# Assessing General Education Programs

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# Alignment of General Education Programs

Alignment is a key concept in the design and assessment of general education curricula. We ask if the campus provides a cohesive learning environment that supports its general education mission, goals, and learning outcomes. Biggs (2002) reminds us that "teaching and learning take place in a whole *system,* embracing classroom, department and institutional levels" (p. 1), and he argues for "constructive alignment" to support student construction of higher-order learning. If everything runs as planned, "The learner is 'trapped', and cannot escape without learning what is needed" (p. 2). Although this may be optimistic, it is an ideal worth seeking.

## Curriculum Alignment

"Well-designed curricula are more than collections of independent courses; they are pathways for learning" (Association of American Colleges and Universities, 2002, p. 30). General education programs may consist of a core curriculum that all students take, a distributed curriculum with many options, or some combination of optional and required coursework. Regardless of the model, faculty have the responsibility to offer a cohesive curriculum that systematically fosters the agreed-upon general education learning outcomes. Alignment asks if the pathways that individual students take systematically lead to these outcomes.

## A Cohesive General Education Curriculum

A *cohesive curriculum* systematically provides students multiple opportunities to synthesize, practice, and develop increasingly complex ideas, skills, and values. Important learning outcomes are introduced early, and they are reinforced and further developed throughout the curriculum (Allen, 2004; Diamond, 1998). This is easier to do in a general education program if courses are taken in a set order, with some courses prerequisite to others. For example, students may be required to complete a basic skills sequence before enrolling in other general education courses, so they develop basic communication, critical thinking, information literacy, and quantitative skills before continuing. Subsequent general education courses then build on this foundation, giving students opportunities to practice and further develop these basic skills.

Four-year colleges and universities often require upper-division general education courses, and faculty who teach them can build on the lower-division foundation to further strengthen student mastery of general education outcomes and promote the integration of learning. Although most community colleges only offer lower-division courses, some require a capstone general education course that is taken after other general education requirements have been met. This course can promote the consolidation and integration of learning, and it provides opportunities for embedded assessment of the program.

A simple way to conceptualize a cohesive program is by summarizing it in an *alignment matrix* or *curriculum map* that shows where learning outcomes are fostered in the program. Figure 3.1 shows a simplified model of a cohesive curriculum for developing basic skills in a general education program. *I, D,* and *M* indicate that a learning outcome is introduced, developed to foster more sophistication, and demonstrated at a level of mastery acceptable for graduation, respectively. A *D* indicates that students are given opportunities to practice, learn more about, and receive feedback to develop more sophistication. Only four outcomes are listed in Figure 3.1 to simplify this discussion, but, as we saw in Chapter 2, campuses might have dozens of general education outcomes

This alignment matrix uses *I, D,* and M, but these notations may not work as well for you as some others. For example, you might prefer /, *E,* for introduce, enable, and master; I, P, D for introduce, practice, and demonstrate learning; or *B, I, A* for basic, intermediate, and advanced expectations for learning. Campuses with a professional focus might separate



Figure 3.1

Cohesive Development of Basic Skills

| *Course* | *GE Outcome 1* | *GE Outcome 2* | *GE Outcome 3* | *GE Outcome 4* |
|---|---|---|---|---|
| Freshman Basic Skills Course 1 | | | | |
| Freshman Basic Skills Course 2 | | | | |
| Freshman Basic Skills Course 3 | | | | |
| Freshman Basic Skills Course 4 | | | | |
| Sophomore-Level Courses | D | D | D | D |
| Capstone/Upper-Division Course(s) | M | M | M | M |

= Introduce outcomes are introduced at the basic level.
D = Develop students are given opportunities to practice, learn more about, and receive feedback to develop more sophistication.
*M* = Mastery studentsdemonstrate mastery at a level appropriate for graduation.

didactic from experiential (e.g., internship) learning, so they may prefer something like *I, E, P* M, where

*I* = Introduce at the basic level.

*E* = Enhance learning; increase sophistication beyond the basic level using didactic methods.

*P* = Practice with real or simulated clients and receive feedback to develop practical skills.

*M*= Demonstrate mastery at a level appropriate for graduation.

You and your colleagues should decide what distinctions help you map your learning outcomes onto your curriculum. You could just use check marks, but more details show how the curriculum builds on itself. This *scaffolding* systematically provides opportunities for consolidating learning and developing increasing sophistication.

The alignment matrix focuses on outcomes, rather than goals, because we want to verify that students receive appropriate support to master all outcomes. If we focused at the goal level, some outcomes might be lost. For example, if we aligned our curriculum with an oral communication goal, the program might look cohesive, but if *we* focus on a specific outcome associated with oral communication, such as interpersonal skills, we might discover that no course fosters the development of this specific outcome. This matrix also serves another important purpose. When we begin to develop our assessment plan, any alignment matrix entry of *D* or M alerts us to the existence of products or behaviors that could be evaluated in an embedded assessment study.

Many colleges allow students to take general education courses in almost any order, without a capstone requirement, and this makes scaffolding difficult. For example, see Figure 3.2. Here each course works relatively independently. Faculty cannot be confident about what students already know, so students may receive multiple introductions to something like information literacy, but they may never experience coursework beyond the introductory level. Students may be required to take only one course to meet each requirement, and this course often is expected to introduce, develop, and elicit the demonstration of mastery-level learning. Some basic skills, such as written communication, may overflow into other courses, as shown for Outcome 1 in Figure 3.2, and this should be recognized by including the relevant outcomes on course syllabi.

Perhaps making some minor changes that create a few prerequisites within the general education program would provide students opportunities to integrate and practice what they learned multiple times, as well as develop higher levels of learning. Freshman experience courses, for example, might introduce all new students to basic information literacy skills, so faculty who teach subsequent general education courses have opportunities to build on this foundation. Including capstone courses in the humanities, natural sciences, and social sciences and/or an overall general education capstone course would allow students to focus on integrating what they have learned.

