PROPOSED QUALITY INDICATORS FOR

UNDERGRADUATE EDUCATION ON THE TWIN CITIES CAMPUS

OF THE UNIVERSITY OF MINNESOTA

August 1, 1988

This proposal grew out of discussions of the Quality Indicators Group, an ad hoc committee composed of the following individuals:

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EXECUTIVE SUMMARY

Several current forces suggest that the University should initiate a process to develop a set of quality indicators for undergraduate education. First, several University task force reports in the last five years have called for substantial improvements in undergraduate education and accompanying data to document the effects of those improvements. Second, the University needs to respond to requests from its constituencies about the educational quality on its campuses. Third, the still-growing national assessment movement in undergraduate education is not a fad that will disappear, but represents serious concerns about quality that require prompt institutional attention. Finally, since we need to move forward in thinking about the goals and objectives for the baccalaureate degrees provided by the institution, discussions about quality indicators can inform and be informed by those discussions.

What is presented in this document is a summary of the issues that bear on the development of quality indicators. The document is intended to help us develop an approach that can be supported by all--students, staff, faculty, administrators, regents, and our nonuniversity constituencies. The document at this point is intended for discussion purposes only rather than as a set of indicators to be accepted or rejected. The illustrative indicators represent our collective wisdom about potentially useful ways to define quality in undergraduate education on the Twin Cities campus.

Defining quality in undergraduate education historically has concentrated on three different approaches. They focus on different parts of the educational experience. The first approach concentrates on relevant resources or "inputs." The second approach focuses on educational "processes," including the content and nature of student experiences as well as institutional practices and procedures designed to influence quality. Process variables are especially important to constituencies interested in whether or not the University shows the intention to achieve certain desireable outcomes of undergraduate education. The third approach emphasizes the results or "outcomes" of educational experiences. All three variables should be included in a comprehensive set of quality indicators, although recent discussions about assessment in higher education have focused on the need for more outcome assessment. Looking at outcome measures has value only if you can simultaneously describe the inputs and processes necessary to achieve particular outcomes.

The 18 proposed indicators, classified by type, are as follows:

- Indicator 1: Preparation Requirements (Input)
- Indicator 2: Academic Potential of Entering Students (Input)
- Indicator 3: Students of Color (Input)
- Indicator 4: Advising Resources (Input)
- Indicator 5: Classroom Facilities and Study Space (Input)
- Indicator 6: Retention Rates for Entering Freshmen (Process)
- Indicator 7: Instruction of Lower Division Students (Process)
- Indicator 8: Undergraduate Curriculum (Process)

- Indicator 9: Use of Sound Educational Practices and Principles (Process)
- Indicator 10: Class Size Experiences of Students (Process)
- Indicator 11: Grades Received (Process)
- Indicator 12: Training of Teaching Assistants (Process)
- Indicator 13: Monitoring of Student Experiences (Process)
- Indicator 14: Student Course Evaluations for Large Enrollment Courses (Process)
- Indicator 15: Students' Participation in Key University Activities (Process)
- Indicator 16: Graduates' Performance on Graduate Record Examination (Outcome)
- Indicator 17: Employment Experiences of Graduates (Outcome)
- Indicator 18: Postbaccalaureate Educational Experiences (Outcome)

We propose that the following timetable be followed to move us forward in developing a set of quality indicators:

August 1988:	Discussion of proposal among central officers and representatives of appropriate student and faculty committees. Planning process is established for widespread discussion in the Fall.
September - October 1988:	Discussion and consensus building about indicators worth pursuing.
November 1988:	Small teams established to specify procedures for calculating indicators and to estimate costs of collecting and reporting data.
January 1989:	Revised proposal that includes cost estimates and specifications is discussed.
February 1989:	Final set of indicators adopted.
March 1989 and thereafter:	Mechanisms established for collecting and reporting quality indicators.

INTRODUCTION

When A Commitment to Focus was presented to the Board of Regents on February 8, 1985, it proposed several implementation recommendations to help the University "move with a sense of purpose through this period of transition and into the future"(p.1). Two of the three foci for change were related to the University's undergraduate education mission: (a) to recruit high ability undergraduates who can best benefit from the University's programs; and (b) to improve the quality of our undergraduate programs. The proposal grew out of the University's planning processes in the late 1970s and early 1980s and reflected real and widespread concerns about the quality of undergraduate education provided at the University of Minnesota, especially on the Twin Cities campus.

We have encountered many difficulties in winning support for A Commitment to Focus, not the least of which was skepticism about the University's real commitment to high quality undergraduate education. Constituencies both within and outside the academy expected to support efforts to improve undergraduate education, but expected to see changes occur that confirmed the University's intention to improve the quality of undergraduate education. As an institution, we had a wealth of suggestions about what to improve and how to improve it, but got "bogged down" in moving quickly to make significant, visible improvements. We proposed that we wanted to improve quality by reducing the numbers of undergraduates (but retaining the same funding level that had been based on enrollments) without specifying the nature and extent of improvements that would result from decreased enrollments.

Concurrently, the University was being encouraged by the governor and his staff and by legislators to develop a set of indicators to be used in evaluating the institution's relative success in its attempt to "move forward with a sense of purpose." Numerous discussions within the University during the past three years explored possible strategies for developing indicators of quality, but without consensus to move forward. We waited to see what would happen. Much has happened since then, some of which has been unpleasant and demoralizing to administrators, faculty, staff and students. It is now time for us to initiate a process to develop a set of quality indicators for undergraduate education.

A colleague, Professor Mary Corcoran, once remarked in a discussion about undergraduate education that "you can tell a lot about an organization by identifying the activities and functions for which it keeps good data." What struck me then and now is the paucity of information about the quality of undergraduate education at the University of Minnesota. We readily have available extensive data that summarizes quantitative aspects of undergraduate education (e.g., total number of student credit hours), but relatively little overall institutional data about the quality of what we provide to students. Certainly, there are bits and pieces of information that one could use in making judgments about quality, although no one has been motivated to pull them together and identify specific problems of quality that need to be addressed.

This proposal, which presents the content, framework and rationale for evaluating each of 18 quality indicators, first must be discussed widely and

endorsed by appropriate groups of faculty, students and administrators on campus. Faculty and staff must be involved in developing the indicators if we expect those same individuals to value and use the indicators. The second step, which could take place concurrently with the first step, is to discuss the proposed set of indicators with the University's external constituencies—legislators, educators in other systems in Minnesota (including the K-12 system), and concerned citizens. The third step is to select small teams of individuals, composed of students, faculty and academic and professional staff, to develop a specific proposal for calculating, collecting and summarizing information for each indicator.

