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ABSTRACT

This paper reviews recent literature pertaining to outcomes assessment, especially college senior surveys, and provides background information on several successful studies documenting the effectiveness of outcomes assessment. Books chosen for review are: (1) "Information on Student Outcomes: How To Get It and How To Use It" (Peter T. Ewell); (2) "Measuring College Outcomes" (C. Robert Pace); and (3) "College: The Undergraduate Experience in America" (Ernest Boyer). Specific student outcome assessments are reviewed from the University of Maryland, University of Tennessee at Knoxville, California's Stanford University, Harvard University in Massachusetts, Kean College of New Jersey, Ohio's Kent State University, Bowling Green State University (Ohio), and Ohio University. Essential elements of outcome assessments as found from the literature review suggest that faculty be involved in controlling the assessment, that presidential backing is required, that several methods of assessment are needed to fully understand the undergraduate experience, and that it is important to assess senior year students. School program analysis revealed that each contained a section questioning students about the campus environment, that all surveys had background information sections, and that all of them asked for the seniors' overall assessment of their university experiences. The report provides a model of a senior survey. Contains a 15-item bibliography. (GLR)

Student Outcomes Assessment: The Senior Survey

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Foreword

The purpose for this background paper arose from the need to establish an understanding of the current knowledge derived from student outcomes assessment in higher education in America. Throughout this process I have been in contact with many colleges and universities and collected and read hundreds of documents relevant to outcomes assessment, more specifically to senior surveys. Although there are thousands more documents available, in this work I have referenced only those documents I believe are most important to the understanding of student outcomes assessment.

Introduction

Concern over the assessment of student outcomes has risen sharply in the past decade . Educators have become aware that simply earning adequate credits to graduate is not enough to determine if students are prepared for life after college. We must look at the quality of undergraduate education, making sure that it is achieving its intended goals. Towards this end, many institutions are implementing student outcomes assessment.

Outcomes assessment in higher education can be defined in two distinct ways. First, it can describe the process of measuring and evaluating student performance in the classroom. In most cases this is done on a grading scale and ranks each student in comparison with his/her peers. The second definition, and the one that will be primarily discussed in this work, is the evaluation of the many academic, administrative, and student service programs on department, college and university levels.

The purpose of this paper is to review recent literature pertaining to outcomes assessment, especially senior surveys, and to provide background information on several successful studies, documenting the effectiveness of outcomes assessment. Chosen for the literature review are: 1) Information on Student Outcomes: How to Get It and How to Use It by Peter T. Ewell; 2) Measuring College Outcomes by C. Robert Pace; and, 3) College by Ernest Boyer. The University of Maryland, University of Tennessee at Knoxville, Stanford University, Harvard University, Kean College, Kent State University, Ohio University, and Bowling Green State University assessment programs will be reviewed to provide a contextual understanding of the methods implemented for outcomes assessment.

The History of Outcomes Assessment

The history of outcomes assessment dates back to the beginning of higher education in America. The first 200 years of higher education saw public oral student examinations by qualified "outsiders" that would evaluate both student preparation and faculty accomplishment. This approach provided a system of checks and balances that made sure the student was prepared, usually for the ministry. In the mid to late 1800s tremendous growth in enrollment and changes in curriculum necessitated other assessment methods. There were not enough qualified outsiders to evaluate students so the faculty took it upon

themselves to decide if the student was prepared and, more importantly, if they (the faculty) were doing their jobs effectively (Bok, 1986). This method fostered an attitude in the faculty that presumed no outsider had the competence to question the authority of the instructor. This "unquestioned authority" philosophy persists today to some degree, but the current call for assessment has posed some additional questions regarding the measurement of learning outcomes of the individual students as well as the institution.

Landmark Assessment Programs

Two models of student outcomes assessment that will not be reviewed extensively, but deserve mention, are those of Northeast Missouri State University and Alverno College. These two are known for their successful longitudinal assessment programs, and represent much of the recent history of outcomes assessment in the United States.

