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ASSESSMENT, ACCOUNTABILITY, AND STUDENT LEARNING OUTCOMES

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INTRODUCTION

In the last fifteen years two trends have gained prominence throughout higher education: assessment and accountability. For various historical reasons, and the source of considerable confusion, both are erroneously referred to as "assessment." The first, "assessment for excellence," is an *information feedback* process to guide individual students, faculty members, programs, and schools in improving their effectiveness. Assessment instruments are designed to answer a wide range of self-evaluative questions related to one larger question: how well are we accomplishing our mission?

The second trend, "assessment for accountability," is essentially a *regulatory* process, designed to assure institutional conformity to specified norms. Accountability advocates, including especially state legislatures, to a considerable extent view colleges as factories and higher education as a production process (Astin, 1993, p.17), although there is widespread disagreement about what exactly they are supposed to produce, and about how to measure it (Ewell, 1997). Nevertheless, various *performance measures,* which attempt to measure institutional effectiveness, particularly with regard to fiscal efficiency and resource productivity, have been created and applied to public universities and colleges throughout the country.

Although the terms "assessment" and "accountability" are often used interchangeably, they have important differences. In general, when we assess our own performance, it's assessment; when others assess our performance, it's accountability. That is, assessment is a set of initiatives we take to monitor the results of our actions and improve ourselves; accountability is a set of initiatives others take to monitor the results of our actions, and to penalize or reward us based on the outcomes. They have very different flavors.

Although assessment efforts over the past dozen years have been largely focused on aggregate statistics for entire schools, accreditation review boards recently have been increasing pressure on institutions to actively engage departments and students in the assessment-learning-change cycle (Gentemann, 1994). If learning is our business, how well are we doing at all levels (assessment), and how can we demonstrate that to others (accountability)?

This increasing focus on assessment and accountability has powered a shift away from prestige-based concepts of institutional excellence, in which size of endowments, accomplishments or credentials of faculty, or types of programs, for example, were assumed to be indicators of institutional quality or effectiveness, and also away from curriculum-based models that emphasize what is presented, toward learning-based models which emphasize what students know and can actually do. The emerging measure of institutional excellence is how well institutions develop student talents and abilities, i.e., *student learning outcomes* (Astin, 1985, 1993, 1998).

The purpose of this paper is to provide an introduction to some of the relationships among assessment, accountability, and student learning, and to inform a discussion of these issues in the Western community. Section I describes in more detail the relationships between assessment and accountability; Section II discusses some of the current thinking about student learning and how to improve it; Section III discusses the role of assessment in improving student learning, and provides some examples; Section IV suggests possible directions here at Western for shifting institutional focus to student learning, and offers two recommendations.

I. ACCOUNTABILITY AND ASSESSMENT

A. ASSESSMENT FOR EXCELLENCE

"Assessment is not an end in itself but a vehicle for educational improvement." (AAHE, 1992). As shown in Figure 1, given the attributes of entering students, measurement of an array of student outcomes provides feedback about how well individual courses, programs, and the university as a whole are accomplishing their stated missions and goals. Assessment aims at the continuing improvement of student development, and is generally consistent with a "value-added" concept of education; note that the rationale for having better programs is to ensure better student outcomes.

As shown in Figure 1, the collection of assessment information is only the first step in a four-part process. To be useful, it must be analyzed and reflected upon by appropriate decision makers, and then used to design and apply changes. In each iterative cycle, modified programs are then reassessed and readjusted, continually improving effectiveness.

Even at the departmental level, new guidelines for program reviews are shifting the focus away from a preoccupation with departmental assets or curricular structure and more toward "how resources are used, the consequences of these uses, and the way in which students actually experience the major" (Gentemann, 1994).

Fig. 1:
Assessment for Excellence
An Information Feedback Process

Student Inputs → WWU Environment → Student Learning

WWU Environment ← Program Changes ← Department & Program Reflection ← Student Learning

Western's recent accreditation review indicated that the Office of Institutional Assessment and Testing (OIAT) must do more to deliver useful assessment information to academic units, and individual academic units must do more to integrate assessment practices into their programs. The bold arrows in Figure 1 show the current flow of assessment data at Western; the dotted lines show the parts of the feedback loop which need further development. These are discussed in more detail in Section III.

