact far more students than you may anticipate at first.

The Curriculum Is Not Always Equal to or More Than the Sum of Its Parts

A growing number of authors report that too many of our students simply do not receive the quality of education that society expects and that the country needs for the years ahead. The educational experience of our college students has been described as disjointed, unstructured, and often outdated. Courses often have little relationship

to the curriculum that is in place and may overlook the critical skills that students need to acquire.

The observations identified in the Association of American Colleges and Universities' report, *Integrity in the College Curriculum: A Report to the Academic Community* (1985), are even more appropriate today than they were over twenty years ago: "As for what passes as a college curriculum, almost anything goes. We have reached a point at which we are more confident about the length of a college education than its content and purpose. Indeed, the major in most colleges is little more than a gathering of courses taken in one department, lacking structure and depth, as is often the case in the humanities and social sciences, or emphasizing content to the neglect of the essential style of inquiry on which the content is based, as is too frequently true in the natural and physical sciences." The report continued, "The curriculum has given way to a marketplace philosophy; it is a supermarket where students are shoppers and professors are merchants of learning. Fads and fashions, the demands of popularity and success, enter where wisdom and experience should prevail. Does it make sense for a college to offer a thousand courses to a student who will only take thirty-six?" (p. 2).

The research, too, suggests that in many cases college and university curricula do not produce the results we intend. Curricula that are not focused by clear statements of intended outcomes often permit naive students broad choices among courses resulting in markedly different outcomes from those originally imagined: by graduation most students have come to understand that their degrees have more to do with the successful accumulation of credits than with the purposeful pursuit of knowledge (Gardiner, 1996, p. 34). In his 2006 essay on the status of innovation in American colleges and universities, Ted Marchese, former vice president of the Association for Higher Education and editor of *Change* magazine, made the following observation:

> What's at stake? Does this matter? Does it matter that university completion rates are 44 percent and slipping? That just 10 percent from the lowest economic quartile attain a degree? That figures released this past winter show huge chunks of our graduates who cannot comprehend a *New York Times* editorial or their own checkbook? That frustrated public officials edge closer and closer to imposing a standardized test of college outcomes? Does it matter that we look to our publics like an enterprise more eager for status and funding than self-inquiry and improvement? [2006].

Although his comments are certainly discomforting, they are accurate. Despite the efforts of many dedicated faculty and administrators and the support of numerous foundations, we are still not doing a particularly good job of educating our students. Too many

of our graduates leave underprepared to be effective and productive citizens, and far too many students who enter college never graduate. As a result, America is losing out in many areas. Fewer and fewer citizens vote, we are perceived as an isolated country with little understanding of other cultures and of the world in general, and numerous other nations' educators are doing a far better job of developing in their citizens the competence that will be required in the years ahead.

In the additional resources section at the end of this chapter you will find several publications that discuss in more detail the challenges that colleges and universities face.

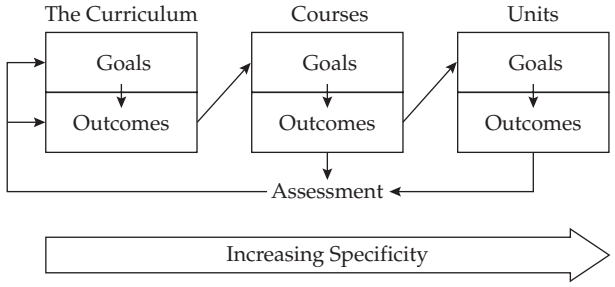
In short, we have reached a point where we educators, in addition to becoming more efficient and effective, have to rethink at a basic level what we teach and how we teach. We must rethink our roles as faculty, how we can most effectively use the time and talents of our students, and how we can fully utilize the expanding capabilities of technology. The approach that we will use in this book is designed to help you do all of these things.

The Challenges of Curriculum and Course Design

Designing a quality course or curriculum is always difficult, time-consuming, and challenging. It requires thinking about the specific goals you have for your students, the demands of accreditation agencies, and about how you, as a teacher, can facilitate the learning process. This demanding task will force you to face issues that you may have avoided in the past, to test long-held assumptions with which you are very comfortable, and to investigate areas of research that may be unfamiliar to you. At times you may become tired and frustrated and wish to end the entire project. Just keep in mind how important this work is and press on. Despite the work involved most faculty who have used this model report that they found the process of design and implementation challenging, frequently exciting, and when completed, most rewarding.