Northeast Missouri State is best known for the "value-added" approach to student outcomes assessment. Each student completes four questionnaires during his/her college experience: when they enter the university, while they are enrolled, as a graduating senior, and as an alumnus. The senior year is then compared to subsequent years to determine the amount of educational gain or value-added to the student. This survey information, along with a student information data base, allows administrators and faculty to ask important questions about the educational benefit a students receive at Northeast. Answers to these questions often lead to curriculum changes, alterations in course content, or general program improvements by giving direction and substance to these needed changes.

In 1973 the faculty of Alverno College developed a new curriculum in which all students demonstrate certain major abilities within their disciplines or professional areas in order to graduate. This assessment plan was designed to give each student information on his/her progress in developing abilities, to contribute to the progress itself, and to evaluate each student's performance. However, assessment was also used to improve the curriculum and establish its internal validity (Earley, 1985). The most important feature of Alverno College's assessment program is that it was conceived, implemented, and evaluated by faculty. This gives faculty the knowledge to implement improved teaching strategies

based on the enhanced knowledge of individual differences in students' performance of abilities in their major field and in general education.

I. REVIEW OF LITERATURE

Information on Student Outcomes: How to Get It, How to Use It.

In Information on Student Outcomes: How to Get It, and How to Use It, Peter Ewell, made it very clear that outcomes assessment is not a simple process, nor is it a "quick fix" to the problems of higher education. He described the outcomes of undergraduate education as "multifaceted" and "multicausal", and also argued that educators must treat outcomes with caution because the data can reduce the context of an experience into a qualified, objective standard (Ewell, 1983). Ewell mentioned that the greatest challenge is not the measurement of outcomes, but deciding what to measure by assessing what variables will provide the most accurate information. He warned that the data should have immediacy and applicability. Immediacy refers to the ability of the researcher to disseminate the information quickly to the decision makers, and applicability, describes valid information that can affect policy decisions.

Ewell cited the following example to prove the utility of outcomes data in administrative decisions. If outcomes data uncover shortcomings, the administration may want to improve the programs based on those findings. On the other hand, if the findings are positive, the administration will be able to articulate that information to faculty, students, and prospective students, demonstrating that graduating students are receiving a quality education. Ewell warned that outcomes measures should be inter-subjective, explaining that if outcomes measures are accurate, different observers, under different conditions, at different times will agree on given properties of an outcome and agree on the value of that outcome. Outcomes measures that fit this description are better than the judgments of one individual or department (e.g., grades). Ewell also warned that assessors should not accomplish assessment to compare themselves to other institutions. Although there is some utility in these comparisons, different institutions with different missions and different students have much different needs. Outcomes assessment must be individualized to a particular institution if it is to be used to improve that institution's programs.

Ewell came to three main conclusions. First, institutions must use multiple measures to assess student outcomes. Using only one measure could provide misleading information, and this would be worse than not assessing at all (Ewell,1983). Second, Ewell wrote that the most important voice in outcomes assessment is that of students. He suggested using measures such as senior surveys, comprehensive major tests, and alumni surveys to allow students, who stand to gain the most from outcomes assessment, to have a major role in assessment by evaluating what they have experienced. Finally, Ewell stated that the importance of outcomes assessment is not the answers it provides, but the questions it raises. Outcomes assessment helps to focus the attention of administrators and faculty on potential problems so that they can take a pro-active approach to a given situation.

Measuring College Outcomes: Fifty Years of Findings and Recommendations for the Future

In his book, Measuring College Outcomes, Robert Pace examined two areas that are relevant to student outcomes assessment: Achievement during college--Undergraduates, and Achievement after college--Alumni. A third area in which Pace discussed institutional self-examination will not be reviewed in this paper. In each section, the author discussed assessment methods and techniques that have been previously used at institutions, as well as provided implications and recommendations for the future. In his review of assessment, Pace wanted to look at what we know about higher education after fifty years of educational testing and surveys. More specifically though, Pace wanted to examine what we know about student learning and achievement during college.