Sometimes faculty are surprised by their general education alignment matrix. Look at the alignment matrix in Figure 3.3, pretending that this program has only five outcomes and four courses which students take in alphabetical order (A, B, C, and D). Does this campus offer a cohesive general education curriculum?

*Alignment of General Education Programs*



Less Cohesive Program

| *Course* | *GE Outcome 1* | *GE Outcome 2* | *GE Outcome 3* | *GE Outcome 4* |
|---|---|---|---|---|
| English 100 | I, D | | | |
| History 101 | D, M | I, D, M | | |
| Biology 100 | D | | I, D, M | |
| Sociology 100 | D, M | | | I, D, M |

Introduce; D = Develop; M = Mastery

Figure 3.3

General Education Alignment Matrix Example

| *Course* | *GE Outcome 1* | *GE Outcome 2* | *GE Outcome 3* | *GE Outcome 4* | *GE Outcome 5* |
|---|---|---|---|---|---|
| A | I, D | I, D | | | |
| B | D | | | D | |
| C | D | | | | I |
| D | D, M | | | D, M | M |

The first outcome in Figure 3.3 is well-integrated into the general education program. Faculty introduce students to it in the first course, provide development and practice with feedback in every course, and expect students to demonstrate mastery at the end of the general education program.

Outcome 2 is introduced and developed in one course, but students do not systematically improve beyond this course nor demonstrate mastery within the program. This is fine if students' majors provide subsequent opportunities for development; otherwise it appears to be a problem. Campus faculty can determine this.

Outcome 3 was forgotten in the curriculum, and you might think this never happens, but I have seen it in practice. A campus might have a broad communication goal that includes writing, reading, speaking, and listening, but an examination of the curriculum might reveal that no instruction or feedback is provided for one or more of these skills. Other goals or outcomes might share this problem. For example, Emporia State University (2001) discovered that none of its general education courses addressed

their goal related to developing "a commitment to scholarship, intellectual curiosity and life long learning" (Events During 1998-1999 section).

Outcome 4 is fairly well integrated into the curriculum, but it was never introduced. Perhaps faculty know that incoming students do not need an introduction, and this assumption could be verified by a simple assessment when students begin Course B. If students do well on this assessment, the present curriculum is reasonable. If not, the faculty should determine where the introduction will occur.

Outcome 5 is introduced and students demonstrate their mastery in Course D, but students are never given opportunities to learn more, practice, and receive corrective feedback. For example, faculty may lecture students on speaking or scientific reasoning, but they may not provide students formative feedback on their ability to give a speech or to analyze a phenomenon from a scientific perspective. Most students require more than just an introductory lecture to develop and retain such skills.

## Pedagogy and Grading Alignment

Learning-centered teaching requires careful attention to the alignment of learning outcomes with pedagogy and grading. Traditional lectures, reading assignments, and objective exams might serve surface-level learning well, but may not support some aspects of deeper learning. In addition, teaching methods and curriculum structures that used to work may not be optimal for the wide variety of students in our classrooms today. *We* have the responsibility to help our students learn, and this might require changes in how we design courses.

### Pedagogy

Decades of research in higher education and in cognitive science have allowed us to identify characteristics of the teaching and learning environment that support deep and lasting learning. Researchers at the Berger Institute (n.d.) at Claremont McKenna College review this literature and summarize nine learning principles:

- The single most important variable in promoting long-term retention and transfer is "practice at retrieval"—learners generate responses, with minimal retrieval cues, repeatedly, over time.
- Less is more, especially when considering long-term retention and



- Varying learning conditions makes learning more effortful but results in enhanced long-term retrieval.
- Learning is generally enhanced when learners arc required to take information that is presented in one format and "re-represent" it in an alternative format.
- New information learned depends heavily upon prior knowledge and experience.
- Learning is influenced by our students' as well as our own epistemologies (theories about learning).
- Experience alone is a poor teacher.
- To promote in-depth understanding, avoid passive learning situations where a lone teacher mostly lectures while learners take notes.
- The process of remembering influences what learners will and will not remember in the future.

transfer. (g 2).

These principles provide an empirical foundation for the cohesive curriculum that offers students repeated opportunities to remember, expand, and use their learning in a variety of contexts. Students should be expected to communicate well, think critically, and use what they have been learning throughout the curriculum—not just in the courses that satisfy specific general education requirements; and they should learn how to learn. Faculty should engage students in active learning opportunities that promote the establishment of links between previous and new learning and the development of deep, conceptual understanding.

Feedback is crucial. One does not improve just by doing something. Imagine you have been told to shoot basketballs through a hoop that is ten feet away. Someone requires you to use a blindfold and earplugs, then leads you to a basketball court. The person keeps passing you balls, and you throw them again and again. Without any feedback, your basketball skills will not improve. However, take away the blindfold and the earplugs, and Your shooting accuracy can improve because you can see the target and you can see and hear the "swish" as the ball goes through the hoop. Sometimes the environment provides the feedback that the learner needs, as in the

basketball example, but often the instructor must provide the feedback. As will be seen in Chapter 5, grading rubrics can be used to give effective feedback and save faculty grading time.

The concept that "less is more" is a lesson many experienced faculty have learned the hard way. They may begin their teaching careers as walking encyclopedias, and they want to somehow transmit that entire encyclopedia into the head of each of their students. Frustrated and disappointed, they recognize that their graduate-level understanding of what they're teaching is inappropriate and impossible for their general education students. The undergraduates do not have the necessary background or experience to make sense out of everything, and there is simply too much to memorize. Faculty learn that the "less is more" approach actually improves learning. They begin each class period with two or three learning outcomes for the day, and students hear about those things, practice them, discuss them, and leave the room understanding them.