B. ASSESSMENT FOR ACCOUNTABILITY

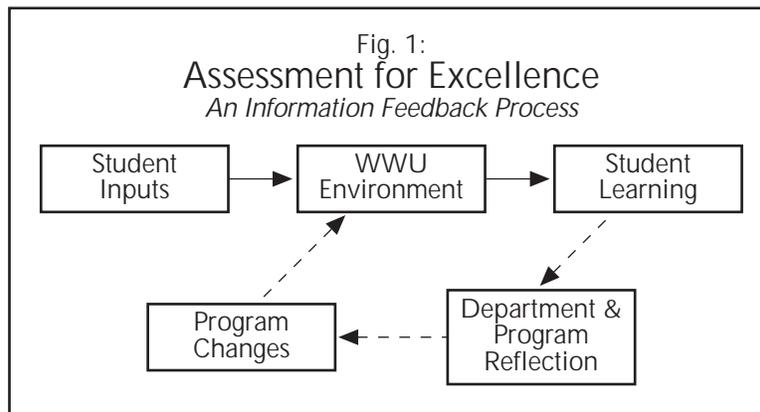Accountability measures are an attempt to assert more direct public control over higher education, as shown in Figure 2. They are primarily concerned with resource allocation and fiscal efficiency. While it is completely appropriate for those who pay the bills—taxpayers, parents, and students—to evaluate critically what they get for their money from public education, performance measures as they are currently defined in Washington State remain problematic, for at least two reasons.

First, because they are measured on arbitrary scales, their meanings are ambiguous. Second, the measures themselves direct institutional goals to some extent, rather than the other way around. Resulting University policy is driven to achieve specific measurement targets, and these may be at odds with the University's larger mission and goals, including the enhancement of student learning.

Two performance measures which illustrate this point are *fall to fall retention* of students and the *graduation efficiency index*; both are commonly regarded as measures to be maximized. The rationale is that for the sake of fiscal efficiency, a student should enter school, stay enrolled, take only the courses necessary to graduate, and then leave as soon as possible to make room for another student. This kind of thinking assumes a factory model of education, in which the measure of output is degree attainment, and the measure of cost is time to degree.

Such a view penalizes institutions for various kinds of normal student behavior which make the numbers look bad, but which might serve students and their educations very well—like taking a double major or taking elective courses irrelevant to the major. Incentives are created for institutions to eliminate these students, to narrow their educational options, or to encourage them to go elsewhere for their educations, all questionable goals from the standpoint of student learning.

Assessment derives its legitimacy from the quality of its measurements; and those being measured generally best know the area being assessed. University mission statements ought to be the place to find out what is important, and therefore what should be measured. Since student learning figures prominently in most academic mission statements, student learning outcomes may have special appeal as performance measures.

C. The role of technology

The assessment-accountability waters are further muddied by developments in academic technology. Manufacturers of computer software and hardware have been heavily lobbying both legislators and academics nationwide to substitute electronic and media technologies, such as web-based distance learning, for more traditional, face-to-face educational practices (Jacklet, 1998).

At present there is no reason to suppose that these computer technologies will necessarily either improve learning or lower costs. Although there are certainly ways in which such technologies can be applied effectively to increase either faculty productivity or student learning, or both (Chickering & Ehrmann, 1998), technology can never entirely replace the face-to-face interactions among students and between students and faculty which have shown demonstrated importance in student development (Astin, 1993, 1998).

Nevertheless, such lobbying is a persuasive distraction at all levels. Using student learning outcomes and faculty productivity as the measures of effectiveness of educational systems in general and of new technologies in particular would help to assure that only those technologies which are both cost-effective and learning-effective be adopted.

It turns out that student learning outcomes constitute useful measures of quality in and of themselves. They are consistent with the stated missions of higher education; improving them is a valid indicator of improved institutional performance. Such indicators, when combined with cost data, could also be used effectively as measures of changes in institutional fiscal efficiency or overall performance over time.

Performance measures based on student learning outcomes would be unambiguous; they would tell us whether institutions are providing the same levels of learning at lower cost, or providing improved levels of learning for the same cost. Either type of measure satisfies the two criteria for performance indicators, and gets more directly at the tension between assessment and accountability: minimizing the cost of a truly excellent education.
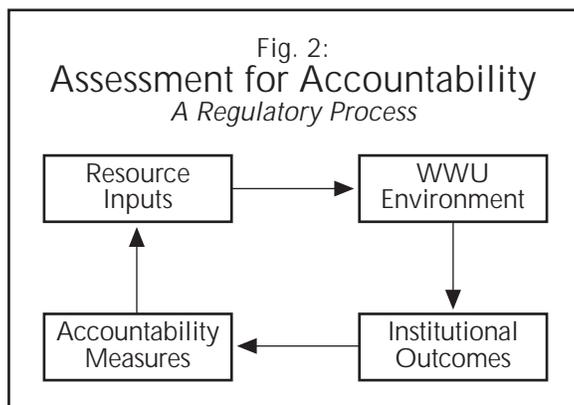
II. Student Learning Outcomes

Sharpening the focus of higher education onto student learning outcomes goes beyond mere tinkering with traditional structures and methods; it really constitutes a paradigm shift in educational philosophy and practice. An increasingly accepted view among educational scholars is that traditional structures are dysfunctional and overdue for change (Miller, 1998). To remedy this, "students and their learning should become the focus of everything we do…from the instruction that we provide, to the intellectual climate that we create, to the policy decisions that we make" (Cross, 1998).