In section I, Achievement during college: Undergraduates, Pace examined five significant studies or sources of data to understand the undergraduate experience. They are:

- The 1928,1930, and 1932 Pennsylvania Study in which most college sophomores and seniors were tested for achievement
- The Test of General Education, in the 1940s, from the Graduate Record Office and The Carnegie Foundation
- The Graduate Record Exam Area and Advanced tests in the 1950s and 1960s
- The College Board's College Level Examination Program (CLEP) in the 1960s and 1970s
- The Undergraduate Assessment Program, developed by the Educational Testing Service in the 1970s

Pace's conclusion emphasized the need for educators to test students on general and specific knowledge. Pace argued that tests should be nationally-normed so as to draw comparisons of high reliability and validity.

Based on the history of assessment, Pace offered two recommendations for outcomes assessment. First, Pace recognized the need for greater use of current outcomes measures. He suggested that freshmen be tested upon entry into college, and also when they leave as seniors. The use of the same measurement instruments at different times would lead to important information on student learning and development that would be beneficial to academic planners and faculty. Pace wrote, "The accumulation of evidence of students' gains in knowledge and understanding, through longitudinal studies, would fill the most important gap that still exists in the large-scale use of achievement measures" (Pace, 1979, p.41).

Second, Pace recommended that more and different measures be developed. New assessment methods should be developed using three guiding principles. The first encompasses a new way of thinking about general education. The second concerned organizing test content around a specific set of ideas and values. The third demonstrated the need to use measures that integrate knowledge, attitudes, and actions of the individual, with respect to the objectives of general education (Pace, 1979, pp. 170-172).

In section II, Achievement after college: Alumni, Pace related results of numerous national alumni surveys, including those conducted by The University of Minnesota, UCLA, Syracuse, Higher Education Research Institute (HERI), and Time magazine. In a separate section, Pace compared survey results from all of these studies. Pace concluded that most efforts to study alumni have focused on the graduates' occupational and financial status. Other studies have been stimulated more by "internal college concerns --that is, by colleges themselves thinking about their curriculum, about the opinions of former students, and about the role of their graduates as adults in civic and cultural affairs" (Pace, 1979, p.49).

Pace showed great concern that there are no standardized tests to acquire and compare outcomes data from alumni. Researchers in need of such data have developed their own unique instruments, and this has led to data that cannot be compared. Pace recognized the need for individuality among different

institutions, but stated that the most basic goal of every institution is the same: successful student learning. Along these lines, he claims, a standardized means of measurement should be developed.

Pace provided six suggestions as to what to measure in a standardized alumni survey. They are: 1) knowledge possessed by alumni; 2) personal achievement; 3) intellectual interests and habits; 4) standards of judgment and tastes, and investment in community and culture; 5) self-evaluation of educational experience; and 6) graduate and professional school experiences.

Pace stressed that alumni surveys should answer two fundamental questions. How well did college prepare you for additional college work (further undergraduate and graduate school)? And, how well did college prepare you for your first job?

College: The Undergraduate Experience in America

As reported by Ernest Boyer in his book College: The Undergraduate Experience in America, The Carnegie Foundation believes that there is an ". . . urgent need to bring Colleges and Universities more directly into the national debate about the purposes and goals of American education" (p. 27).

Towards this end, The Carnegie Foundation began a study in 1984 to examine the undergraduate experience in America, how structures and procedures affect the lives of students, and current strengths and weaknesses in order to suggest solutions. The Carnegie Foundation conducted site visits lasting two weeks at 29 campuses representing all institutional types. During each visit, researchers observed classrooms, administration, faculty, and general education curriculum. Eight tension points for students were identified as follows: 1) transition from high school to college; 2) goals and curriculum of education; 3) faculty priorities; 4) the condition of teaching and learning; 5) quality of campus life; 6) college governance; 7) assessing the outcomes; and 8) the connection between the campus and the world. Although all of these are interesting and worthy of further study, the tension point most important to this paper is number seven, assessing the outcomes.

Boyer reported that 91% of college administrators surveyed favored assessment if it is linked to institutional improvement. These same administrators also thought that the assessment of student outcomes was an appropriate way to assess the effectiveness of institutions (Boyer, 1987). From this study, Boyer recommended several very specific methods of assessment.