Most faculty teach the way they were taught, and this may not optimize learning for the students in their courses today. According to Halpern and Hakel (2003), "ironically (and embarrassingly), it would be difficult to design an education model that is more at odds with the findings of current research about human cognition than the one being used today at most colleges and universities" (pp. 37-38). The active learning classroom is different from the typical lecture classroom, and doing it well requires some risk taking and proficiency in an array of techniques. An important active learning principle is that students don't just do something—they learn something. Occasionally, the class seems noisy or out of control, but the effective teacher has carefully thought through each activity and assignment so that students consolidate and extend their learning.

To use class time effectively, faculty motivate their students to complete homework, such as reading assignments, before coming to class so that class time can be spent working with the material, not learning about it for the first time. This often is a challenge in general education courses, and even some courses for majors, but we want our students to develop lifelong learning skills that will assist them during school and after graduation. Some faculty find that setting expectations early and using learning journals, short writing assignments on the readings, study groups, or quizzes helps to motivate students to get their first exposure to course materials before coming to class.



Each course has explicit learning outcomes, and the faculty member organizes the course to facilitate mastery of those outcomes by deciding what students should do, how they should receive formative feedback, and how they should be graded. Figure 3.4 illustrates the planning for two course outcomes.

Figure 3.4

Course Planning Grid for Two Course Outcomes

| *Course Outcome* | *Activity* | *Feedback and Grading* |
|---|---|---|
| Students learn to give effective oral presentations. | Students hear a lecture on effective speaking and develop two oral presentations: one to summarize key concepts in a chapter section and one to describe how a theory from this course could be applied to an event in a recent newspaper article. Immediately prior to each speech, they provide an outline of their presentation to everyone in the class. | Students are given peer feedback and instructor feedback on each presentation using a rubric that describes the content and delivery style. Each presentation counts as 5% of the course grade. |
| Students learn to design experiments to test theories. | Students participate in a series of demonstrations designed to show how research hypotheses are generated and tested to evaluate psychological theories. Students develop hypotheses and aggregate data to reach conclusions. After each of these, the class, as a whole, discusses how the theory was translated into testable predictions about observable phenomena. | Students write short reports on two of the demonstrations and identify how the theory was tested and what was learned. In addition, the final exam requires students to develop and explain a simple experiment to empirically examine a theory learned in the course. The reports count as 5% of the course grade, and the exam question counts as 10% of the final exam. |

## Faculty Development

If you want to learn more about active learning and learning-focused instruction, much help is available. Perhaps your campus has a faculty development program that provides support. If not, you might consider inviting some colleagues to join you in a collaborative learning group to explore the teaching-and-learning literature. There likely is a journal dedicated to the scholarship of teaching in your discipline, and many of these are linked to a web site maintained at Indiana University Bloomington (Subject and Area Librarians Council, 2001-2005). In addition, dozens of excellent books have been written on teaching and learning. Faculty reviews of a variety of these books are published in *Exchanges: The Online Journal of Teaching and Learning in the CSU (http://www.exchangesjournal.org).*

## Grading

Grading, whether by letter grade or narrative summary, can be a powerful tool for promoting student learning. Grading serves a number of purposes:

- Exams and assignments communicate to students what we want them to learn.
- Exams and assignments can provide opportunities for learning. For example, preparing for comprehensive exams helps students consolidate learning, and writing critical analyses engages students in thinking about course concepts.
- Exams and assignments can be used to provide formative feedback to students.
- A series of exams and graded assignments motivates students to keep up with the coursework, reminds them that learning is important, and rewards them for learning.
- Faculty can use embedded assessment to improve courses and programs by reviewing student work on exams and assignments.

Grading procedures should align with course outcomes, and course grades should indicate the extent to which students have mastered them. Figure 3.5 summarizes the analysis of the grading components for one course with four learning outcomes. Each of the graded components contributes from 5%-30% and each of the four outcomes counts from 21%-31% of the course grade. An *S* indicates that the grading procedure



is at the surface level. This is usually done using objective exams that require students to recognize or recall specific facts. A *D* indicates that the grading procedure requires students to demonstrate deeper levels of learning. For example, students may be required to explain, apply, analyze, synthesize, or evaluate something using what they have learned.

**Figure 3.5**

Grading Alignment Matrix I*

| *Grading Element* | *Grading Weight* | *Week* | *Course Outcome 1* | *Course Outcome 2* | *Course Outcome 3* | *Course Outcome 4* |
|---|---|---|---|---|---|---|
| Quiz 1 | 5 | 2 | S (3) | S (2) | | |
| Homework 1 | 5 | 3 | D (2) | D (3) | | |
| Quiz 2 | 5 | 5 | 5(1) | S (3) | 5(1) | |
| Homework 2 | 5 | 7 | D (2) | D (3) | | |
| Community Service Report I | 5 | 7 | D (2) | D (3) | | |
| Midterm | 15 | 8 | S, D (7) | S, D (8) | | |
| Lab Report | 5 | 9 | D (1) | | D (2) | D (2) |
| Oral Report | 5 | 9 | | | D (5) | |
| Homework 3 | 5 | 11 | D (2) | | | D (3) |
| Quiz 3 | 5 | 13 | | S (1) | S *(2)* | S (2) |
| Group Project | 10 | 15 | | D (3) | D (3) | S (4) |
| Community Service Report II | 5 | 15 | | D (2) | D (1) | D (2) |
| Final Exam | 25 | 16 | S, D (4) | S, D (4) | S, D (8) | S, D (9) |
| Total | 100 | | 24 | 32 | 21 | 22 |

S = Surface-level learning is assessed.

D = Deep learning is assessed.

*Numbers in parentheses are the percentage of the course grade for each outcome.