We at the University of Minnesota are not alone in our efforts to define educational quality and develop indicators for each of several dimensions of quality. Other large research institutions are concerned about the quality of undergraduate education and the need for increased attention to assessing teaching and learning. The Alliance for Undergraduate Education, a twelve-institution consortium (i.e., University of California, Berkeley; University of California, Los Angeles; University of Illinois; University of Maryland, College Park; University of Michigan; University of Minnesota; University of North Carolina at Chapel Hill; The Ohio State University; The Pennsylvania State University; University of Texas at Austin; University of Washington; and University of Wisconsin, Madison) has spent considerable time discussing the implications for large research institutions. At the recent third annual AAHE Assessment Forum, four of these institutions, including the University of Minnesota (Hendel, 1988a), participated in a panel discussion of their current assessment activities. Approximately 150 individuals attended the panel discussion, which is an indication of the interest in the topic of assessment in large research institutions. Subsequent sections of this document summarize national trends and give examples of quality assessment initiatives in other states and at other colleges and universities.

One of the difficulties in proposing a set of quality assessment indicators is that the terms "assessment" and "quality" can be defined and understood in many different ways. Subsequent sections of this proposal discuss the complicated issues in trying to arrive at a definition of quality in undergraduate education. For purposes of this discussion, we will accept Boyer and Ewell's (1988) definition of assessment as:

> Any process of gathering concrete evidence about the impact and functioning of undergraduate education. The term can apply to processes that provide information about individual students, about curricula or programs, about institutions or about entire systems of institutions. The term encompasses a range of procedures including testing, survey methods, performance measures or feedback to individual students, resulting in both quantitative and qualitative information. (p.3)

In Minnesota, efforts to develop quality indicators in the K-12 system are moving forward and can serve as an illustration to guide the development of indicators for the postsecondary level. The Legislative Commission on

Public Education is currently engaged in a process of determining the criteria to be used in judging educational quality in Minnesota. The Commission hired a consultant to provide them with data about educational goals, possible indicators of educational quality, and information systems to be used in reporting data. A survey of educators, potential employers and citizens is being conducted to determine their views on the above three topics. Here are the twelve possible indicators from the "Educational Goals and Indicators Survey" that are being used to collect data:

- Tests which measure how well students master objectives
- Tests which measure minimum competency at various levels
- Tests which compare students' performance to national standards or norms
- Percent of students who enroll in college or other post-high school education
- Percent of students who participate in extracurricular activities
- Surveys to measure the satisfaction of consumers (students, parents, employers)
- Percent of students needing remedial help from postsecondary institutions
- Evidence of a plan for the achievement of stated educational goals
- Professional qualifications of staff
- Evidence of regular student monitoring and feedback
- Surveys to measure the satisfaction of teachers and administrators
- Evidence of high expectations for student performance

The future health of the University depends on many factors, not the least of which is demonstrated concern for and improvement of undergraduate education on the Twin Cities campus. Institutional quality is just that--a characteristic of the whole rather than a quality possessed by a few of its components. We must demonstrate a commitment to improving the quality of undergraduate education. Developing and using a set of quality indicators will help us reach that goal.

This proposal has two parts. The first part summarizes eight topics central to an understanding of the current status of quality assessment in higher education. Additionally, this overview produced guidelines for constructing the 18 proposed quality indicators found in this proposal. The second part

is a detailed rationale for using each of 18 quality assessment indicators on the Twin Cities campus of the University of Minnesota.

OVERVIEW OF ISSUES IN QUALITY ASSESSMENT

This discussion covers eight interrelated topics that serve as general background for the development of the 18 undergraduate quality indicators. The first topic is a perspective on the ultimate purpose of quality assessment activities. The second topic is an overview of others' attempts to define and measure quality in undergraduate education. The third topic looks at the development of quality indicators within the recent context of assessment initiatives in higher education. The fourth topic relates quality assessment initiatives to concerns for increased accountability of colleges and universities. The fifth section gives examples of quality assessment efforts at other institutions. The sixth section focuses on the role of standardized testing in the recent wave of assessment initiatives. The seventh section connects national and state concerns about educational quality to University-based reports focusing on the quality of undergraduate education. The final section presents a set of guidelines in developing quality assessment indicators.

1. The Purpose of Quality Assessment

Currently assessment is viewed as the predominant means through which improvement in teaching and learning can occur, although in recent decades other institutional efforts (e.g., faculty development, curriculum revision) were viewed as the primary approach. If assessment activities improve the quality of undergraduate education, an important criteria in evaluating them is the degree to which their results can be linked to institutional initiatives and policies which support quality in undergraduate education. Quality assessment can occur at many levels--at the institutional level, at the department level, at the course level, and at the student level. The more remote the assessment is from the actual experiences of the students, the more difficult it is to use assessment for purposes of instructional improvement. This principle is most evident when we try to determine what students have learned in college. A psychology professor can determine whether or not students understand and can apply the principle of reinforcement and, if students neither understand nor can apply the principle, can take appropriate steps to clarify the misunderstanding. Cross (1988) continually reminds us of the need to insure that assessment matters: "Most people think of assessment as a large-scale testing program conducted at institutional or state levels to determine what students have learned in college. I believe that we should be giving more attention to small-scale assessments conducted continuously in college classrooms by discipline-based teachers to determine what students are learning in that class" (p.1).

Assessing the quality of undergraduate education will, in the minds of many, do little to improve undergraduate education unless the University's incentive system vis a vis undergraduate education changes. Over the past

five years, this concern has been voiced repeatedly in committee meetings and is explicit in the reports of several task forces (e.g., "Committee on the Quality of Undergraduate Teaching and Learning," "Final Report of the Implementation Task Force on Undergraduate Education on the Twin Cities Campus.") There is considerable skepticism on campus about expending resources to assess undergraduate education if there is no institutional commitment to allocate resources to improve specific aspects of undergraduate education.

Curricular reform is one of the possible results of quality assessment efforts focused on student learning. In order for this reform to occur, students' curricular choices (i.e., the courses they completed) must be described and related to learning outcomes. The Differential Coursework Patterns Project (DCPP; Ratcliff, 1988) is a project funded by the U.S. Department of Education to determine the associated effects of different college coursework patterns on general learned abilities of students in six institutions (i.e., Clayton State College, Evergreen State College, Georgia State University, Ithaca College, Mills College, and Stanford University). This project and its results can provide us with a useful model for using assessment activities to revise undergraduate curricula.

As we move forward in developing a set of quality indicators we must be certain to pay equal attention to the processes in place that: (a) reward quality in undergraduate education; and (b) offer assistance and financial support to improve quality. No one wants to develop an intensive, costly set of indicators that exist separately from other decision making processes already in place in the institution. We must not lose sight of the ultimate goal of improving undergraduate education.

2. Definitions of Quality in Undergraduate Education

Robert Persig, in his book Zen and the Art of Motorcycle Maintenance (1974), speaks to us about the dilemma we face when we try to define quality in undergraduate education:

> Quality...you know what it is, yet you don't know what it is. But that's self-contradictory. But some things are better than others, that is, they have more quality. But when you try to say what the quality is, apart from the things that have it, it all goes poof. There's nothing to talk about. But if you can't say what Quality is, how do you know what it is, or do you know that it even exists? (p. 184).