First, to demonstrate the ability of students to write, speak, and think clearly as well as communicate ideas in an effective and integrative way, Boyer suggested that each student prepare a senior thesis related to his/her major dealing with historical, social, and ethical concerns. The senior should then present his/her paper to their peers in a senior seminar, or possibly to the whole college community, making it clear to students, faculty, and administration that the outcomes of education are to be measured by the capacity to integrate and apply knowledge.

Second, Boyer recommended that a senior survey be used to learn how students are influenced by the culture of the institution. A senior survey would be very helpful by providing information about the student such as maturity, personal skills, honesty, acquisition of humane values, objectivity, tolerance and self-understanding (Boyer, 1987).

Finally, Boyer suggested that students be required to show competence in their major. A test that measures knowledge in the major would help institutions to assess programs as well as provide outcomes to all of the universities' constituencies.

Four major conclusions pertaining to outcomes assessment surfaced from this study. First, the common goal of all institutions is to produce learned individuals. Therefore, measuring student learning outcomes is a direct assessment of the institution. Second, to effectively measure if this goal is being accomplished, colleges must first clarify their goals and articulate them to students, faculty, administrators, and all other constituencies. Third, assessment must be initiated by educators, not by the government and politicians. Those outside of education will only look at quantifiable data to assess education, subsequently missing non-quantifiable variables that shape the "whole" educational experience. Finally, the information gained from outcomes assessment must lead to better teaching. The ultimate beneficiary of positive gains from outcomes assessment must be the student, and better teaching increases positive student learning outcomes (Boyer,1987).

Summary

Several major themes were apparent in the review of literature. First, all three authors agreed that student outcomes assessment must be accomplished with the use of multiple measures. Student outcomes are much too complicated and diverse to be measured by just one test or survey. The authors

cite assessment methods such as senior surveys, comprehensive tests, alumni questionnaires, and graduate school entrance exams as helpful in understanding what students learn, what is important to learn, and how to provide a learning-rich environment.

Second, each author mentioned that colleges and universities should employ some sort of testing system to find the answers to two very important questions: How much knowledge and skills do our students have? and, What changes can we make to help them to know more? Ewell, Boyer, and Pace each suggested achievement testing in the major, and all three authors expressed the need to assess learning in the general education curriculum.

Finally, each author recognized that the student should have the most important voice in outcomes assessment. Pace suggested that assessment should answer two questions: How well did college prepare you for additional college work? and, How well did college prepare you for your first job? When these questions are answered by the student, faculty and administrators can begin to understand the ever-changing undergraduate experience and plan for improved outcomes.

II. REVIEW OF STUDENT OUTCOMES STUDIES

Kent State University

Kent State University (KSU) followed five principles in developing a five-year plan for assessment activities.

1. Focusing outcomes assessment on effectiveness of academic programs and on the improvement of student learning and performance
2. Relying on incentives, not regulations or penalties to evaluate assessment and implement improvements
3. Allowing faculty to have a major role in the development of assessment and evaluation programs
4. Encouraging the use of multiple methods of assessment
5. Linking assessment to University-wide strategic planning

KSU's goal is to gather information about students, curriculum, and services that will provide insight into needed program improvements.

Much of the KSU assessment effort lies in the administration of Major Field Achievement Tests in many majors. These tests show the level of academic preparation, with results used to implement program

changes where needed. Other assessment activities include: an alumni survey, non-enrolled freshman study, non-traditional student needs survey, Cooperative Institutional Research Program (CIRP), non-returning student retention and attrition study, and evaluation of assessment methods.

As of this writing, only two assessments have taken place at KSU. First, KSU has undertaken an alumni survey to assess alumni reflections on their educational experience. The survey asked for demographic information, goals as students, degree aspirations, licensing exam information, transfer information, employment information, and evaluation of basic higher order skills attained. The second assessment activity was an assessment of non-enrolled freshmen. This survey was for those students who applied for and were granted admission to KSU but for some reason did not enroll for their freshman year. No conclusions or recommendations have yet been issued.