Unfortunately, as important as these activities are, we faculty are seldom prepared to carry them out. Although you may have been fortunate enough to have participated in a strong, well-conceived program for teaching assistants, few faculty have had the opportunity to explore the process of course and curriculum design or to read the research that provides a solid base for these initiatives. This book is designed to help you go through the design, implementation, and evaluation processes. It will provide you with a practical, step-by-step approach supported by case studies, a review of the significant literature, and introduce you to materials that you should find extremely useful.

Figure 1.1.
From Goals to Outcomes to Assessment



An Important Relationship

As you follow through the steps of designing or revising a course or curriculum, it is extremely important to keep in mind the important relationship between goals, outcomes, and assessment. It is a relationship that remains a constant whether you are focusing on a curriculum, a course, or a unit or element within a course.

1. The outcome statements that are produced for the curriculum will be the basis on which the primary goals of each course within that curriculum are determined.
2. The outcome statements that are produced at the course level will be the basis on which the primary goals of each unit or element within that course are determined.
3. As you move from the curriculum to the courses within it, and to the individual units or elements within each course, the goal and outcome statements become more specific.
4. The success of your effort will be determined by how well your students meet the criteria for success as defined in the outcome statements at the course and unit or course element level. (See Figure 1.1.)

Getting Assistance

Although curriculum development is always a team activity, course design often is not. In both instances, however, the process can be facilitated and the end result improved if others are involved. These may include specialists in assessment or technology, other faculty or experts in the community, and although often overlooked, the registrar. In addition, we have found that having someone from outside your content area serve as a facilitator can be extremely useful. This individual may be a faculty member from

another department or a staff member from the Academic Support Center on your campus. The facilitator, who has no vested content interest in the project, can help you explore options, ask key questions by challenging your assumptions, and get the important but often overlooked issues out in the open. Simply by not being in your discipline, facilitators can also put themselves in the position of your students and raise questions about assumptions and sequence. The importance of this role cannot be overstated. In Chapter 5 we discuss this function in some detail.

Course Design and the Delivery of Instruction

The best curriculum or course design in the world will be ineffective if we do not pay appropriate attention at the course level to how we teach and how students learn. Although faculty, employers, and governmental leaders agree that graduates need critical-thinking, complex problem-solving, communication, and interpersonal skills, research shows that the lecture is still the predominant method of instruction in U.S. higher education (Gardiner, 1996, pp. 38–39).

To ensure that students develop the higher-level competencies that you believe to be essential will require thinking about how you and your students spend time both inside and outside the classroom, what the responsibilities of your students should be, and how you will assess them during and at the end of courses, and at the conclusion of their total learning experience. It may also require rethinking your role as a faculty member. The chapters in this book on the design and delivery of instruction will describe the many options available to you, as well as the research on teaching and learning that can help inform your decisions.

Accountability

A major problem that all institutions face is the perception of business and governmental leaders, and of the public at large, that we have enthusiastically avoided stating clearly what competencies graduates should have and that, as a result, colleges and universities have provided little evidence that they are successful at what they are expected to do. Unfortunately, these perceptions are not far from the truth. The public demands for assessment of programs and institutions have, for the most part, fallen on deaf ears, and as a result of this inattention, higher education in general receives increasingly less support from the public and private sectors. While tuition has increased significantly, the quality of our product has not.

As governors and other public leaders have made extremely clear, this problem of accountability needs to be addressed if support is to increase.

This demand for more information on the quality of learning at colleges and universities has led to many of the changes that are under way in accreditation, and to the increased attention being paid to learning outcomes and assessment by numerous national associations and institutions (see Chapter 2). As a result, collecting data and reporting results must be major elements in the process of course and curriculum design and implementation. One of the underlying assumptions in the work you will be doing is that the instructional goals you develop, and the assessment of your students' success in reaching them, will be made public. Only this level of specificity can answer higher education's severest critics. For this reason, as we move along we will discuss in some detail the development and assessment of both broad instructional goals and specific learning outcomes.

Institutionwide Initiatives

Recognizing both the need for quality information and the demands for increased institutional accountability, a growing number of colleges and universities have been developing a campuswide approach to assessment of the quality of their academic programs that can provide faculty and administrators with extremely useful information as they attempt to improve both courses and curricula. An early first step should be for you to find out what data already exists on your campus or is in the process of being collected.