The faculty member who teaches the course described in Figure 3.5 has 13 graded activities that assess both surface and deep learning, and they appear to be aligned with the course learning outcomes. Brief quizzes at the surface level focus students on key concepts, and the homework assignments, community service reports, oral reports, and group projects provide opportunities to practice and receive feedback on deeper understanding of the material. The midterm and final, together worth 40% of the grade, measure both surface and deep learning; and each is preceded by relevant activities to help students prepare for the larger exams. The assignments are spread across the semester to encourage ongoing student engagement, and the most important learning outcome (judging by its weight in the course grade) is introduced early and practiced throughout the semester. In reviewing a grading alignment matrix, faculty might ask:

- Do the course grading procedures give appropriate weight to each of the learning outcomes? (For example, should the second outcome in Figure 3.5 generate the highest proportion of the course grade?)
- Are outcomes assessed at an appropriate level? (For example, is too much of the course grade determined by surface-level learning?)
- Are students provided with sufficient formative feedback to benefit from mistakes before the final exam? (For example, are the exams and assignments timed to give students time to reflect on and learn from the feedback? Does the feedback help students develop deep learning?)
- What is the intended function of each exam and assignment and does it serve this function? (For example, if the faculty member is using quizzes to motivate students to keep up with reading assignments, is this strategy working?)

Examine the grading alignment matrix summarized in Figure 3.6, and ask if the grading procedures align with course outcomes. Assume that all four outcomes require some deep learning.

Your first response to Figure 3.6 may be that too few grading elements arc used. When I was an undergraduate, admittedly quite a few years ago, this was the typical grading scheme, and I am confident that some faculty use something like it today. Faculty teaching large sections without assistance cannot be expected to develop and provide feedback using dozens of



Figure 3.6

Grading Alignment Matrix II

| *Grading Element* | *Week* | *Grading Weight* | *Course Outcome 1* | *Course Outcome 2* | *Course Outcome 3* | *Course Outcome 4* |
|---|---|---|---|---|---|---|
| Midterm | 8 | 30 | S (15) | S (15) | | |
| Term Paper | 15 | 20 | | D (15) | | D (5) |
| Final | 16 | 50 | S (10) | S, D (10) | 5 (15) | S (15) |
| Total | | 100 | 25 | 40 | 15 | 20 |

procedures, and the real question is if the procedures align with course outcomes and promote student learning.

An examination of Figure 3.6 demonstrates that Outcome 2 receives the most weight for the course grade (twice the weight given to outcome 4), which may be reasonable if it has the highest priority for this course. In addition, Outcomes 1 and 3 are not graded at the expected, deep level. Course grades will not indicate deep learning for these outcomes, and students who focus on exams will be more likely to study for surface-level learning. In addition, much of the grading for Outcomes 2 and 4 is at the surface level, suggesting a similar problem. The grading procedures do not appear to provide early formative feedback, especially for deep learning, but ungraded exercises may be embedded in the course to serve this function. Courses must be considered as a whole. An array of active learning exercises can even be integrated into huge course sections, reducing the need for reliance on graded components to provide necessary feedback.

## Institutional Alignment

Learning does not happen just in courses. Institutions, as a whole, should support the general education program. Advisors should provide timely, useful advice to students about options in the general education program, the order in which courses should be taken, and course sections that seem particularly suited to their needs or interests. Tutoring center staff should be familiar with general education learning outcomes, as well as individual course outcomes, and they should tailor their services to help students meet these expectations.

Faculty and staff should be particularly aware of *gateway* or *roadblock* courses that frequently challenge students and result in failing grades, and they should work together to facilitate student success. "Taking pride in `flunking out' large numbers of students is a distant memory on most campuses," (Swing, 2004b, p. ix), and we want to solve this problem by finding ways to help more students meet our expectations. First-year experience courses generally focus on reducing student attrition, but a single course is unlikely to solve everything.

The cocurriculum can support a variety of general education learning outcomes. For example, student government, clubs, social organizations, and athletic, political, and cultural events provide opportunities to develop communication, leadership, collaboration, civic engagement, and ethical decision-making skills. They present a natural laboratory for applying what students learn in a variety of general education courses, and they can provide opportunities to develop multicultural awareness and an understanding of cultural, social, political, and economic issues.

Aligning the work of student affairs and academic affairs staff requires deliberate effort, especially when these units are functionally independent within the institution. Leaders should find ways to institutionalize collaboration. For example, on many campuses librarians are assigned to particular departments and programs, and part of their responsibility is to reach out and work with relevant faculty to support the development of information literacy skills. The campus should host events to foster collaboration between and among faculty, staff, and administrators concerning how they can work together to support learning in the general education program. An annual campus-wide assessment retreat may be instrumental in initiating collaboration.

Faculty and staff development programs should include a focus on support needs for general education, and program decisions should be affected by assessment findings. For example, if an assessment resulted in the conclusion that students were taking writing-intensive general education courses before completing basic college composition requirements or that students were not meeting faculty expectations for the development of ethical reasoning, faculty and staff development professionals could target these problems.

One indicator of campus commitment to general education is the types of faculty who contribute to it. On some campuses the full range of faculty, including senior faculty, teach in the general education program,but on others general education courses are assigned to adjunct faculty and new



faculty. In my experience, some of the best teaching in general education is by dedicated, long-term lecturers; but if senior faculty denigrate their contributions and believe that general education teaching is inferior and to be avoided, the wrong message is sent. A well-taught general education course can change the course of students' lives. Most of us know students who changed majors or added a minor after taking an especially interesting general education course. Faculty of all ranks should take advantage of this opportunity to share their discipline with a new audience of potential enthusiasts.

We are in the age of learning-centered instruction, and many campuses claim to be learning-centered. Recognition and reward systems and campus policies should align with this vision. Are faculty and staff who make extraordinary contributions to student learning in the general education program publicly honored and respected by peers and institutional leaders? Do personnel decisions recognize such efforts? Are faculty expected to demonstrate effective teaching before they are eligible for tenure, promotion, or ongoing classroom assignments? Are staff expected to demonstrate positive impact on students when they are reviewed for retention, promotion, or salary increments? Are administrators evaluated, in part, on their active and vocal support for student learning? If yes, the campus is aligned to foster student success.