Fig. 2:
Assessment for Accountability
A Regulatory Process

Resource Inputs → WWU Environment → Institutional Outcomes → Accountability Measures → Resource Inputs

## D. Reconciling Assessment and Accountability

Student learning transcends facts and concepts, and includes the values, attitudes, self-concepts, and world views students evolve in the interactive intellectual and social environment which colleges foster. Grounding accountability in student learning, with measures designed by the units being measured, would provide the most rational basis to measure university performance.

Accountability aims at improving fiscal efficiency, but is blind to issues of educational quality. Assessment aims at improving the quality of education, but is necessarily constrained by budgets. A focus on student learning outcomes can be a bridge that links the two.

Effective and useful accountability measures should have two qualities. First, they must be unambiguous, either monotonically increasing or decreasing measures of either costs or benefits; i.e., we all agree whether we want more less of whatever it is they measure. Second, they must be linked in some way to indicators of quality.

At this point, it is useful to make some distinctions between "student outcomes" and "student *learning* outcomes." *Student outcomes* generally refer to aggregate statistics on groups of students, like graduation rates, retention rates, transfer rates, and employment rates for an entering class or a graduating class. These "student outcomes" are actually *institutional* outcomes; they attempt to measure comparative institutional performance, not changes in students themselves due to their college experience. They have generally been associated with accountability reporting.

Unfortunately, student-outcomes statistics are often "output-only" measures (Astin, 1993). That is, they are computed without regard to incoming student differences and

without regard to how different students experienced the college environment. As a result, they do not distinguish how much an observed measurement is the product of the institution and its programs on students, and how much is due to other factors, such as socioeconomic status, general intelligence, or which high school was attended, for example, and can therefore be misleading.

"Student *learning* outcomes," on the other hand, encompass a wide range of student attributes and abilities, both cognitive and affective, which are a measure of how their college experiences have supported their development as individuals. *Cognitive* outcomes include demonstrable acquisition of specific knowledge and skills, as in a major; what do students know that they didn't know before, and what can they do that they couldn't do before? *Affective* outcomes are also of considerable interest; how has their college experience impacted students' values, goals, attitudes, self-concepts, world views, and behaviors? How has it developed their many potentials? How has it enhanced their value to themselves, their families, and their communities?

There are essentially three threads which must be interwoven into a program dedicated to the improvement of student learning: shifting curricular focus to student learning; developing faculty as effective teachers; and the integration of assessment into curriculum at several levels. These are discussed in some detail in the next several sections.

A. Shifting Curricular Focus

There are thousands of articles and hundreds of books on student learning; fortunately, several scholars have painstakingly sifted through this material and summarized important conclusions on which the studies are in general agreement. Perhaps the best known is Chickering and Gamson's *"Seven Principles for Good Practice in Higher Education"* (1987). The Seven Principles provide a useful introduction to the thinking behind a learning-based approach to higher education, and are listed below (this annotated version is adapted from *Ehrmann & Chickering, 1998*):

1. Good Practice Encourages Contacts Between Students and Faculty

Frequent student-faculty contact in and out of class is a most important factor in student motivation and involvement. Faculty concern helps students get through rough times and keep on working. Knowing a few faculty members well enhances students' intellectual commitment and encourages them to think about their own values and plans.

2. Good Practice Develops Reciprocity and Cooperation Among Students

Learning is enhanced when it is more like a team effort than a solo race. Good learning, like good work, is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning. Sharing one's ideas and responding to others improves thinking and deepens understanding.

3. Good Practice Uses Active Learning Techniques

Learning is not a spectator sport. Students do not learn much just sitting in classes listening to teachers, memorizing prepackaged assignments, and spitting out answers. They must talk about what they are learning, write reflectively about it, relate it to past experiences, and apply it to their daily lives. They must make what they learn part of themselves.

4. Good Practice Gives Prompt Feedback

Knowing what you know and don't know focuses your learning. In getting started, students need help in assessing their existing knowledge and competence. Then, in classes, students need frequent opportunities to perform and receive feedback on their performance. At various points during college, and at its end, students need chances to reflect on what they have learned, what they still need to know, and how they might assess themselves.

5. Good Practice Emphasizes Time on Task

Time plus energy equals learning. Learning to use one's time well is critical for students and professionals alike. Allocating realistic amounts of time means effective learning for students and effective teaching for faculty.

6. Good Practice Communicates High Expectations

Expect more and you will get it. High expectations are important for everyone—for the poorly prepared, for those unwilling to exert themselves, and for the bright and well motivated. Expecting students to perform well becomes a self-fulfilling prophecy.

7. Good Practice Respects Diverse Talents and Ways of Learning

Many roads lead to learning. Different students bring different talents and styles to college. Brilliant students in a seminar might be all thumbs in a lab or studio; students rich in hands-on experience may not do so well with theory. Students need opportunities to show their talents and learn in ways that work for them. Then they can be pushed to learn in new ways that do not come so easily.