This elusive view of the meaning of quality in undergraduate education has been noted by others as well. Tan (1986), in an article that discusses the problems associated with measuring quality, noted that "quality, like beauty, is in the eye of the beholder; it has a different meaning for different people" (p.224). Astin (1986) summarizes five approaches to measuring quality: nihilist approaches, reputational measures, resources indicators, outcomes measures, and value added approach. The nihilist

approach is similar to Pirsig's view that defining and measuring quality is an impossible task. According to Levine (1986), the attitude that we cannot define quality but that we know it when we see it, is destructive to building confidence in American higher education.

Fortunately, there is much to learn from the other four approaches noted by Astin that we can use in developing a set of quality indicators for the Twin Cities campus of the University of Minnesota. Astin, once a strong advocate of value added approaches (i.e., what does a college education do to change students' knowledge, skills, and values), is now proposing that institutions use indicators of how resources are used, not simply the existence of overall resources as input, in defining educational quality. Tan (1986), in his review of types of variables used in quality assessment, hypothesizes that "excellent institutions would be those which can affect significantly the intellectual and scholarly development of students" (p. 261). Pascarella (1987) gives a cautious endorsement of value added approaches, but only if they focus on specific outcome measures. Astin also suggests that we use two criteria in evaluating a quality indicator: (a) does it reflect what faculty, administrators and students mean when they refer to quality? and (b) does using the indicator have specific implications for improving institutional quality? These two criteria serve as one useful basis for evaluating the eighteen indicators described in this proposal.

The research literature on the definition and measurement of quality in higher education is focused on the quality of graduate and professional institutions, although some work (e.g., Solomon and Astin, 1981) has focused specifically on quality in undergraduate programs. Solomon and Astin studied seven departments (i.e., biology, business, chemistry, economics, English, history, and sociology) and found that those institutions with high graduate ratings were also judged to be the best undergraduate institutions. Tan's (1986) excellent review of the three approaches to measuring institutional quality (i.e. reputational studies, objective indicator studies) provides the basis for some general comments about the three approaches to measuring institutional quality.

The reputational approach, initially sponsored by the American Council on Education and developed to help baccalaureate graduates choose graduate or professional institutions, was first used by Cartter (1966). Cartter's approach used the peer evaluations of a panel of judges to make evaluative judgments on two dimensions: quality of graduate faculty, and effectiveness of the doctoral program. Subsequent studies by Roose and Anderson (1970) increased the number of programs studied and addressed some of the methodological limitations of Cartter's work, but continued to focus on perceived quality. One of the problems with a reputational approach to defining quality undergraduate education is that it fails to suggest steps to improve institutional quality.

Objective indicator studies (Tan, 1986) use five categories of variables: faculty variables, student variables (e.g., number of students and selectivity), measures of institutional or departmental resources, outcome measures for graduate and professional school students, and multiple

criteria. The strength of this approach lies in its objective measurement of quality. The problem with this approach is that most studies of this type have made the assumption that faculty research productivity is the major indicator of quality. Clearly, other types of variables and definitions of quality are necessary to develop a meaningful set of indicators to reflect quality in undergraduate education.

The quantitative correlates studies (e.g., Conrad and Blackburn, 1986) are, in a sense, a combination of the first two types of studies. These studies identify variables that are correlated with high institutional reputations for graduate and professional education. Although studies of this sort help us better understand the meaning of results of reputational studies, the lack of a theoretical basis for defining educational quality weakens the implications and usefulness of this approach.

Of all of the recent reports on the quality of undergraduate education, Involvement in Learning (1984) is the most prescriptive about what contributes to excellence in undergraduate education. Three critical conditions of excellence are noted as being essential to improving undergraduate education: involving students, communicating high expectations, and increasing student feedback and assessment. Chickering and Gamson (1987) added four additional criteria and proposed them in an article "Seven Principles of Good Practice in Undergraduate Education."

Insights about the quality of undergraduate education come, too, from an analysis of variables that do not relate consistently or logically to observed or perceived quality. Levine (1986), in a presentation about misconceptions about quality, listed six myths about quality: (a) the more money an institution has, the better its quality; (b) selectivity, in the form of high admissions standards, is synonymous with excellence; (c) quality resides in only certain types of institutions; (d) one course of study is higher quality than another; (e) one type of instruction is of higher quality than others; and (f) quality is not a measure of everything colleges do that are beneficial to students. He concluded by noting, "I think quality is the key issue in higher education today.... In this respect, quality is a measure of the best a particular institution is capable of achieving. It is a standard that necessarily varies from college to college" (p. 29).

3. Assessment Background in the Development of Quality Indicators

Edgerton (1986), in a cleverly written article entitled, "An assessment of assessment" in the 1986 ETS Invitational Conference Proceedings, talks about "assessment as a play that has unfolded in four acts" (p. 93). In Act I, assessment began in the selection of officers in the military and concluded with the selection of individuals for managerial careers. In Act II, assessment came onto college campuses to help faculty and counselors make difficult decisions about admitting experienced adult learners. In Act III in the 1970s and 1980s, legislators and governors became concerned about the quality of undergraduate education, often linked with concerns about the

states' economy. In the final Act, the scene now taking place on college and university campuses across the country, administrators, faculty, and students are working together to define and assess the quality of undergraduate education.

Concerns about defining and measuring quality in American higher education are one of the "market-forces" that distinguish our system from those in other countries (Trow, 1988). Although the federal government supplies only one-fourth of the financial support for American higher education, its influence can be dramatic as evidenced by the impact of pronouncements by Secretary of Education, William Bennett. According to Trow, American higher education expenditure in 1985-86 accounted for 2.5 percent of the nations' gross national product ($102 billion). Hartle (1986), in his overview of the current interest in assessment, concluded that "assessment is not likely to be a fad" (p. 8) and that "the issue will not quickly fade away" (p. 9).

Although there is considerable recent interest in quality assessment in American higher education, we have relatively few reliable and valid methods for assessing important variables that affect college student learning. Bok (1986) noted that colleges and universities spend little time in efforts directed at research aimed at improving student learning, but considerable time debating what students should learn. Bok concluded: "At present, universities have no adequate way of measuring the effects of undergraduate education or assessing the methods of instruction they employ. This is a serious defect" (p. 23).

If one accepts the need for increased assessment of educational quality, some (e.g., Bowen, 1986) argue that the assessment should be based on the institution's successes in changing students, a "value added" approach to quality assessment. The first step, then, is to define goal areas and assess changes in students as a result of undergraduate education. Bowen suggests five goal areas: cognitive development, aesthetic sensibility, emotional and moral development, practical competence, and direct satisfaction and enjoyment from college education. One of the problems with this approach on our campus is the lack of processes in place to develop a consensus about the goals for undergraduate education.