Ohio University

In response to President Charles Ping's 1980 State of the University Address, Ohio University (OU) has implemented an extensive assessment program. Their goal was to make assessment a multidimensional approach with a University-wide scope. The primary goal was that in five to ten years OU could systematically describe what was happening in its role as an educational institution. The objective was to look at the broad impact of the undergraduate experience, not to measure specific knowledge and s' rom a major field of study. Nationally-normed instruments and locally designed surveys were utilized to provide assessment results. Since 1981, six components--ACT/COMP, Student Involvement Questionnaire, Student Treatment Study, Placement Survey, and Alumni Survey have all helped to target areas needing improvement and recognize excellence in other areas. The following are some results from studies of OU seniors:

1. Senior scores on the ACT/COMP increased steadily from 1982 through 1987. OU attributes this gain to new changes made in problem areas identified by assessment activities. This "value-added" approach allows assesso.. o recommend changes based on quantifiable results.
2. In the senior year at OU, there is greater faculty-student interaction and greater student satisfaction. Seniors reported more frequent formal (advising) and informal (dinners, parties) contact with faculty members. Seniors were also more satisfied with OU (generally) than the same

students were as freshmen. These two findings have a direct relationship with student retention. Researchers have found that with more faculty interaction, a student: a) has a better chance to persist, and b) can be identified if there is a problem and an advisor can intervene to help that student to persist (Williford & Moden, 1989).

3. The OU Placement Study revealed that about 80 percent of the graduates were employed at the time of the surveys (within one year of graduation). Almost all of the graduates (92%) reported being satisfied with the academic preparation they received at OU for their first job or for additional academic work.

Ohio University uses assessment information to improve instruction, improve services, recognize outstanding programs, provide for accreditation review, and to gain a general knowledge of students and programs.

University of Maryland at College Park

The University of Maryland at College Park (UMCP) developed a longitudinal study of assessment beginning in the fall of 1980. Conceived by the Division of Student Affairs, the study's primary objective was to "gather and promote data-based information crucial to an understanding of the characteristics of the diverse individuals who matriculate at UMCP" (Maryland Longitudinal Study Steering Committee, p. 3). This information leads to the realization of more specific goals such as: providing recommendations for improvement of academic departments and student services, gaining knowledge about student perceptions and experiences, studying variables that contribute to retention, and identifying and defining the roles and functions of the University.

Two types of instruments were administered to Maryland Longitudinal Study (MLS) participants: published, standardized instruments and instruments crafted by an assessment Steering Committee. Several instruments were used in one or more years and administered to some or all MLS participants. Each year students completed an instrument package capable of measuring descriptive, vocational,

developmental, personality, and institutional/consumer variables.

The following is a brief summary of the relevant findings:

1. There was a tendency for students in academic jeopardy not to seek tutoring. Only 30% of the students who were placed on academic probation as a result of their first semester at UMCP reported having sought help from tutoring services.
2. Students tended to have an unrealistic expectation of matriculating into a professional or graduate school. As first semester freshmen, 74% of all participants fully intended to continue their education. Over time this intention was very vulnerable to change.
3. There is a correlation between students' commitment to learning and faculty-student contact. Students who reported positive gains in their commitment to learning were those who had positive interactions with faculty members. Conversely, students who saw little or no gain in their commitment to learning were those who had minimal faculty feedback or contact.
4. By the third year in college, there was a tendency for UMCP's brightest students to find fault with their educational experience. These students had high GPAs and a high graduation rate.

Harvard

In his book, Higher Learning, Harvard president Derek Bok urged that every institution of higher education "study the learning process and assess the effects of its programs" (p. 14). For this reason, the Harvard Assessment Seminars were started. About one hundred educators from many different institutions came together to develop a plan to measure student satisfaction and learning. There were three ground rules that guided all research developed in the seminars. First, there was an understanding that the goal of assessment is not to measure "how much students know" but rather to "encourage innovation in teaching, in curriculum, in advising, and then to evaluate the effectiveness of each innovation" (Light, Singer, & Willett,1990, p. 12). Second, although much of the research is done at Harvard, including colleagues from other colleges and universities clearly broadens everyone's perspective. Third, more than 100 participants were divided into small "working groups" which included at least one administrator, one faculty member, and one student. Each group designed its own project or innovation, implemented it and then evaluated it. This "working group" model allowed three separate

perspectives to guide the group. This approach assures that the results are released on a useable level and that several individuals are accountable for the dissemination and use of the data.