A consistent and unifying theme throughout the Seven Principles is *student involvement*—with faculty, with other students, and especially with their studies. These points resonate with Astin's (1993) identification of student involvement as a major factor in student talent development; increased levels of involvement, including high levels of cultural diversity and community service, are strongly associated with many measures of success after college. Therefore, one logical direction for improving student learning outcomes is to establish policies which encourage and enhance many types of student involvement, including academic involvement; involvement with faculty, student peers, and mentors; and involvement in work, both on and off campus.

These same principles are also consistent with Marchese (1998), who has recently reviewed at length the implications of recent developments in neuroscience, anthropology, cognitive science, and evolutionary studies for our understanding of human learning. These developments form the impetus for new pedagogical approaches in higher education; they demonstrate conclusively that student learning is a complex, personally unique, and interactive process, and that traditional approaches have many built-in shortcomings which can be greatly improved upon. Ewell (1997) has condensed Marchese's discourse into a summary list of ways to improve student learning, presented here in edited form:

By emphasizing application and experience.

Applied experiences like internships and service learning try to break down artificial barriers between "academic" and "real-world" practice, while effective curricular designs foster appropriate knowledge and skills "just in time" for concrete application in current classwork or experience.

By having faculty constructively model the learning process.

"Apprenticeship" models of teaching allow students to directly watch and internalize expert practice. Such settings also assign students consequential roles emphasizing correct practices. The demonstrable effectiveness of undergraduate participation in faculty research is a case in point, as are the internship or practicum components of many existing practice disciplines.

By linking established concepts to new situations.

The best gains occur when students are given both the conceptual "raw materials" with which to create new applications and active cues about how to put them together. For such approaches to work as advertised, though, students must do the work themselves and faculty must assiduously avoid "telling" them how to make these linkages.

By stimulating interpersonal collaboration.

Research findings on collaborative learning are overwhelmingly positive, with instances of effective practice ranging from within-class study groups to cross-curricular learning communities.

By providing rich and frequent feedback on performance.

How students are assessed powerfully affects how they study and learn. Managing the frequency and consequences of such assessments, by using weekly quizzes or ungraded practice assignments, for instance, creates iterative opportunities for students to try out skills, to examine small failures, and to receive advice about how to correct them.

By consistently developing a limited set of clearly identified, cross-disciplinary skills that are publicly held to be important.

Intentional and integrated "learning plans" can affect learning powerfully. Needed integration must be both "horizontal" (emphasizing the application of key skills in different contexts) and "vertical" (fostering sequential vectors of development) to be effective. And both depend critically on making collective campus commitments about what should be learned in the first place.

If the Seven Principles to a large extent emphasize the importance of different kinds of student involvement to enhance learning, four additional principles of curricular design emerge from these recent discoveries about human learning: 1) Learning is enhanced by engaging the natural learning functions of the brain, which involve processes of incremental and sequential integration. Students form their own meanings from their interactive experiences with new information, in ways that are personally unique. What works for one student may not work for another; 2) An appropriate and continuing level of challenge stimulates student participation and learning. Too much or too little discourages interest; 3) Assessment procedures which provide frequent feedback are an important part of learning. Entrenched practices of midterm, final, and term paper—or less—may serve faculty as evaluative tools, but deprive students of the rich learning engendered by ongoing assessment and feedback practices; and 4) Ideas must be put into practice and experienced in personal ways for students to embody and deepen their learning. Teaching methods which emphasize application, such as internships, service learning, experiential education, apprenticeships, research, and other practices all help to transfer abstract learning into concrete and measurable skills.
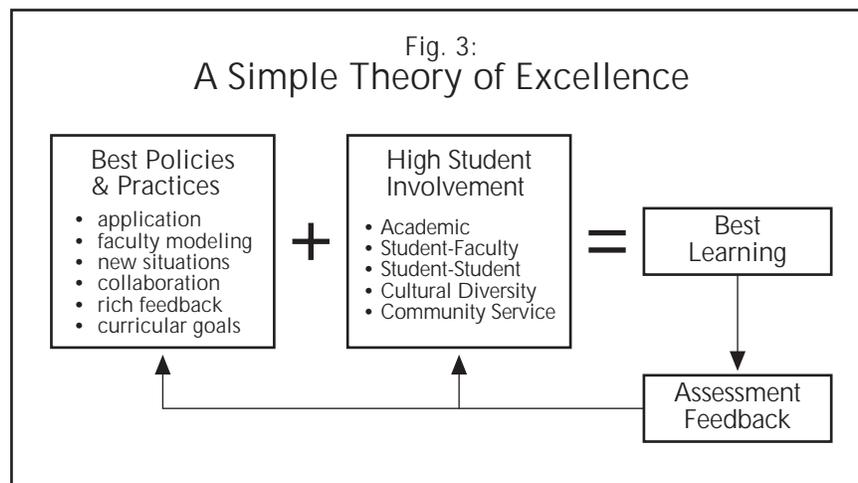
B. Enhancing Teaching Excellence

A increased emphasis on student learning will have major impacts on the structure and practice of *teaching.* An institutional commitment to student learning could give faculty significantly increased responsibility for real teaching excellence. Emphasis on learning demands a different kind of teacher, and a different kind of teaching, from the traditional model; it may no longer be enough that college teachers are competent in their disciplines; they are likely to be increasingly called upon to create, develop, and manage stimulating learning environments, using a variety of resources, abilities, and technologies, including assessment resources, in order to deepen and enrich student learning.