## The DEEP Project

An interesting study of institutional effectiveness is the DEEP (Documenting Effective Educational Practice) project conducted by the Center for Postsecondary Research at Indiana University (Kuh, Kinzie, Schuh, Whitt, & Associates, 2005). Project staff identified 20 colleges and universities using two major criteria. Compared to similar institutions, DEEP campuses have higher than expected graduation rates and higher than expected scores on the National Survey of Student Engagement (NSSE). In effect, these campuses, compared to similar campuses, have students who report being more engaged in their learning and who are more likely to complete their degree. In addition, researchers wanted to examine a variety of campuses. Their sample included public and private, residential and commuter, research-intensive and undergraduate-intensive, and large and small institutions. Two are historically black campuses, two are Hispanic-serving, two are women's colleges, and one is a men's college.

What do these effective campuses have in common? Researchers spent time on each campus attending classes and meetings, interviewing campus representatives, reviewing documents, and evaluating the campus environment. Kuh and Associates (2005) are careful to point out that what works on one campus may not work on another and that each DEEP campus was unique, but they found "six features that appeared to foster student engagement and persistence" (p. 24):

- A "living" mission and "lived" educational philosophy
- An unshakeable focus on student learning
- Environments adapted for educational enrichment
- Clearly marked pathways to student success
- An improvement oriented ethos
- Shared responsibility for educational quality and student success (p. 24)

DEEP campuses have a clearly defined mission or philosophy, and everyone on campus "lives" it. They have a shared vision that guides decision-making and priorities. When asked about the campus, representatives of DEEP campuses tend to refer to their shared mission; it is salient in their day-to-day decision-making. For example, Alverno College's mission permeates the campus: "Alverno exists to promote the personal and professional development of women" (Kuh, et al., 2005, p. 29). Representatives of Fayetteville State University share the mantra of "meeting students where they are" (p. 35), and faculty at Longwood University designed their general education program for "preparing citizen leaders for the common good" (p. 39). The University of Michigan's mission is "to serve the people of Michigan and the world through preeminence in creating, communicating, preserving, and applying knowledge, art, and academic values and in developing leaders and citizens who will challenge the present and enrich the future" (p. 48). According to Kuh and his colleagues, taking their missions seriously helped these DEEP campuses promote student engagement and persistence.

DEEP institutions are learning-focused: "Student learning and personal development at DEEP schools is a priority. Though this might *seem* to be a simplistic and hardly revolutionary statement, DEEP schools are



special precisely because their commitment to this priority is authentic and they pursue it with a high degree of effectiveness" (Kuh, et al., 2005, p. 88). Researchers concluded that these campuses share four characteristics related to student learning. They value undergraduate learning, engage students through active learning, share "a cool passion for talent development" (p. 65), and make time for students. Institutional commitment to undergraduate learning runs deep, and these campuses provide an array of enriching activities and support mechanisms, such as honors programs, tutoring centers, technology centers, and interdisciplinary courses. Faculty believe in their students' capacity to learn, they provide extensive feedback to help students develop, and they diligently provide support for multiple learning styles. They are available to students and encourage interaction inside and outside the classroom, in person and via email. In addition, DEEP campuses are careful to recruit faculty who are dedicated to student learning, and they support faculty in their teaching by providing services, such as faculty development programs and internal grants to support teaching innovations.

DEEP institutions adapt environments to support learning. For example, classrooms are well designed, and undergraduate services are easily accessible. Students are encouraged to stay on campus, even if they are commuters. Campuses provide places for students to study, to interact outside of class, to exchange and discuss ideas, to exercise, to eat, and to relax. Residence halls may be organized as living-learning communities, and groups of students may take classes as a cohort. These institutions develop mutually beneficial town-gown relationships, and students, as well as faculty, provide community service and use the community as a laboratory and internship site.

DEEP institutions help students understand campus expectations and opportunities. They acculturate new students into the institution and its mission, and they communicate high standards as well as welcoming support. Students feel as if they belong on campus, and they are empowered to take advantage of available services. For example, Wofford College invites newly admitted students to "join" Wofford and become part of its family. Gonzaga University hosts a Gonzaga Experience Live (GEL) program for prospective students—a weekend featuring campus and community tours, samples of academic experiences, an overnight dorm stay with a current student, and social activities. Participants learn about student clubs, the campus mission, and the nature of the Gonzaga

experience. Most DEEP colleges have summer transition programs for at-risk students and first-year experience programs to ensure that all students feel welcome, understand what is expected of them, know how to take advantage of campus services, and become part of the campus community. Campus staff take the advising role seriously, and they monitor student progress and reach out proactively to help students who are experiencing academic difficulty.

"DEEP schools seem to be in a perpetual learning mode—monitoring where they are, what they are doing, where they want to go, and how to maintain momentum toward positive change" (Kuh, et al., 2005, p. 133). This is assessment at its best, and it requires administrative and academic leaders who are willing to make hard decisions to prioritize learning, even when budgets are tight. Professionals on DEEP campuses recognize that any complex system is imperfect. They're willing to investigate their impact, and they're flexible enough to experiment with new approaches when their criteria aren't met.

The last characteristic noted by the research team was that DEEP campus professionals share responsibility for student success. They respect the contributions of others, and they recognize the value of ongoing collaboration between academic and student affairs professionals. Faculty, administrators, and staff—both individually and collectively—support student development. "DEEP campuses benefit from large numbers of caring, supportive individuals who perform countless daily acts of kindness and thoughtfulness that make students feel wanted and important" (Kuh, et al., 2005, p. 172).

As you consider the alignment of your campus' courses, curriculum, cocurriculum, policies, and activities with general education outcomes, ask if your campus exhibits some of the learning-centered characteristics of DEEP campuses. If you conduct assessment studies and are disappointed with results, the DEEP project may provide some provocative ideas for responding to these findings.