In his paper "Assessment with open eyes: Pitfalls in studying student outcomes", Terenzini (1988) suggests that assessment requires consideration of these questions: "What <u>should</u> a student get out of college?, What should a student get out of attending <u>this</u> college?, and What <u>does</u> a student get from attending this college?" These three questions serve as the starting place for developing a comprehensive outcome assessment plan for the University of Minnesota.

4. Accountability and Quality Assessment Initiatives

Although the previous section outlined some of the research on quality indicators in higher education, it did not put recent developments in the context of increasing requests to colleges and universities for new

assessment initiatives that document the educational outcomes of higher education. One might make a comparison with the research on the quality of undergraduate education, which has shifted from an emphasis on input and processes to a concern for outcome measures (Nettles, 1987). The results of a survey of the 50 states, conducted by the Education Commission of the States (Boyer, Ewell, Finney, and Mingle, 1987) indicated that two-thirds of the states had formal assessment initiatives in place. Although there is a considerable role for the state governments and legislatures to play, the responsibility for planning and implementing quality assessment initiatives is an institutional responsibility.

Wilson (1984) defines accountability as "a persistent demand levied on universities by external sponsoring authorities and agencies," and as "the fraternal twin of institutional autonomy" (p. 11). This view suggests that it is crucial for institutions to be quickly responsive and responsible in terms of providing appropriate data about the quality of undergraduate education, as well as data about an institution's other missions and activities. The question then becomes one of identifying the set of quality indicators that an institution decides is appropriate to provide to its external constituencies.

External constituencies have, in a sense, an "information gap" relative to what they know about the quality of undergraduate education on the Twin Cities campus. This may be due, in part, to the perceived low priority that undergraduate education has had during the past three decades. Some of the increasing demands for new quality assessment initiatives come from our failure to communicate with our external constituencies what is already known about the quality of undergraduate education on the Twin Cities campus. By way of contrast, there are very strong perceptions about features of the University that are being correlated with poor quality (e.g., large class sizes and infrequent contact between students and faculty). The implication of this discussion is that developing and implementing a quality indicators program requires the expertise of public relations consultants who can help us develop a strategy for communicating quality assessment indicators to our constituencies.

Trow (1988) connects the increased accountability requirements by states to increased financial support for colleges and universities: "The fifty states have increased their support for the public sector of higher education, they have demanded greater accountability from the colleges and universities for the use of these funds" (p. 22). Hartle (1986) suggests that colleges take a leadership role in developing quality assessment efforts that "meet the publics' interest while possessing institutional autonomy" (p. 9). According to Tan, "our obsession with quality is speculated to be inherent in our democratic culture, in which competition and excellence are central values" (p. 224).

5. Quality Assessment Efforts at Other Institutions

As previously noted, assessment of undergraduate education is a focus for new initiatives in many other states and institutions. Although it is beyond the scope of this proposal to do an exhaustive review of other quality assessment activities, brief summaries of efforts elsewhere help put our efforts into an appropriate national context.

First, we in Minnesota need to continue to learn from successes and failures in other states. Second, the chronologies of events in five case study states (i.e., Colorado, Missouri, New Jersey, South Dakota, and Virginia) described by Boyer and Ewell (1988b) suggest a start-up period of at least three years. Third, state-based quality assessment initiatives must respond to the particular state's concerns about quality and, more importantly, must be consistent with the governing policies and procedures within the state. Finally, state-based approaches to assessment have been most successful when institutional and system initiatives have been encouraged and supported, rather than when states have predetermined particular approaches to quality assessment.

Six different types of activities characterize the range of quality assessment initiatives at other institutions: (a) faculty initiated quality assessment projects directed at particular quality assessment dimensions; (b) the development of centers for research on undergraduate education; (c) comprehensive assessment systems that are closely linked with institutional goals and, in some cases, legislative funding; (d) applications of educational evaluation to develop campus-based assessment initiatives; (e) the development of undergraduate quality indicators as part of a comprehensive set of institutional quality indicators; and (f) attempts to include quality assessment activities in institutional initiatives designed to improve undergraduate education.

Faculty-initiated quality assessment projects constitute the first type of activity. The Harvard Seminar on Assessment, now at the end of its second year, is an ongoing forum for faculty and administrators to develop concrete assessment projects. The seminar, led by Professor Richard Light of the John F. Kennedy School of Government at Harvard, consists of about 90 regular participants, including 60 faculty and administrators from Harvard and 30 from other colleges and governmental agencies in the area. The goal of the activity is to encourage faculty research that is directed at improving the college experience, rather than in providing institutional quality assessment data. As such, it resembles the proposed activities on our campus suggested in the report, "Practical Steps Toward Enhancing our Understanding of and Impact on the Undergraduate Experience at the University of Minnesota" (Peterson and Hendel, 1987).

The second type of activity is one that assigns quality assessment initiatives as one of the responsibilities to be assumed by new research centers on campus. Among this type of activity are those at the University of Arizona and Indiana University. The Arizona plan, the results of a committee chaired by Clifton Conrad, called for the establishment of a

Center for Research on Undergraduate Education, effective January 1, 1988, to begin developing a framework for institutional quality assessment. The four areas to be addressed were: comprehensive assessment of the quality of the institutional environment, student learning and development outcomes, value added student learning, and the relationship between the environment and student learning. The committee further recommended that the first two years of the center's work be an experimental period during which various assessment approaches be used on a pilot basis. Indiana University's three-part process is similar to Arizona's: Appoint an assessment planning committee, create an assessment resource center, and implement pilot assessment measures. Undoubtedly, given the pressures many institutions are under to increase assessment activities, centers have been created in numerous other institutions. This approach has been discussed as a possible strategy for the University of Minnesota. The structure and objectives for such a center are described in the report, "Proposal to Create a Centralized Research Center on the Twin Cities Campus for Research on Undergraduate Education" (Merwin, 1987).

The third type of activity includes those institutions that developed, prior to the recent surge of interest in quality assessment, comprehensive systems to define and examine changes in the quality of undergraduate education. Among these are systems at Northeast Missouri State University, the University of Tennessee, Ohio University, and Alverno College. The University of Tennessee's complex system, stimulated by linking state funding to demonstrated improvements in undergraduate education, is used across their campuses. Northeast Missouri State University's approach is a primary example of a value added approach. Ohio University's approach (Moden, 1987), in place for seven years, includes six components including value, added testing, measures of social and academic integration, and alumni outcome measures. Alverno's approach (Mentkowski and Loacker, 1985) focuses on student outcomes as the centerpiece of assessment activities. What is unique about their approach is that assessment of student outcomes in eight ability dimensions (e.g., problem solving, aesthetic response, taking environmental responsibility) is intimately connected to curricular design issues.

A fourth type of activity adapts educational evaluation models for use as a tool in quality assessment. This approach, exemplified by work under way at St. Olaf College (Thomas, 1987), begins by discussing the relevant input, process, and outcome dimensions to be used. The second step specifies intended educational outcomes, develops indicators for each of the dimensions, and articulates standards to be used in making judgments about quality. This approach is especially useful in working with groups of faculty and administrators to develop an agreed-upon set of indicators of the quality of undergraduate education, although it is problematic to implement in large, diverse faculties characteristic of institutions such as the University of Minnesota.