In response to these increasing demands, relatively more resources will be needed to support the development of faculty. Such support could take many forms. Western's recently created Center for Instructional Innovation is already supporting faculty in the application of information technologies to their courses. This Center, perhaps in cooperation with other currently existing units, like the Faculty Development Advisory Committee, which currently offers grants to faculty for the development of teaching, might play an expanded role in faculty development as teachers. Alternatively, various forms of "outsourcing," such as a continuing workshop series with leading thinkers, could also stimulate faculty development as teachers.

Whatever the form, a meaningful emphasis of student learning demands some kind of serious program for faculty development as teachers. One excellent example of a comprehensive support program is the Learning Resources Unit (LRT) at British Columbia Institute of Technology (BCIT). "(The LRU) was established in 1988 as a key catalyst for educational excellence at BCIT. Staffed with more than 25 instructional designers, technical writers, editors, graphic artists and clerical personnel, its mandate is to improve the teaching and learning process through faculty, curriculum, and learning-skills development initiatives." (BCIT web page.)

The LRU provides workshops, teaching aids, and consultations with faculty for course, syllabus, and curriculum development. It also provides faculty with a number of confidential resources for development of teaching skills, including instructional skills workshops, mid-term student evaluations, videotaping, and one-on-one professional classroom observation and feedback.

Combining findings about learning and about teaching, a preliminary model of institutional excellence emerges, as shown in Figure 3. Adopting the best educational practices and structuring courses, curricula, and university support programs to stimulate student involvement enhances the conditions for learning and individual development. Assessment of student learning outcomes then provides feedback which guides further improvements in policy.

Fig. 3:
A Simple Theory of Excellence

Best Policies & Practices
• application
• faculty modeling
• new situations
• collaboration
• rich feedback
• curricular goals

+

High Student Involvement
• Academic
• Student-Faculty
• Student-Student
• Cultural Diversity
• Community Service

=

Best Learning

Assessment Feedback

III. The Role of Assessment

A. The Assessment Learning Cycle

Assessment will be a fundamental and integral part of any curriculum based on student learning outcomes. Basically the same assessment learning cycle, shown in Figure 4, takes place at the levels of the student, the course, the program, the college, and the university as a whole.

It is worth emphasizing: *assessment is not just the measurement of learning; it is in itself an integral part of learning.* Assessment is the first step in a continual learning cycle which includes measurement, feedback, reflection, and change. The purpose of assessment is not merely to gather information; the purpose of assessment is to foster improvement.

Frequent assessment of students helps them to refine concepts and deepen their understanding; it also conveys high expectations, which further stimulate learning. "Students overwhelmingly reported that the single most important ingredient for making a course effective is getting rapid response" (Wiggins, 1997).

Similarly, assessments of faculty teaching by students and faculty development consultants help teachers to improve

their teaching and course organization. Program assessments tell departments and curriculum committees how well programs are meeting their objectives; and comprehensive university-level assessments provide feedback about how effectively university policies are contributing to the accomplishment of the university's mission and goals.

Over several years beginning in 1988, a group of distinguished scholars met regularly to share ideas and experiences and to formulate principles for assessment. Their set of "Nine Principles of Good Practice for Assessing Student Learning," (AAHE Assessment Forum, 1992) is patterned after the learning principles discussed above, and clarifies the linkages between assessment and student learning:

1. The assessment of student learning begins with educational values.

We measure what is most important to our mission and goals.

2. Assessment is most effective when it reflects an understanding of learning as multidimensional, integrated, and revealed in performance over time.

Learning entails not only what students know but what they can do with what they know; it involves not only knowledge and abilities but values, attitudes, and habits of mind that affect both academic success and performance beyond the classroom.

3. Assessment works best when the programs it seeks to improve have clear, explicitly stated purposes.

Assessment is a goal-oriented process. Assessment as a process pushes a campus toward clarity about where to aim and what standards to apply; clear, shared, implementable goals are the cornerstone for assessment that is focused and useful.

4. Assessment requires attention to outcomes but also and equally to the experiences that lead to those outcomes.

To improve outcomes, we need to know the curricula, teaching, and student effort that lead to particular outcomes.

5. Assessment works best when it is ongoing, not episodic.

Though isolated, "one-shot" assessment can be better than none, improvement is best fostered when assessment entails a linked series of activities undertaken over time, monitoring progress toward intended goals in a spirit of continuous improvement.

6. Assessment fosters wider improvement when representatives from across the educational community are involved.

Student learning is a campus-wide responsibility; the aim over time is to involve people from across the educational community. Assessment is not a task for small groups of experts but a collaborative activity; its aim is wider, better-informed attention to student learning by all parties with a stake in its improvement.