## Promoting Student Engagement in Community Colleges

The DEEP project examined four-year colleges and universities and used the NSSE to identify campuses that actively engage their students. The Community College Survey of Student Engagement (CCSSE) is the community college version of the NSSE, and its results are summarized in an annual report. Authors of the 2005 report, *Engagement by Design: 2004 Findings* (CCSSE, 2005), acknowledge that community colleges face serious challenges, including tight budgets and students who work and have families, attend college part-time, and vary considerably in their academic background and goals; but "these challenges do not make student engagement impossible. They simply indicate that student engagement is not likely to happen by accident. Engagement, therefore, must be intentional. It must happen by design" (CCSSE, 2005, p. 2). CCSSE staff take this responsibility seriously:



> And this work is essential. Community colleges tend to serve students who have the fewest options; if they do not succeed in their community college, students likely will not have access to productive jobs, further education, or any of the benefits these next steps bring. Community colleges, moreover, are not just preparing students for their own benefit. They are preparing students to contribute to their neighborhoods, the nation, and the world. Providing effective learning experiences is critical for both the students themselves and our society, which increasingly relies on every individual to participate productively in our economy, our democracy, and the global village. (p. 3)

The CCSSE can be a powerful tool for monitoring and strengthening student engagement in their educations, and this should lead to increased learning. The authors of *Engagement by Design* (CCSSE, 2005) describe four strategies to expand student engagement and provide campus examples for each strategy:

- *Strategy 1.* "Engage early; engage often" (p. 6). Community colleges can't wait for students to become engaged; they must be proactive. For example, Tallahassee Community College sets up information tents at the beginning of each term to help students locate classes and support services, office staff wear "Ask Me" buttons, and faculty and staff create stations in classroom building lobbies with refreshments, maps, and willing assistance.
- *Strategy 2.* "Stress academic advising" (p. 7). CCSSE results indicate that more than one-third of community college respondents rarely or never see an academic advisor, and nearly half fail to make use of career counseling services. Unfortunately, this puts these students at risk because goal setting and developing a concrete strategy for meeting long-term goals help students succeed. Campuses should be proactive. For

example, Sinclair Community College provides counseling and support to encourage students to develop a "Student Success Plan," which has resulted in increased student persistence and success.

- *Strategy 3.* "Emphasize effective developmental education" (p. 7). Nationally, about half of all entering community college freshmen are not prepared for college-level work, and developmental education helps them develop the skills they need to succeed in school, at work, and in the future. For example, Prince Edward Community College requires developmental work for students who need to develop reading, writing, and computational skills.
- *Strategy 4. "Redesign* educational experiences" (p. 9). Faculty can engage students in and out of the classroom in many ways, such as using active learning techniques during class, assigning work that promotes reflection and deep learning, requiring group projects, and providing opportunities for students to join learning communities. For example, Northwest Vista College's weekend college combines two or three disciplines and offers team-taught, multidisciplinary courses that students take as a learning community. Students work together on final projects that integrate what they learn each semester.

## Efforts to Increase Student Retention and Success

Because of concern about student retention, general education programs are often given the added responsibility of helping students learn to succeed in college. Habley and McClanahan (2004), representing ACT, analyzed survey data from more than 800 two- and four-year colleges and universities to identify factors related to student retention. When asked to identify three effective campus retention practices, at least 10% of campus representatives identified freshman seminars (13%), tutoring programs (13%), advising interventions for special student subgroups (13%), and required placement testing programs (10%). Based on a review of all their findings, Habley and McClanahan recommend that campuses:

- Designate a visible individual to coordinate a campus-wide planning team.



- Conduct a systematic analysis of the characteristics of your students.
- Focus on the nexus of student characteristics and institutional characteristics.
- Carefully review the high impact strategies identified in the survey.
- Do not make first-to-second-year retention strategies the sole focus of planning team efforts.
- Establish realistic short-term and long-term retention, progression, and completion goals.
- Orchestrate the change process.
- Implement, measure, improve! (Executive Summary section)

In short, they recommend that campuses systematically plan and coordinate their interventions, align programs with specific goals, and use assessment to improve their efforts—good advice for any initiative.

Many strategies have been used to promote student retention and success, and assessment is essential to verify that interventions have the desired impact. For example, a research team at the University of Mississippi empirically verified that course absences among first-year students are directly related to their grades, and they created a pilot Absence-Based Intervention Project. Faculty who taught freshman English reported students with at least two absences, and graduate students intervened by calling or visiting identified students and telling them about available support services. Compared to a control group of students who were not contacted, project freshmen earned significantly higher grades. Based on these findings the campus expanded the program and anticipates continuing success (Anderson, 2004).

The most common intervention is a first-year experience course, and these courses have emerged all over the country. They specifically target the development of the knowledge, skills, and values required for sustained academic success.

### Types of First-Year Experience Courses

Barefoot (1992, cited in Tobolowsky, Cox, & Wagner, 2005) identified five types of first-year experience courses:

1. *Extended orientation seminar.* Sometimes called a freshman orientation, college survival, college transition, or student success course. Content likely will include introduction to campus resources, time management, academic and career planning, learning strategies, and an introduction to student development issues.

2. *Academic seminar with generally uniform content across sections.* May be an interdisciplinary or theme-oriented course, sometimes part of a general education requirement. Primary focus is on academic theme/discipline but will often include academic skills components such as critical thinking and expository writing.

3. *Academic seminars with variable content.* Similar to previously mentioned academic seminar except that specific topics vary from section to section.

4. *Pre professional or discipline-linked seminar.* Designed to prepare students for the demands of the major/discipline and the profession. Generally taught within professional schools or specific disciplines.

5. *Basic study skills seminar.* The focus is on basic academic skills such as grammar, note taking, and reading texts. Often offered for academically underprepared students. (pp. 7-8)

Of course, no typology of academic programs can be complete, and campuses have created first-year experiences that are combinations of some of the above approaches. Experiences at nearly 40 campuses are described in the third volume of the First-Year Experience Monograph Series, *Exploring the Evidence: Reporting Research on First-Year Seminars* (Tobolowsky, Cox, & Wagner, 2005).