A fifth type of activity is the attempt to collect, analyze and disseminate quality indicator data about undergraduate education within the context of a total set of institutional quality indicators. In 1982, the State Board of

Education in Florida required that postsecondary systems develop specific indicators of quality to be used in setting quality improvement goals, in justifying budget requests, and in evaluating the results of efforts to improve quality. In their outline of the set of indicators from the Florida University System, Coles, Cullar and Mitchell (1987) made the point that each of the quality indicators should address a particular policy issue. Although Florida's Indicators Program is quite different from the one being proposed for the University of Minnesota, it is described below as an example of a set of indicators.

Florida's Indicators Program contains 21 indicators of quality, nine of which are referred to as "upper-quartile" indicators and twelve of which are referred to as "foundational" indicators. The upper-quartile indicators are those for which national comparison data are available. The foundational indicators reflect institutional indices which are more closely related to educational quality, but cannot be evaluated relative to national norms. The nine upper-quartile indicators are: mean faculty salaries, mean faculty salaries by rank, number of enrolled National Merit Scholars, state financial aid per student headcount, state appropriations per student headcount, number of scientists and engineers employed, rank of research libraries, number of Phi Beta Kappa chapters, and national reputation of rank. The twelve foundational measures are pre-post comparisons on the College Level Academic Skills Test, findings of follow-up placement, licensure examination, success of graduates, GRE scores of graduates receiving baccalaureate degrees, percent of faculty by highest degree, admission test scores, number of endowed chairs, specialized or professional accreditation, student-faculty ratio, employment goals for equal access and opportunity, student minority recruitment, and contract and grant funding per faculty. Of the nine upper-quartile measures, six are input indicators, two are process indicators, and one is a reputational indicator. Of the twelve foundational indicators, three are input measure, five are process measures, and four are output indicators. Coles, Cullar and Mitchell (1987) concluded: "Regardless of the shortcomings, the indicators reports are providing information which is potentially helpful in policy analysis and decision making" (p. 16).

The final type of activity is student assessment that is closely tied to institutional efforts directed at improving undergraduate education. Some of these efforts are closely tied to major curriculum revision projects, two examples of which are at the University of Minnesota (i.e., Project Prosper at Morris and Project Sunrise in the College of Agriculture). Others are focused on particular aspects of undergraduate education in need of improvement. For example, at the University of Pittsburgh (Weingartner, 1987) four semi-autonomous subcommittees have been charged with developing a plan for improvement in these areas: institution-wide baccalaureate requirements, improving undergraduate learning, broadening curricular perspectives, and capitalizing on institutional strengths.

6. The Role of Standardized Testing

Many of the suggested reforms in undergraduate education focus on concerns about what students are learning in the nation's colleges and universities. Some of these concerns are related to hypothesized decreases in academic rigor as higher education accommodated to the needs of less well-prepared students who entered colleges and universities in the 1970s. Some concerns are a reaction to studies comparing the performance of our graduates with those of other countries. Other concerns were the result of a "spill-over" to postsecondary education from demonstrated poor learning outcomes in elementary and secondary education. Not surprisingly, each of the above concerns was stimulated, in part, by data collected from standardized tests developed to measure student learning.

Although assessment activities can focus on inputs, processes or outcomes, outcomes assessment has been emphasized in the recent wave of concern about quality in higher education. Some institutions, such as the University of Texas at Austin (Hanson, 1988), have focused on students' assessments of educational goal attainment as a means for assessing college outcomes. This approach was first used at the University of Minnesota decades ago when Robert Pace conducted pioneering research in the General College. Although student assessment of goals attained is an important component of outcomes assessment, most of the recent efforts have focused on the use of tests to directly assess student learning.

Many of the new institutional assessment efforts (e.g. Northeast Missouri State University, Alverno College, University of Tennessee) focus heavily on data collected from standardized tests. A test-based quality assessment approach is likely to be viewed positively by state legislators, since they have had considerable familiarity testing students in the college arena. As Marchese (1987) has noted, a test-based system can pose serious problems as a sole criterion measure in quality assessment in higher education: "Applied to a different enterprise --a college--that tradition can be dangerous" (p. 5), since "Assessment per se guarantees nothing by way of improvement, no more than a thermometer cures a fever" (p. 7). Articles by Bok (1986), Bowen (1986), and Chandler (1987) have voiced similar concerns about test-based quality assessment programs.

Steele (1988), in a review of the validity and reliability of measures of general education outcomes, discusses how the result of standardized tests, such as the College Outcome Measures Program (COMP), can be used to improve programs and curricula at particular institutions. He notes that "over the last twelve years almost five hundred colleges and universities have utilized the tests and services of COMP" (p.3). The four case studies he presents (i.e., Bethany Lutheran College, Our Lady of the Lake University, the University of Puget Sound and Austin Peay State University) illustrate how standardized test results can influence curricular decisions at particular institutions that place a high emphasis on general education.

The emphasis on testing learning outcomes is less problematic in those systems that include tests other than nationally standardized ones. Banta

and Schneider (1986), in their paper on the experiences of 14 departments at the University of Tennessee which use locally developed exit examinations for majors, suggest that locally developed examinations can be useful in evaluating curriculum and instruction in particular units. One of the problems, of course, is that developing valid and reliable examinations is an expensive, time-consuming process that few institutions are willing to follow. The University of Tennessee also uses other tests, such as the ACT COMP Exam and the Academic Profile, and is able to contrast the usefulness of nationally standardized versus locally developed examinations (Banta and Pike, 1988).

The pressures on the University of Minnesota to develop and use tests that document learning outcomes of a baccalaureate degree are likely to increase in the future. We are moving forward in several small ways, including a Spring 1988 research study using the Academic Profile, developed by ETS, and the College Outcome Measures Project, developed by ACT. Before we can adopt, as a campus, either a test or an approach to testing baccalaureate graduates, we must first develop a process to bring faculty together to discuss curriculum and related learning outcomes. Until we compile that discussion, any selection of learning outcome measures for all baccalaureate graduates is premature. When we are at that point, we must use the scholarly resources available to us to help assess college student learning. One of the best resources is Adelman's (1988) Performance and Judgment: Essays on Principles and Practices in the Assessment of College Student Learning. It is appropriate at this time, however, to use certain test data for important subgroups of students (e.g., GRE scores for baccalaureate graduates interested in attending graduate school). If we are to proceed as a campus to assess outcomes in particular areas, we must be prepared to devote extensive resources to develop learning outcome measures that are reliable, valid and compatible with our institutional goals and climate. One possible area for us to develop learning outcomes is in writing assessments for our baccalaureate graduates.