7. Assessment makes a difference when it begins with issues of use and illuminates questions that people really care about.

Fig. 4:
Assessment Learning Cycle

Modified Behavior → Feedback → Reflection → Understanding → Modified Behavior

To be useful, information must be connected to issues or questions that people really care about. The point of assessment is not to gather data and return "results"; it is a process that starts with the questions of decision-makers, that involves them in the gathering and interpreting of data, and that informs and helps guide continuous improvement.

8. Assessment is most likely to lead to improvement when it is part of a larger set of conditions that promote change.

Assessment alone changes little. Its greatest contribution comes on campuses where the quality of teaching and learning is visibly valued and worked at, where information about learning outcomes is seen as an integral part of decision-making

9. Through assessment, educators meet responsibilities to students and to the public.

Our deepest obligation—to ourselves, our students, and society—is to improve. Those to whom educators are accountable have a corresponding obligation to support such attempts at improvement.
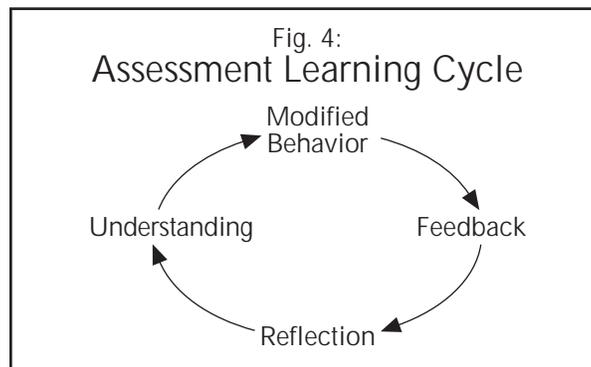
B. Missions and Measures

The first assessment principle above, *measure things that matter*, accentuates the important link that must exist between a unit's mission and its assessment measures.

"The mission of an institution is the answer to the question, what do you do and for whom?…Colleges need to be clear about whom they serve and how they serve them, and to measure their results to determine how well they deliver on their promises" (Miller, 1998). Put another way, "a strong institutional mission statement provides an invaluable starting point for assessment…assessment cannot and should not take place in the absence of a clear sense as to what matters most at the institution" (Banta, 1996). Effective accomplishment of stated goals is the most appropriate measure of institutional performance and effectiveness. The same principle applies to all levels of assessment.

For example, although Western's mission statement does contain language which asserts that Western "nurtures the intellectual, ethical, social, physical and emotional development" of its students, the statement lacks the specificity necessary to form the basis of clear and measurable performance criteria. Clarifying the mission of the University in terms of specific performance objectives and developmental goals for students is an essential prerequisite to an integrated, learning-based academic program.

C. Example Programs Based on Student Learning Outcomes

Pioneering efforts in assessment and student learning have been made at several colleges. While there may be little direct transferability between the paths these schools have followed and the path that will be chosen at Western, the experiences of these schools are nevertheless instructive. They provide useful maps of approaches that work.

1. Alverno College

Alverno College is a small, independent, four-year liberal arts college for women, located in Milwaukee, and is widely recognized for its pioneering work in assessment. Over the last twenty-five years the Alverno faculty has developed a highly sophisticated system *of student-assessment-as-learning* and *assessment-through-the-curriculum,* for which it has received explicit recognition and considerable financial support from numerous foundations (Alverno, 1994).

Over many years of work, Alverno has defined eight measurable Abilities that a successful liberal arts education should develop: Communication, Analysis, Problem Solving, Valuing in Decision-Making, Social Interaction, Global Perspectives, Effective Citizenship, and Aesthetic Responsiveness. Each of these Abilities has in turn been divided into eight developmental levels—generally

ranging from fundamental identification at the first level to integrated application at the highest level.

Abilities have three important characteristics. They are: *integrated*, involving an integrated set of skills; *developmental*, implying an increasingly complex hierarchy of processes; and *transferable,* broadly useful and applicable across the student's future roles and settings. Every course at Alverno defines two specific sets of learning objectives; the first pertains to the levels of traditional knowledge and skills associated with the course; the second pertains to the Abilities addressed in the course.

Therefore, to pass a course, students must demonstrate not only appropriate mastery of course material *by doing something,* they must also demonstrate mastery of the Abilities *by how they do it.* For example, a math course would not only have specific math skills students must demonstrate, it might also have specific levels of Communication, Analysis, and Problem Solving Abilities the student must demonstrate as well, and which instructors have agreed to assess.

2. King's College

King's College is a small, Catholic, liberal arts college. Its comprehensive assessment program tracks the development in all students of a series of transferable skills, derived from its mission statement, which quite specifically articulates the College's responsibilities for student development (King's, 1999).