### Alignment of First-Year Experience Courses

Faculty and staff who contribute to first-year experience programs may be working outside of their primary expertise, and assessment is essential to verify that their interventions have the desired impact. Regardless of course structure, alignment is also a concern. To test the alignment of first-year courses with campus intentions and to understand how these courses change over time, faculty on some campuses develop *course diaries:*



> A course diary documents the content of a course including assignments, texts used, subjects discussed, handouts distributed, and any other pertinent information and supplies a record of overall student performance and expectations. Historical archives of course records also help faculty members guard against "content creep"—the addition of more content with each new offering of the course—and "curriculum drain"—the elimination of content related to the course goals and objectives.... First-year programs that have used course diaries report greater control over student outcomes, increased student retention, and more involvement from courses typically relegated to low-priority status. (Scheffel & Revak, 2004, pp. 17-18)

In addition, Scheffel and Revak (2004) report that the use of course diaries encourages faculty to be reflective about their teaching and helps them maintain high standards that reduce grade inflation.

## Alignment Questions

As you and your colleagues consider the alignment of various factors with your general education program, you might like to ask these broad questions:

### Curriculum Cohesion

- Is the general education curriculum cohesive? Does it systematically provide students multiple opportunities to synthesize, practice, and develop increasingly complex ideas, skills, and values?
- Are students given opportunities to find connections between the disciplines and to consolidate their learning?
- Do all general education courses have explicit course learning outcomes that align with program-level outcomes?
- Are needed developmental courses, including a first-year experience course, available and required?
- Should some general education courses be prerequisite to others? For example, should students take mathematics before science courses or should they take English courses focusing on reading and writing before

history courses? Does a check of transcripts demonstrate that students without these prerequisites are at a disadvantage?

- Are prerequisites strictly

enforced?

### Pedagogy and Grading

- Does the pedagogy in general education courses align with course learning outcomes?
- Do students receive formative feedback on program learning outcomes throughout the general education program?
- Are students actively engaged in the general education program?
- Do faculty use grading as a tool to promote student attainment of course outcomes?
- Do course grades reflect the extent to which students master course outcomes?
- Do course exams and assignments measure each outcome at the appropriate level (surface vs. deep learning)?

### Support Services

- Do general education advisors take a personal interest in each student's development?
- Do students understand general education requirements and options?
- Do students develop personal plans to attain their academic and career goals?
- Are tutoring center staff, librarians, and others on campus aware of general education course and program outcomes? Do they collaborate with faculty to provide needed support?
- Does the cocurriculum provide enrichment activities that support general education outcomes?
- Do faculty and staff development programs support contributions to general education and address needs identified through the assessment of the general education program?



### General Education Instructors

- Does the campus recruit faculty who are learning-centered and eager to contribute to the general education program?
- Are general education courses taught by an appropriate array of faculty, including senior faculty?
- Do campus recognition and reward systems encourage contributions to the general education program?

### Learning-Centered Campuses

- Does your campus have a general education mission or philosophy that everyone shares?
- Does your campus have an "unshakeable" focus on student learning in the general education program?
- Does your general education program have adequate, easily accessible space for advising, teaching, studying, and interacting?
- Does your general education program include ties to the community?
- Do faculty and staff who work with general education students believe in students' capacity to learn and provide opportunities for students who learn in different ways?
- Is learning in your general education program assessed, and have you made improvements in the program based on assessment findings?
- Does the campus routinely analyze the retention and success of students who vary in systematic ways, such as age, ethnicity, gender, or income, to identify groups of students who require special assistance?
- Do faculty and staff accept a shared, mutually respectful responsibility for helping general education students meet your standards?

## Alignment Through Course Certification

In the past, most campuses relied on individual faculty and departments to determine what was taught in general education courses, but we have moved to a learning-centered model that is based on a shared, campus-wide

understanding of what students should learn. Individual faculty determine how they teach, what their students do, and how grades are assigned; but everyone who teaches a general education course is expected to help students meet agreed-upon criteria. Individual faculty and departments might augment the general education outcomes with some of their own. For example, a general education course might also serve as an introduction for majors, but it also includes the relevant general education outcomes.

The general education program and the array of approved courses sometimes has been stable on a campus for decades, and faculty who teach these courses may be accustomed to more freedom than this model provides. Substantial differences in stated or implied learning outcomes for the same course may be ignored, tolerated, or even encouraged. The time has come for colleges and universities to take collective responsibility for general education, its expectations, and its courses so that students experience a cohesive, integrated program. At the same time, campuses should respect faculty autonomy to manage their own courses in ways that meet student needs.

Alignment specifies which outcomes will be introduced and supported in each general education course. Many campuses also set additional criteria for general education courses. For example, the University of Montana (2002) sets outcomes and criteria for each general education segment. Here are the criteria for courses that meet their natural sciences requirement:

1. Courses should systematically develop principles for comprehension of a broad class of physical phenomena and should demonstrate the methods scientists use to gather, validate, and interpret data.

2. Lab courses should include specific examples of some typical activities, instruments, and materials used, and a description of the relationship of lab or field work to the course content for lab courses.

3. Applied and narrowly focused courses should include significant and coherent attention to basic principles and theory or the application should follow a prerequisite natural science course that has exposed those theoretical foundations.



4. Courses should not he mainly descriptive or have as their primary objective the development of a professional vocabulary. (Criteria for Courses in Perspective VI: Natural Sciences section)

## Course Certification

Most campuses use a formal certification process to ensure course alignment with general education outcomes. A committee, generally composed of faculty, sometimes augmented by an administrative representative, usually reviews proposals to determine how well courses align with general education expectations. Campuses may have one committee or multiple committees, each charged with oversight of a segment of the general education program. Often this committee makes a recommendation to a relevant academic administrator, such as an undergraduate dean or provost, or to a council, such as an academic senate, for final course approval.