The University of Indiana, Bloomington, and Monmouth University are two of the institutions that moved in this direction early on. One of the first major campuswide initiatives to develop a culture of assessment took place at Truman State University (formerly Northeast Missouri State University). In Case Study 1 you will find a detailed description of what actions were taken and the long-term impact of these initiatives. The case study clearly shows the importance of quality leadership and faculty involvement in the institutional process of change.

A Brief Introduction to the Model

This book focuses on an approach that has been used successfully at institutions with very different profiles: private and public, large and small, and with varying budgets. It shows how to move from

concept to actualization, from theory to practice. The model is designed to facilitate significant and long-lasting change. Case studies will illustrate the model's adaptability with examples ranging from major curricular redesign to developing individual courses and programs.

Benefits of This Approach:

- The model is easy to use, sequential, and cost-effective; it will save you both time and effort by significantly reducing the time needed for implementation.
- It can be used for the design or redesign of courses, curricula, workshops, and seminars in every subject area and in every instructional setting—traditional and nontraditional.
- The programs you develop will meet accreditation agencies' demands for clear statements of learning outcomes with an associated high-quality student assessment process.
- It is politically sensitive, protecting you from decisions by others that could jeopardize implementation.
- It will ensure that all important questions are asked and all options are explored before key decisions are made.

Several factors make this model particularly relevant. As the case studies illustrate, programs that have been developed using the model meet the goals identified in major reports on educational change. Faculty who have used the model, and the administrators to whom they report, have a sense of ownership of the courses and programs that are developed, ensuring that these programs and projects will become an integral part of the existing system and thus survive.

Since the model was first used in the mid-1960s, changes incorporated as a result of experience working with it, and comments from faculty and staff, have made it less complex and easier to use, reducing the time needed for implementation. Program assessment is a part of the process and places outcome measures of a course or curriculum within the context of national, state, and regional goals.

This approach has several additional characteristics that significantly affect its success. By using a person who is not a content expert to facilitate the design process, this model allows you and other faculty to focus on content and structure while ensuring that assumptions are questioned and alternatives are explored. The model also allows you to focus first on what an ideal program would look like, eliminating perceived limitations—many of which turn out to be more imagined than real. Furthermore, this approach

is data driven, using information from a wide range of sources to help determine scope, content, effectiveness, and efficiency. Equally important, although this process requires hard work, faculty, as mentioned before, find it exciting, challenging, and rewarding, and administrators remark on its efficiency and effectiveness.

One additional benefit should be mentioned. In the process we will follow, specific approaches or solutions are not determined until goals are identified and all options are explored. All too often in education we find advocates of a particular approach starting with the answers before they have even identified the problems that need to be addressed.

The model follows a specific sequence that begins with an assessment of need and a statement of goals (moving from the general to the specific), which is followed by the design, implementation, assessment, and revision of your course or curriculum (Figure 1.2). This sequence assures a meshing of goals, instruction, and assessment.

Under an external mandate to assess the quality of their academic programs, departments, schools, colleges, and universities are finding that no matter where you begin in the process, you will need to go back to the statement of need before you can develop a statement of goals on which assessment must be based (Figure 1.3). For example, to assess your program you will first need to know where you are trying to go, and then, based on this information, you will need to develop an assessment program that can help determine whether you are successful.

Those responsible for assessment initiatives are reporting a number of common problems that we will address as we move through the design process.

Figure 1.2.
Basic Design Sequence

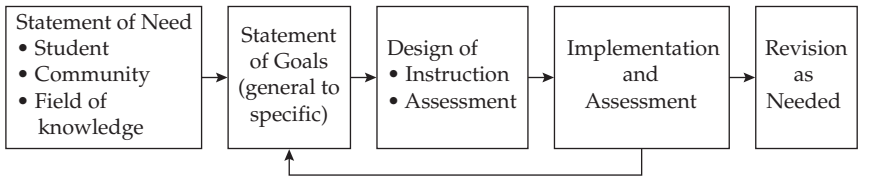
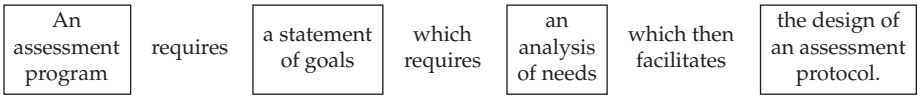


Figure 1.3.
Assessment Sequence



- Statements of outcomes do not exist for many curricula and many courses.
- When outcome statements do exist, there is often a gap between stated performance goals and assessment (assessment tends to focus on recall and recognition, whereas more important and complex goals are never assessed).
- When outcome statements do exist, there is often a gap between stated goals and what is taught.
- When outcome statements do exist, they often focus on content rather than on critical thinking and learning skills.