King's has a CORE Curriculum which "focuses in a deliberate and systematic manner the skills of liberal learning: Critical Thinking, Effective Writing, Effective Oral Communication, Library and Information Literacy, Computer Competence, Creative Thinking and Problem Solving, Quantitative Reasoning, and Moral Reasoning." In addition, "each department…defines each transferable skill within the context of the major and then divides the skill into specific competencies..."

King's College also incorporates two integrative projects into all student programs of study: the Diagnostic Project, and the Senior Integrated Assessment.

The Sophomore-Junior Diagnostic Project: "Each department or program designs a screening exercise to determine each student's ability to transfer critical thinking and effective communication to an appropriate project related to the major field of study. Faculty interact with students throughout the project and share results with them. If the proper level of skill is not apparent, the student is referred to an appropriate office (such as the Learning Skills Center) for assistance. The process also evaluates the student's likelihood of success in the major."

The Senior Integrated Assessment: "Each department or program designs an exercise, usually in the context of a required senior course, a capstone seminar, or a project, to allow the faculty and student to examine the latter's success in integrating learning in the major with advanced levels of the transferable skills of liberal learning."

3. California State University, Chico

The approach adopted by the College of Behavioral and Social Sciences at California State University at Chico provides an appealing example of an approach to assessing student learning in an institution much like Western. Its approach is rooted in two basic premises: first, faculty in the unit have particularly high teaching loads, and therefore no extra time; and second, faculty wanted to be able to demonstrate the effectiveness of their own programs *on their own terms*—given budgetary uncertainties (Jacob, 1998).

The plan was divided into three stages. The first step was for each department to engage in a dialogue about what it means to be a major in this department, and what should a major in this department know; that is, define departmental learning objectives. As obvious as these questions are, what was learned in each department was often a revelation.

The second step asked faculty to link those learning objectives with the learning processes and experiences which would lead to the desired learning outcomes. This requires departments to address objectives explicitly, and to consider dropping courses which meet no learning objectives.

The third step was to identify and implement assessment procedures, which is still in progress. The plan has resulted in the adoption of a wide range of assessment tools and a spate of curricular reforms in nearly all departments. While the search for better assessment tools continues, the next step will involve exchanging ideas among units, perhaps focusing discussions on identifying some set of "best practices" in assessment.

The experience at Chico State demonstrates that a simple plan can be highly beneficial, and that program benefits begin to accrue as soon as dialogue begins at the departmental level about student learning, curricular goals, and assessment practices. The all-important first step is to open a dialogue about student learning and curricular objectives.

IV. Toward a Curriculum Based on Student Learning
A. Background

Since the inception of state accountability reporting requirements over ten years ago, Western has created and maintained extensive databases and developed analytical capabilities in assessment and in survey research. The Office of Institutional Assessment and Testing (OIAT) and the Office of Survey Research have generated scores of reports on student attitudes, behaviors, and performance, and their relationship to program effectiveness, in the form of entering and graduating student profiles, alumni satisfaction surveys, employer satisfaction surveys, and program reviews.

State reporting requirements have recently been extended to include additional performance targets, and recent communications from the Washington State Higher Education Coordinating Board suggest that additional reporting requirements regarding student learning outcomes, at the level of academic units, will very likely also be required in the near future.

At the same time, the accreditation review process has also increased its emphasis on assessment of student learning. Ewell (1997) has suggested that, since nearly universal accountability requirements duplicate many of the traditional elements of peer review, accreditation review should narrow its focus to core academic processes, which would or could include the integration of student learning outcomes into curricula, and the incorporation of best teaching and learning practices, such as the Seven Principles, into academic programs. Western's recent Accreditation Review is evidence that such a shift is already happening. Its recommendation that Western's academic units must be more actively involved in assessment is entirely consistent both with this new role for accreditation and with a shift in mission and policy toward student learning.

Referring back to Figures 1 and 2, what all of this means is that assessment to date has been largely driven by the regulatory process; assessment has been about accountability, fiscal efficiency, and resource allocation. These trends are not going to go away, although they are likely to continue to evolve. However, recent evidence suggests a growing convergence of accountability requirements and accreditation requirements regarding the central importance of student learning outcomes as measures of institutional performance.

B. ROLE OF THE OFFICE OF INSTITUTIONAL ASSESSMENT AND TESTING (OIAT)

OIAT maintains extensive databases on student characteristics and student outcomes. This includes data from the Student Tracking System maintained by the Registrar's Office, for information about student backgrounds, enrollment history, coursework, grades, and majors, and information from a variety of student, alumni, faculty, and employer surveys.

In addition, Western has participated intermittently for many years in the Cooperative Institutional Research Project (CIRP), a comprehensive freshman survey developed and administered through the Higher Education Research Institute at UCLA, and its corresponding senior survey, the College Student Survey (CSS). Collectively, these surveys generate detailed longitudinal information on student goals, behaviors, activities, expectations, and values, both as they enter Western and as they graduate.

In early 1998 OIAT assembled departmental information from a number of recent survey instruments, including the CSS, and provided summaries of this data to department chairs. Such reports could be made even more valuable if they were constructed with substantial input from the academic units themselves, and if databases were expanded to facilitate analysis on a departmental level.