Findings were integrated from many different studies conducted at Harvard and other cooperating institutions (Light, Singer, & Willett,1990). The results of these studies were put forth in five main findings and three supplemental findings. First, the studies revealed several differences between women and men students such as: what men and women want from college, how they spend their time, whom they talk to for advice, how they study, and which adults are important to them and affect them. Second, they found that in response to questions dealing with the college experience, alumni and current undergraduates respond almost identically. This shows that the college experiences leave a deep and lasting impression on students and that students' judgments about themselves are not easily or casually changed. Third, crucial features of highly respected courses were identified including: 1) Immediate and detailed feedback on written and oral work; 2) High demands placed on students, but with many opportunities to revise and improve their work before being graded; 3) Many tests, quizzes, papers, and oral exams--again frequently evaluated; 4) It was found that many faculty members innovate to learn how students learn best. Most faculty will develop and introduce new curricula to make their teaching more effective and enhance student learning; 5) Students' academic performance is tied closely to factors outside the classroom. Non-academic behaviors (part-time work, extracurricular activities, etc.) affect course selection, interest, intensity of academic involvement, willingness to take academic risk, and grades.

The studies also revealed the following three supplemental findings. 1) Although it is commonly thought that because of time constraints it is difficult for students to meet with faculty, data suggest that faculty are available for student appointments. 2) Students are concerned about how a small group of students can set the tone on campus. 3) Students who study in small groups do better than those students studying alone. Based on these findings, Harvard has already implemented many innovations and they plan more changes based on continual assessment efforts.

Stanford

The only outcomes assessment information available from Stanford was a senior survey form. In a cover letter, president Donald Kennedy urges seniors to contribute to the knowledge about strengths and weaknesses of undergraduate education at Stanford. He further explains that responses identify trends, confirm mutual goals, and surface disparities between aspirations and accomplishments. The survey includes sections as follows: 1) student assessment of undergraduate programs; 2) student evaluation of current level of knowledge and skill--and how the University affected this; 3) evaluation of the courses taken (general); 4) participation in special university programs; 5) evaluation of academic advising; 6) assessment of quality of student services; 7) impact of classes, student services, and activities on personal growth, academic choices, and educational or career plans; 8) contact with faculty; 9) volunteer service; 10) educational expenses; 11) oversees studies; 12) effect of environment; 13) post-graduation plans.

Although there is no additional support material, two themes are inferred from the survey. First, assessors are interested in the development of the whole student, not just academic preparation. Second, student perceptions are measured, bringing a subjective understanding to the data. It seems as though the Stanford Senior Survey measures extracurricular activities and campus involvement as opposed to strictly academic areas.

Kean College

Student learning is the focus of assessment efforts at Kean College in New Jersey. Towards the understanding and improvement of student learning, president Nathan Weiss created a 70 member Presidential Task Force on Student Learning and Development, and directed them to: 1) study approaches to program assessment at other institutions; 2) identify those measurement approaches to program assessment at other institutions; 3) disseminate information about these approaches to the Kean College community; 4) make policy recommendations for implementing an assessment program at Kean College; and, 5) ensure that appropriate decision-making channels are used to approve recommendations.

The Task Force made twelve recommendations for an assessment program at Kean College. Three of these are particularly noteworthy. First, it was recommended that Kean College use criterion-referenced rather than norm-referenced instruments. This is seen by the Task Force as the best way to measure specific learning because it allows for a subjective look at the data. Second, the Task Force charged each department to clearly specify learning objectives for each course and program, and use valid and reliable assessment instruments. Finally, recognizing diversity in the academic programs, it was recommended that departments be given a choice among five different assessment methods. Two are process oriented, (administered during early points in the undergraduate experience), and three are outcomes oriented (administered to graduating seniors and alumni). Assessors at Kean College recognize that to evaluate learning they must not only look at learning in the academic majors, but also at general education.

To date, all 38 degree-granting programs have begun assessment procedures. Student outcomes, (test scores, survey results, etc.), reveal the strengths and weaknesses of each department which provides the impetus for changes and improvements in the programs.