Wallace (1986), in a paper entitled "What undergraduates learn: The role of assessment in large research universities," emphasized the importance of the assessment of quality of undergraduate education "because these institutions set standards, public perceptions, and expectations for much of the education system and because they provide directly the undergraduate education for large numbers of the ablest and most favored students in the society, people who as graduates will be leaders in all of the institutions of society " (p. 15). He suggested that the insufficient purposiveness vis a vis undergraduate education in institutions such as ours requires the following seven special considerations in the design of assessment activities:

- Assessment of learning outcomes should be part of a framework of deliberation, inquiry, and action that the faculty trusts.

- Assessment of learning outcomes should be part of a framework that students and employers trust.

- Seek assessment strategies that emphasize continuities with learning in the schools and build on progress in assessment that have been made in the K-12 system.

- Seek opportunities to use formal assessment of learning outcomes to generate a sense of community and shared enterprise in large, complex research universities.

- Beware of simple distinctions between learning process and learning product where complex learning is concerned.

- Look for opportunities to increase our use of intensively evaluated pilot programs.

- Be pragmatic about issues of scope and scale; we should dare to think small as well as large. (pp. 10-12).

7. Connections and Local Concerns About Undergraduate Education

The need to develop a set of quality indicators for undergraduate education on the Twin Cities campus has been the subject of discussion in several task forces and committees during the past five years. The foreword to "The Final Report of the Task Force on the Student Experience" (July 1984) included the following statement: "Undergraduate education has been virtually everyone's responsibility, and in reality that has meant that it is no one's responsibility. We believe that it is imperative to focus that responsibility and to accompany it with commensurate authority" (p. 1). The report went on to address seven "issues regarding the quality of teaching and learning at the University" (i.e., student preparation for lower division, allocation of teaching resources to the lower division, course accessibility for undergraduates, stronger sense of community among undergraduates, active learning strategies, problems associated with large classes, and one-to-one interaction between students and faculty), but did not call for the development of a set of quality indicators to monitor improvements in undergraduate education.

More recently, other reports have been more specific in making recommendations about needed quality data and the processes necessary to insure that the data be used to improve the quality of undergraduate education. "The Final Report of the Special Committee on Minority Programs in Support of Commitment To Focus" (May 1987) recommended "that the University allocate resources to develop a comprehensive, centralized, computerized data system to facilitate monitoring the progress of minority students..." (p. 10). "The Final Report of the Implementation Task Force on Undergraduate Education on the Twin Cities Campus of the University of Minnesota" (June 1987) recommended two mechanisms related to the University's goals for undergraduate education: "The first is primarily administrative--to monitor overall performance and to ensure that policies and administrative practices are changed as needed to control enrollments and to improve undergraduate education" (p. 19). That report also located

this function in the Office of the Provost and specified three necessary activities: (a) to gather information, (b) to distribute that information to those who must act to change performance, and (c) to design mechanisms to make sure the information is acted on and that the University's performance improves as a result. Finally, the report suggested that four trends of information--context variables, input variables, process variables and output variables--should be included in a comprehensive system to monitor the effectiveness of undergraduate education.

Another report, "Preparing For the Twenty-First Century: Background Paper For a Discussion at the University of Minnesota Twin Cities Campus" (September 1987), included a section on undergraduate education and noted several problems (e.g., lower division advising and the need for active learning opportunities) that need to be addressed. That report suggested that data about improvements in undergraduate education is a critical component of University planning: "Success in planning can be judged only by observable changes in outcome of our programs. Planning succeeds only to the extent that we can point to teaching, research and service of higher quality, and more responsive to the needs of the public that we serve" (p. 1).

8. Guidelines in Developing Quality Assessment Indicators

The experiences of many states, institutions, and assessment experts have yielded a rich set of guidelines for us to follow in thinking about how to set up a quality indicators program for the University of Minnesota. The fact that we are a somewhat late entrant to the quality assessment arena means that we can benefit from the mistakes and successes of others.

Nettles (1987), in a publication sponsored by the New Jersey State College Governing Boards Association, listed five principles in developing quality assessment indicators: (a) use multidimensional indicators rather than a simple indicator; (b) develop indicators that exceed minimum standards; (c) develop indicators with realistic expectations to fulfill goals; (d) provide for analysis of data to examine the effects of assessment on improving teaching and learning; and (e) use assessment activities that yield dividends worth the investment. Nettles highlighted the important role of assessing learning in his statement: "Because the primary mission of higher education institutions is providing instruction, it is quite appropriate that student learning and development be the centerpiece of assessment policies" (p. 14).

Ewell (1987a, 1987b) has articulated several principles about how institutions should deal with the increasing requests for assessment initiatives and accountability data. He views quality assessment as being based on two key concepts. The first concept is that of choice, suggesting that no institution can investigate all of the quality assessment dimensions that might be of value to the institution. The second concept is that of quality assessment as a "program," a visible, integrated, ongoing effort of an institution to communicate to constituencies relevant data about the

quality of undergraduate education. His three principles for institutions initiating quality assessment efforts are: respond visibly, build or strengthen (including using existing data), and show action by making quality assessment activities part of important administrative processes. Ewell (1987b) suggests that the dilemma most institutions now face concerns "how to meet growing demands for accountability and at the same time undertake serious internal investigations of instructional effectiveness" (p. 1). The challenge for the University is to develop a set of quality indicators that answers important questions posed by the institution's constituencies and, at the same time, suggests areas in need of improvement, thereby leading to the improvement of quality in undergraduate education.

Developing an appropriate set of quality indicators and assessment processes depends, as well, on the compatibility between those indicators and processes and an institution's value structure. Indicators should be developed that reflect commonly held beliefs about institutional strengths and weaknesses. What that suggests for the Twin Cities campus of the University of Minnesota is that the indicators reflect concerns abut undergraduate education expressed in recent task force reports (e.g., "Final Report of the Task Force on the Student Experience" (July 1984), "The Committee on Quality Undergraduate Teaching and Learning" (August 1985), "The Special Committee on Unified and Increased Preparation Requirements" (March 1986), "The Special Committee on Coordinating Lower-Division Education on the Twin Cities Campus" (May 1986), and "The Implementation Task Force on Undergraduate Education on the Twin Cities Campus" (June 1987).

A related issue concerns an institution's motivation and energy available to develop a set of quality indicators. Rossman (1987) makes the point that an institution's attention to other issues may be so intense that faculty and administrators may not have sufficient energy to launch major quality assessment indicators. The attention given to A Commitment to Focus may explain why developing a set of quality indicators has been difficult to accomplish in the last few years. Ironically, developing a set of quality indicators for undergraduate education is entirely consistent with the goal articulated in A Commitment to Focus, "to focus on improving the quality of our undergraduate programs." Ewell (1987a) speaks to these concerns as follows: "Determining an appropriate assessment approach is an art that depends upon...and upon an accurate diagnosis of the local organizational and political climate" (p. 25).