Although the CIRP has been regularly administered to entering freshmen in recent years, administration of the CSS has been limited, with sample sizes too small to permit useful inferences about individual programs. Beginning this academic year, however, OIAT plans to expand the CSS, providing comparable entry and exit surveys on all native students, so that a comprehensive longitudinal database can be formed, from which to assess student development while at Western and beyond. Development of a similar entering survey instrument for transfer students is underway.

Expansion of these capabilities is specifically designed to provide assessment data to individual academic programs about the impacts of their programs on student development. Academic units are invited to write for these surveys a number of tailored questions which are of particular interest to them about their students' experiences with their programs. Applying a variety of statistical techniques including frequency analysis, cross-tabulations, analysis of variance, block regression, and factor analysis, OIAT will be able to investigate an extensive array of impacts of Western and its programs on student learning and development.

C. THE ROLE OF ACADEMIC UNITS

In the future the capability for department-specific reporting can be expanded, and tailored to meet data needs of individual programs. First, however, academic departments must examine their own missions with regard to student learning objectives, and how they want to measure their success at accomplishing them, so that appropriate data can be developed.

There are essentially three kinds of questions academic units must investigate. First, what kinds of affective and cognitive outcomes are essential goals of their programs. "…(W)hat should their graduates be able to know, think, do, believe, or value?" (Peterson and Hayward, 1989.)

Second, how are those outcomes to be measured in ways that provide meaningful feedback about program effectiveness? "It is not unusual for lofty goals to be identified that are not really taught. Special attention should be given to ways in which connections are made among goals and elements of the curriculum." (Gentemann, 1994.)

And third, how will the various academic units incorporate the best practices in teaching and assessment into their programs in ways that enhance student learning and that are truly valuable and useful, or "authentic":

> "authentic achievement defines significant intellectual accomplishment by adults as construction of knowledge through disciplined inquiry to produce discourse, products, or performances that have meaning or value beyond success in school…but this 'real world' dimension constitutes only one of three criteria for authentic intellectual work; the other two insist on construction of knowledge through disciplined inquiry—both of which pay significant attention to students' basic knowledge and skills." (Newmann, 1998.)

Faculty from Alverno College have made it clear that their twenty-five year pioneering struggle with these issues has been a difficult one. However, they suggest (Alverno, 1998) that their program began modestly, with a commitment to student learning as their common goal. This commitment was reinforced by a President who provided and enforced an action deadline for the inception of their new program, ready or not. Then, through much dialogue over many years, they were able to identify the seven Abilities, to define levels of those Abilities they could all agree upon, and to reorganize their academic programs and infrastructure around learning.

Similar experiences have been reported wherever this inquiry has been undertaken. This is the fundamental value of assessment in practice; learning about a thing is the inevitable result of attending to it, and improvement is the inevitable result of learning.

CONCLUSIONS

There is ample evidence to suggest that reorienting Western's educational policies and practices toward the improvement of student learning outcomes would, over time, significantly improve the quality of education of Western students and graduates.

Such a reorientation would necessarily be an ongoing process; over time it would likely constitute a quantum shift in our approach to education. It would probably imply changes over time in our mission and goals, in the structure of our curricula, in assessment procedures from the classroom on up, in the responsibilities of faculty, staff, and administrators, and in the organizational structure of the University. However, all of these are the kinds of changes which can evolve in an organic way specific to Western and its community of students, faculty, staff, and administrators. The important thing is to begin the process, and to allow it to develop.

RECOMMENDATIONS

A true commitment to student learning is a paradigm shift, but it doesn't have to happen all at once. The first recommendation—the all-important first step—is to *initiate a campus-wide exploration and discussion* of whether and how to redefine Western's mission and goals to reflect a commitment to excellence in student learning, and to define strategies for achieving such goals. Faculty within academic units must bear a particular

responsibility for beginning a dialogue about their own major programs, examining their willingness and ability to restructure their programs, courses, and assessment procedures to be consistent with improving learning outcomes. They must be willing to ask the three questions posed at Chico State: *1) What should our majors know; 2) How can they best learn these things; and 3) How can we measure our success at teaching them?*

The second recommendation is to **establish some kind of "Faculty Development Center,"** which would provide confidential consultations, resource and technical support, and training to help faculty develop as teachers. Such an office could be an extension of the new Center for Instructional Innovation, or it could be modeled after the Learning Resources Unit at BCIT mentioned in Section 2, which provides a wide range of support services, including course development, definition of course objectives, assessment alternatives, and skills development. We should want to provide explicit support to improve both the quality of teaching and also the productivity of individual faculty, and to provide incentives for teaching excellence.

To obtain a list of references used for this issue of Dialogue, contact Gary McKinney at the numbers listed on the back page, or download the list from the Assessment web-page—http://wwu.ac.wwu.edu/~assess. Click the STUDENT LEARNING button.

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