University of Tennessee, Knoxville

The University of Tennessee, Knoxville's (UTK) assessment program was initiated in response to the Tennessee Higher Education Commission's (THEC) attempt to apply a set of academic performance criteria in funding state colleges and universities. Each state funded institution has a chance to increase their funding award by five percent if they can demonstrate the quality of their programs in an annual report. THEC articulated five standards of quality: the percentage of programs eligible for accreditation that are accredited; the percentage of programs that have undergone peer reviews, that have administered a comprehensive exam to majors within a five-year period, or both; value added by the general education component of the curriculum as measured by the American College Testing College Outcome Measures Project (COMP) exam; opinion concerning the quality of academic programs and services, as measured by surveys of students, alumni, employers, or community members; and implementation of a campus-wide plan for instructional improvement based on findings derived from the procedures just described. Three areas deemed necessary to assess were: achievement in general

education, achievement in the major field, and opinions of students, alumni, employers, and community members.

Trudy Banta, in her article "Performance Funding in Tennessee: Stimulus for Program Improvement" (1987), stated the following four assumptions that underlie the UTK assessment program.

1. [UTK] evaluates the quality of the programs, not the achievements of individual students. Even though students must take achievement tests, the focus is on the mean and the dispersion around the mean, for the purpose of discovering program strengths and weaknesses.
2. No single assessment technique can provide all of the information needed to evaluate a program. Thus several sources of data -- test scores, as well as survey responses--must be used.
3. Assessment information must be integrated and interpreted, disseminated widely, considered by decision makers, and then used to improve programs.
4. Campus assessment programs must be trusted and supported at all levels, by students, faculty, and administrators. Assessment results can not be used to eliminate weak programs, but to focus on improvement efforts.

Along with other already existing data (demographic, GPA, ACT, GRE), UTK began a testing program to test students general education knowledge, and also their preparation in their major. This information, combined with periodic surveys of students, alumnus, and community members, brought up many questions that, when answered, would help UTK to improve its programs and services, not to mention provide for additional funding from the state.

Bowling Green State University

In the spring of 1986 Bowling Green State University (BGSU) developed a pilot study to investigate the feasibility of a Senior Survey. One hundred eighty-nine graduating seniors completed the College Student Experiences Questionnaire (CSEQ), and 29 of those also completed a lengthy interview. The CSEQ measures the "quality of effort" by students responding to a series of activity questions ranging from participation in conversations to formal classroom learning. Student assessment of institutional

climate and relations between campus groups are also included, as well as a section where students estimate their educational gains from college. These data are compared nationally.

As a result of the study BGSU learned several things about its graduating seniors, their undergraduate experience, and the institution. BGSU seniors indicated a high level of satisfaction with college, giving their highest rating to the institutional emphasis on the development of "academic, scholarly, and intellectual" qualities in individuals. Seniors reported their highest estimate of gain as the ability to learn on their own, pursue ideas, and find information they need. Students' lowest estimates of gain were in the arts, literature, and understanding science and technology. BGSU seniors reported similar amounts of writing compared to other students, but lower amounts of non-assigned reading. In the interview students said that academic and non-academic components of the undergraduate experience weighed equally on their overall development.

Several conclusions were drawn from the study. First, the use of a standard instrument (such as CSEQ) could identify trends and assist educational outcomes assessment at BGSU. Second, although students indicated high satisfaction with their college experience, some questions were raised about students' experiences with administrative offices, multi-cultural experience, and their exposure to the arts, and science and technology. Finally, surveys should be distributed to a sample of graduating seniors every other year and on alternating years to specific focus groups (e.g., student-athletes, student activists, Honors students).

Summary

In the review of outcomes studies, there are four components of assessment methods that are very important and deserve another mention. First, successful student outcomes assessment projects such as Ohio University, Harvard University, and University of Tennessee, use multiple measures. Freshman surveys and testing, senior surveys and testing, and alumni questionnaires can all be used. It is important to find out as much information as possible about the student so that faculty and administrators can make informed decisions about changes in the educational environment.