Finally, in these times of financial restrictions and expectations about the decreasing availability of funding, developing the initial set of quality indicators should require limited additional financial resources. We should expect to incur some costs while discussing this draft and developing a set of operationally defined indicators. Overlooking such expenditures is one reason why assessment costs "are frequently and seriously underestimated" (Lewis and Wasecha, 1987). Ewell (1987b) and Nettles (1987) also have noted the importance of developing assessment approaches that are cost effective. The set of quality indicators being proposed for the Twin Cities Campus involves collecting relatively little additional information, since most of

the indicators will be based on data and processes already in place on campus.

The Task Force on Post-Secondary Quality Assessment was established in 1987 by the Minnesota Legislature to study and to make recommendations concerning quality assessment. An important conclusion in that groups' preliminary report (1988) is that "every state develops its quality assessment programs under different circumstances." Within Minnesota, the fact that postsecondary institutions traditionally assume considerable autonomy suggests that assessment activities be developed to meet the needs of particular institutions. The preliminary report contained a set of ten guiding principles for developing assessment policies and practices. Those principles served as one of the foundations used in proposing the set of indicators contained in this preliminary proposal, of which the most relevant are the following:

- Principle 2: Multiple and varied measures are more desirable than a single, standardized exam,
- Principle 3: Keep the number of assessment dimensions to a manageable number,
- Principle 6: Data collected should build upon existing data and should reflect the campus master plan, and
- Principle 8: Outcomes assessment should yield information to decision makers about the quality of the educational experience.

RATIONALE FOR PROPOSED INDICATORS

The indicators that follow may be considered as key questions which students, faculty, administrators and citizens of Minnesota pose about the quality of undergraduate education on the Twin Cities campus. We need to think about the appropriateness of these indicators for an international, research, land grant institution. Some indicators may be in conflict with others (e.g., indicators of student access versus indicators of student selectivity.) Many of the questions relate to processes and inputs, since, rightly or wrongly, there is considerably less concern in Minnesota about what students are learning in our colleges and universities. Part of why this is true may be the perceived and actual high quality educational opportunities, from kindergarten to graduate school, in the State of Minnesota.

In preparing this list of 18 indicators for discussion, many others were considered. Astin's (1985) concept of student involvement is an important umbrella for many institutional activities, but is too broad to be defined clearly. Indicators of course availability speak to how well the University is doing in delivering the courses students want and need, but no systems are in place to describe course demand, except for class closure dates. Other indicators reflecting faculty perceptions about quality (e.g., the

number of children of faculty who enroll at the University) were also considered as possible indicators. These and other possible indicators certainly may replace some of the 18 proposed indicators in the process of discussing this document.

Comments about the proposed indicators include some discussion of the need for strategies for summarizing and disseminating the quality indicators. All activities within the University must connect these undergraduate education indicators to departmental and collegiate data, or else the proposed quality indicators will be perceived as unimportant and without implications for accountability and improvement. Some of the indicators may have primary value within the University, whereas others may be more valuable for external constituencies. Certain committees on campus (e.g., Senate Committee on Educational Policy and the Assembly Committee on Undergraduate Education) have a critical role in formulating guidelines about the use and dissemination of the quality indicators.

Defining quality in undergraduate education historically has concentrated on three different approaches. They focus on different parts of the educational experience. The first approach concentrates on relevant resources or "inputs." The second approach focuses on educational "processes," including the content and nature of student experiences as well as institutional practices and procedures. Process variables are especially important to constituencies interested in whether or not the University shows the intention to achieve certain desireable outcomes of undergraduate education. The third approach emphasizes the results or "outcomes" of educational experiences. All three variables should be included in a comprehensive set of quality indicators, although recent discussions about assessment in higher education have focused on the need for more outcome assessment. Looking at outcome measures has value only if you can simultaneously describe the inputs and processes necessary to achieve particular outcomes.

The 18 indicators described on the following pages, classified by type, are as follows:

- Indicator 1: Preparation Requirements (Input)
- Indicator 2: Academic Potential of Entering Students (Input)
- Indicator 3: Students of Color (Input)
- Indicator 4: Advising Resources (Input)
- Indicator 5: Classroom Facilities and Study Space (Input)
- Indicator 6: Retention Rates for Entering Freshmen (Process)
- Indicator 7: Instruction of Lower Division Students (Process)
- Indicator 8: Undergraduate Curriculum (Process)
- Indicator 9: Use of Sound Educational Practices and Principles (Process)
- Indicator 10: Class Size Experiences of Students (Process)
- Indicator 11: Grades Received (Process)
- Indicator 12: Training of Teaching Assistants (Process)
- Indicator 13: Monitoring of Student Experiences (Process)

- Indicator 14: Student Course Evaluations for Large Enrollment Courses (Process)
- Indicator 15: Students' Participation in Key University Activities (Process)
- Indicator 16: Graduates' Performance on Graduate Record Examination (Outcome)
- Indicator 17: Employment Experiences of Graduates (Outcome)
- Indicator 18: Postbaccalaureate Educational Experiences (Outcome)

Indicator 1: Preparation Requirements

One of the most widely supported developments from A Commitment to Focus was the University's role in increasing the college readiness of students seeking admission to the University of Minnesota. The recommendations of the Special Committee on Unified and Increased Preparation Requirements, effective for new freshman entering the University beginning Fall 1991, specify the following coursework requirements:

- Four years of English,
- Three years of social studies
- Three years of mathematics (including geometry and intermediate algebra),
- Three years of science (including one biological and one physical science), and
- Two years of a foreign language

Although it can be argued that the University ought not be evaluated on the basis of students' course-taking behavior prior to entering the University, the University's success in influencing secondary education in the state is a clearly articulated institutional goal. This indicator, when juxtaposed with other indicators that reflect educational quality and learning outcomes in the freshman and sophomore years, should be useful in assessing the University's responsiveness to the changing character of its entering undergraduates. If students are entering more well prepared, we have an obligation to provide improved conditions for their learning on campus.

Obtaining data for this indicator should require little in terms of additional costs, since implementing the new preparation requirements will require that the admissions process records information about the students' high school coursework in each of the five preparation requirement areas. One possible operational definition of the indicator is the percentage of entering freshmen students who have met one, two, three, four and all five of the preparation requirements. Calculations could be done separately for students from Minnesota and for students from other states.

Indicator 2: Academic Potential of Entering Students

Although the academic talent of students entering a particular institution may not affect the quality of what students experience at that institution, an institution's "selectivity" is perceived to be an important indicator of institutional quality. Recent written statements (e.g., A Commitment to Focus (1985), and "Preparing Students For the Twenty-First Century" (1987)), discussions on campus, and initiatives to recruit more high-ability students all suggest the importance of an indicator that reflects the University's success in recruiting academically talented, recent high school graduates.