In other words, in course and curriculum design it is best to resist the pressure that many of us feel to discuss assessment before we have agreed on the goals for the program or course we will be reviewing. Obviously, we need to identify goals before we can have a meaningful conversation about assessment, or about content and structure. Furthermore, when the focus is on assessment, we often feel threatened, which can undermine the sense of common purpose that any such effort needs. By starting with a consideration of how to facilitate effective learning, we will establish a rapport among everyone involved that makes for a successful team effort. This process reduces stress because it helps us get where we want to go in far less time and with significantly less of the frustration that is common in course and curriculum efforts.

The Question of Time

One question that always comes up is, "How long is this process going to take?" Our goal is to help you design and implement the best possible course or program in the shortest time possible. Under ideal circumstances with maximum support, we've been able to design a course during the spring semester, produce the new materials needed in summer (using a small grant to pay for summer employment of the faculty) and implement the new course in the fall. However, this time line is the exception rather than the rule. There will always be surprises and delays and in many cases you will be doing this in addition to your full-time teaching assignment. So be conservative and give yourself additional time.

For curriculum projects, a year or more of design work is not unusual. However, with a quality facilitator, teams can often meet formally once a week and accomplish a great deal of work. Because most new or redesigned curricula will require several levels of approval—by department, school, and institution—additional delays can be anticipated. Keep in mind, however, that once the

overall curriculum design is completed, work can begin on individual courses even before formal approval is obtained. In most instances, when a total curriculum is involved, some courses will be able to be utilized with very few, if any, major changes. In more than one instance we began offering an important new curriculum before completing the design of the courses that were to follow.

In the chapters that follow we will discuss how a systematic approach ensures the most efficient use of your time and effort and that of your colleagues as you work together to improve your program.

Additional Resources

Lederman, D. "Fixing Higher Ed, Legislator-Style." *Inside Higher Ed,* Nov. 28, 2006. Available at http://www.insidehighered.com/news/2006/11/28/ncsl.

This excellent review of the 2006 National Conference of State Legislators includes background and major recommendations, and places it in a national context. Focuses on the role of state legislators in helping to address the issues faced by colleges and universities. Includes links to other important reports.

Marchese, T. J. "Whatever Happened to Undergraduate Reform?" *Carnegie Perspectives, No. 26,* Stanford, Calif., 2006. Available at http://ctll.stanford.edu/tomprof/index.shtml.

An excellent overview of over two decades of innovations in higher education. Well worth the time.

National Academy of Engineering. *The Engineer of 2020: Visions of Engineering in the New Century.* Washington, D.C.: National Academies Press, 2004.

This small volume by the National Academy of Engineering is must reading for anyone in the sciences and engineering. It not only addresses the challenges being faced by schools and colleges of engineering in the United States but describes, in some detail, the competencies that will be required by engineers in the future. Has implications for faculty and administrators in all the arts and sciences.

Newman, F., Couturier, L., and Scurry, J. *The Future of Higher Education: Rhetoric, Reality, and the Risks of Market.* San Francisco: Jossey-Bass, 2004.

Discusses the changes that will occur in higher education in the years ahead, the forces behind them, and the ways in which colleges and universities will need to respond.

Project Kaleidoscope. *Recommendations for Urgent Action: Transforming America's Scientific and Technological Infrastructure.* Project Kaleidoscope. Washington, D.C., 2006.

Reviews the recommendations (and the rationale behind them) of nearly twenty recent reports addressing America's capacity as a world leader in addressing societal problems through scientific and technological innovation. Must reading for anyone involved in the design of courses and curricula in business, engineering, and science.

Schemo, D. J. "At 2-Year Colleges, Students Eager but Unready." *The New York Times,* Sept. 2, 2006. Available at www.nytimes.com/2006/09/02college.html.

Discusses the challenges being faced by community colleges as they attempt to provide support to under-prepared students. Raises major questions concerning the K–12/Higher Ed interface and describes the challenges faced by both students and institutions when remediation is not addressed.