Second, the studies suggest that assessment is best used to improve instruction, encourage innovation in teaching, and to mold the college environment. The ultimate goal is to improve student

learning, and to accomplish this task, it is important to understand the components of effective learning. Improvement of these components will lead to improved instruction, which will lead to improved learning.

Third, successful studies such as Kean College, Harvard University, and University of Maryland, actively seek the student voice in the assessment process. The ultimate beneficiary of any assessment activity is the student. Therefore, it only seems appropriate to ask the student what he or she thinks. Student contribution can help researchers focus assessment efforts and provide valuable insight.

Finally, although improvement of instruction is the most common use of assessment information, many other uses are noted. Successful assessment programs use the information to recognize outstanding programs and teaching, improve retention, improve admissions, and prepare for accreditation review.

III. CONCLUSION

Through the study of the three books and the review of student outcomes assessment programs, this author has come to several conclusions about what essential elements must be present in a successful assessment program. First, any assessment effort must have presidential backing. The president must support the assessment program and understand its utility for the institution. Without such support, many faculty and administrators may see assessment as a personnel evaluation tool, and not as a vehicle for innovation in teaching.

Second, faculty must be heavily involved. The most successful assessment programs are directly controlled by faculty. At the very least, faculty must be able to direct assessment efforts. The goal of outcomes assessment is improved learning through improved instruction, and there needs to be a direct link between assessment information and the faculty it affects.

Third, many methods of assessment must be used to fully understand the undergraduate experience. The most common measurement methods are comprehensive tests and surveys, but there is a need for more and different techniques.

Fourth, it is important to note that assessment is only a small portion of improving student learning. Assessment provides some answers, but it also raises questions. The difficult part is answering those

questions, changing policies and procedures, and improving instruction so that the ultimate goal of improved learning can be realized.

Finally, although it is important to understand the student at each level, measurement during the senior year provides important information about previous years in college, as well as about student perceptions about his/her preparation for life after college. Several studies have shown that using a senior survey can be an effective way of measuring student outcomes. Such a survey should contain items that are relevant to both the students' in, and out-of-class development.

Review of surveys given at Stanford University, Bowling Green State University, Kent State University and University of Minnesota reveal several important features. First, each contained a section on background information. In some instances, the student identification number was requested to match with student records. Second, all of the surveys asked for the seniors' overall assessment of their university experiences. Third, students were asked to rate their course work and instructors. Fourth, on the Stanford survey, the Minnesota survey, and on the CSEQ instrument used at Bowling Green, there were sections specifically about student services and advising. Finally, each survey contained a section questioning students about the campus environment.

Many of the above mentioned universities use a senior survey as a central component in their assessment efforts. Without the use of a senior survey, universities miss the chance to gain valuable information about its students. Implementation of a senior survey program would give faculty and administrators access to information that is essential in the evaluation of academic programs and student services. A model for a comprehensive senior survey is outlined on the following page.

Model Senior Survey

The following is a brief outline of a model senior survey containing sections that this author thinks would be most relevant on a senior survey.

I. Background Information
   - A. College
   - B. Residential Status
   - C. Prior College Experience
   - D. Time to Graduate
   - E. Demographic Information (from Registration and Records if the student ID # is requested)

II. College Environment
   - A. Perceptions of emphasis on academics
   - B. Perceptions of emphasis on student development
   - C. Contact with Faculty and Staff
   - D. Assessment of Student Services and Administrative offices
   - E. Use of Facilities and Services (Library, Rec Center, Art, Music, and Theater)
   - F. Organizations and Activities (Clubs, Volunteer work, etc.)

III. Assessment of Major
   - A. List major
   - B. Perceptions of clearly defined goals of major
   - C. Quality of courses
   - D. Assessment of faculty
   - E. Advising

IV. Assessment of General Education
   - A. Quality of courses
   - B. Relevance of courses
   - C. Assessment of faculty

V. Gains of education/experience
   - A. In major
   - B. General education
   - C. Specific subjects (Math, History, Philosophy, etc.)
   - D. Out of classroom

VI. Overall Assessment of University experience
   - A. Satisfaction with experience
   - B. Choice of institution, would they do it again?
   - C. Free response, write in

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