For example, San Francisco State University (1999) developed learning outcomes for its oral communication requirement, and any department wishing to offer a new or revised general education course to meet this requirement must petition the Segment I Committee that deals with basic skills. The petition includes a syllabus that has already been approved by the University Course Review Committee and discussion of how the course will meet the specified criteria, including the alignment of instruction, assignments, and grading with relevant learning outcomes. The proposal is reviewed by the Segment I Committee, which makes a recommendation to the General Education Committee, and the General Education Committee makes a recommendation to the dean of Undergraduate Studies for final determination. Departments can appeal to the General Education Committee if they are not satisfied with its recommendation.

San Jose State University takes the course certification process seriously, because it is the foundation for the embedded assessment of their general education program. With extensive collaboration, learning outcomes were developed for each general education requirement, course review criteria were created, faculty development and support mechanisms were implemented, and campus leaders reviewed hundreds of course proposals (Anagnos, Dorosz, & Wheeler, 2002). For example, courses meeting the upper-division Self, Society, & Equality in the U.S. requirement have four learning outcomes. Students who complete the course should be able to:

- describe how religious, gender, ethnic, racial, class, sexual orientation, disability, and/or age identity are shaped by cultural and societal influences in contexts of equality and inequality;
- describe historical, social, political, and economic processes producing diversity, equality, and structured inequalities in the U.S.;
- describe social actions by religious, gender, ethnic, racial, class, sexual orientation, disability, and/or age groups leading to greater equality and social justice in the U.S.; and
- recognize and appreciate constructive interactions between people from different cultural, racial, and ethnic groups in the U.S. (San Jose State University, 2000, Student Learning section)

In addition, instructors who teach these courses must help students develop writing skills by providing feedback on both in-class and out-of-class writing (at least 3,000 words), and they must require students to apply the basic skills developed earlier in the general education program (e.g., reading, speaking, critical thinking, information literacy, and mathematics). Faculty must not rely only on lecturing. They are required to use active learning techniques and to include primary sources among course readings (San Jose State University, 2000).

Procedures for reviewing course proposals are described on the campus web site (San Jose State University, 1998). Departments wishing to propose a general education course submit a Course Certification Request Form, a course description (syllabus, learning outcomes, topic list, prerequisites), a discussion of assessment plans (which have been approved by the Office of Undergraduate Studies), and discussion of planned instruction (pedagogy, general information on instructor qualifications for all who might teach the course, and course coordination plans to ensure consistency across sections). The required assessment plan describes the nature of the course assignments, examinations, and assessment strategies that faculty will use to assess and improve student achievement. Course certification requests are reviewed by the relevant college curriculum committee and dean, the relevant general education advisory panel, and the Board of General Studies. The board negotiates changes, if required, and makes a formal recommendation to the provost, who makes the final determination. Although the process seems complex, it guarantees that faculty, department chairs, administrators,



and the Board of General Studies have a common understanding of how each course aligns with general education expectations for learning outcomes and embedded assessment.

### Course Recertification

Courses, once approved, may drift from their focus. New faculty might be assigned to teach them, new department chairs may not be aware of the responsibility to oversee the department's contributions to the general education program, or faculty might revise courses and lose track of commitments they made during course certification. Most faculty know, through the student grapevine or other paths, how courses in their major are being taught; but the general education program generally is so spread throughout the institution that it is impossible for anyone to be aware of what is happening in every course.

Campuses might require annual summaries from departments offering general education courses, but this might degenerate into a checklist that is routinely ignored because of workload demands on faculty, department chairs, and general education committees. An alternative solution is periodic review and recertification of courses. The cycle may be regular, such as every four or five years; or the first recertification may be required in three years, with subsequent reviews less often. Committees generally examine a narrative summary that responds to specific questions, syllabi, exams, and assignments to verify that the course continues to meet general education criteria. They also might ask for samples of student work at varying levels of performance, such as sample A/B papers, C papers, and D/F papers to verify that student performance and grading criteria align with general education expectations.

Faculty must be aware of course recertification plans so they can save copies of needed documentation. The certification usually is of the course, not the instructor, so departments need to accumulate the appropriate array of documents from all course sections. This should not be an involved process, but a friendly reminder and verification that all is going well. If any problems are identified, they can generally be solved through negotiation. If serious problems emerge and negotiation fails, courses can be decertified, but normally this is a rare event.

## Alignment Studies

A list of alignment questions were identified earlier in this chapter, and any of them could become the focus on an assessment study examining alignment in the general education program. For example, a research team might analyze syllabi to verify that course learning outcomes are specified and are consistent with general education expectations, or they might analyze transcripts to see if students take general education courses in the required order or to see if new prerequisites should be created. Student surveys, such as the National Survey of Student Engagement (NSSE; see http://www.indiana.edu/-nsse), might be used to examine student opinions about and experiences in general education courses. Campus records could be examined to see the range of faculty ranks among general education instructors. Focus groups could be used to investigate faculty perceptions of recognition and reward systems, the use of techniques to reach students who learn in different ways, or the degree of consensus on an overriding general education mission or philosophy. Surveys or interviews of campus professionals could identify how often student affairs and academic affairs representatives collaborate to support the general education program, and they also could examine perceptions of their effectiveness and support needs.

These alignment studies allow us to understand what is happening in our general education program, and results can be just as informative and transformative as assessing student learning. For example, uncovering curriculum alignment gaps can lead to curriculum improvements *before* student learning assessment data are collected. Discovering unreasonable course sequences can lead to a formalization of prerequisites within the program, and finding a lack of collaboration between academic and student affairs professionals can lead to finding forums for needed discussion.

Subsequent chapters in this book describe how to design and implement an assessment plan to examine the extent of student mastery of general education learning outcomes, but many of these same strategies could be used to focus attention on alignment. Systematic alignment of courses, pedagogy, grading, and institutional support should provide students the learning environment they need to succeed.