The two bases upon which an academic potential indicator may be developed are entrance test scores (e.g., SAT) or high school performance (either overall academic grade point average or high school rank). Although the two bases combined yield the best predictor of college performance, high school performance tends to be more predictive for typical groups of entering college students. An indicator based on high school performance is more easily interpreted, since it does not require knowledge about test development procedures, especially the normative meaning of a particular test score. Virtually everyone understands what it means to have a grade point average of 3.60 or to have graduated in the top 10 percent of one's high school graduating class.

Other indicators of talent (e.g., special accomplishments in high school) may be worth considering, although they are less reliably and validly assessed. Some of these measures are routinely collected through the Post High School Planning Program, but are not transferred to the admissions data file. At this point in time, we should begin to conduct research to identify those particular talents and experiences that add to the prediction of student success.

Agreeing that an indicator based on high school performance is more appropriate than a test-based indicator still requires extensive discussion about which one of many possible indicators is the most appropriate for the University of Minnesota given its mission and location in a large, metropolitan area. Some of the possibilities are the percentage of entering freshmen in the upper 5 percent, 10 percent or 20 percent of their high school graduating classes; the number of valedictorians; or the percentage of entering students with high school grade point averages of 3.6 and above, 3.8 and above, or 4.0. Other indicators of special academic potential (e.g., excellence in science or creative writing) are possible too, but are expensive to develop and difficult to interpret.

Indicator 3: Students of Color

Access and a sense of welcome to higher education for students of color is critical to the University, the Twin Cities area, the state, and the nation as a whole. One of the consistent messages in discussions of A Commitment

to Focus has been to maintain (and increase) access to the University for those minority students who can be well-served by the institution. Although, in theory, it may be possible to achieve increased selectivity and a smaller undergraduate enrollment while maintaining (and increasing) access for students of color, considerable sentiment exists on campus that achieving both goals may be an impossible task.

The University is not alone among postsecondary institutions in trying to reconcile conflicting recommendations regarding selectivity and access. In some states, increasing enrollments of students not typically served by higher education have resulted in increased state concern for the educational quality on those campuses. Nationally, many colleges and universities are struggling with plans for increasing the enrollment of students of color, retaining them beyond the first year or two, and increasing the numbers who receive baccalaureate degrees. Clearly, an indicator that focuses on our success in attracting students of color should be part of a plan to summarize relevant data about undergraduate education.

There is danger in basing educational progress indicators on the ultimate criterion of receiving a baccalaureate degree, since it implies that no value has been added to the lives of those students who stayed for one, two or several quarters, but who did not graduate within a specified time period. At the same time, there are dangers in basing an indicator on the University's success in attracting particular students, since their tenure on campus may be short-lived and their experiences may be negative, thereby having a detrimental effect on encouraging students of color to seek higher education. There is merit in basing this indicator on the number of students of color who enroll, since one can argue that this is an important first step in encouraging the University to evaluate its progress in enhancing the undergraduate education of students of color.

We must be careful, however, to avoid giving the impression that we operate a "revolving-door policy" for students of color. A comprehensive system for helping the University in regard to its success with students of color must include indicators such as numbers of inquiries, numbers of applicants, and numbers of students accepted in addition to numbers of students of color who subsequently enroll. Those data will be important pieces of information for the new Associate Provost of the Twin Cities Campus and Associate Vice President for Academic Affairs for the University System to monitor, but they are too tentative to be useful as an indicator of the University's success in enrolling minority students. For our purposes, the best indicator is the annual number of new students of color who enroll on the Twin Cities campus.

Indicator 4: Advising Resources

Until the last two decades, most of the research to define quality of higher education has been based on either input measures or institutional reputation as the basis for defining institutional quality. Although the

current trend is to use measures of processes or outcomes, there are some areas in which an input measure is an important place to begin in assessing institutional quality. Undergraduate advising is one area in which an input measure, the financial resources devoted to advising, seems especially appropriate. Faculty time spent on advising should, if feasible, be included.

We are all familiar with several campus reports of the last five years calling for substantial improvements in the quality of undergraduate education on the Twin Cities campus. Advising services, especially lower division advising, have been adversely affected by the decline in academic support resources. We should not be surprised at students' complaints about insufficient time for advising when the adviser-student ratios in some colleges are seriously out of balance.

Obtaining data on resources devoted to undergraduate advising could become quite complicated, depending upon whether or not an estimate of faculty time spent on advising is included. These data should be generated sequentially, starting with those data that are readily available. Another unresolved issue is whether to focus on resources devoted to lower division advising, or to focus on resources devoted to all undergraduate advising. The indicator could be resources devoted to advising, or resources on a per student basis.

Other aspects of the quality of advising services could include descriptions of the information and resources available to advisers and students which facilitate high quality advising. The computerized degree audit program and the University Course Information Project (UCIP) are but two of the recent developments on campus that should contribute to improved advising services to students.

Indicator 5: Classroom Facilities and Study Space

In the last five years, several reports have addressed concerns about the quality of life on the Twin Cities campus, especially as it affects undergraduates. Several significant and visible changes on campus have made the environment a more pleasant place, although much remains to make the campus a more attractive place for our students to be and to learn. Unfortunately, indicators for some of these dimensions (e.g., aesthetic quality of the campus environment) are difficult to define clearly and nearly impossible to put into operation. Although there are neither empirical nor logical connections between classroom facilities/study space and student learning, the consensus among students and faculty is that the physical environment for learning needs significant improvement.

Two aspects of the campus environment that are easier to define and which significantly affect undergraduates' learning experiences are classroom facilities and study space. Both are important aspects because they are

very visible and are frequently noted in complaints about the student experience on the Twin Cities campus.

The indicators for classroom facilities and study space are similar to the advising indicator, in that they are resource indicators. Although one might argue that neither has been demonstrated to correlate positively with student learning, it is logical to expect that they might. Making significant improvements in each area could be a very visible indicator of the University's commitment to improving undergraduate education.

Numerous options exist for operationally defining an indicator for classroom facilities and study space. Options already may exist in the Minnesota Space Facilities Model. Classroom facilities indicators could be based on additional resources dedicated to upgrade classrooms, the resources devoted to classroom equipment (especially in large enrollment courses), or indices of student satisfaction with classroom facilities. An indicator for study space might measure total square footage designated as study space or indices of student satisfaction with campus study space.

Developing indicators for classroom facilities and study space must be part of a more broadly based public relations effort that identifies effective strategies for improving the University's image vis a vis undergraduate education. Obviously, this particular comment applies to each of the indicators being proposed for consideration.

Indicator 6: Retention Rates for Entering Freshmen

Retaining and graduating the student they admit is a serious problem for most postsecondary institutions. A review of retention studies (Ramist, 1981) conducted at a variety of baccalaureate granting institutions indicated graduation rates that ranged from 25 percent to 70 percent. The most recent retention study conducted at the University of Minnesota (1986) found that 49.5 percent of a sample of students admitted as new freshmen in Fall 1977 had received baccalaureate degrees by 1985, eight years later. Comparisons with other Big Ten schools indicated that our students take longer to graduate and that the findings are related to the high percentage of part-time students at the University.

The importance of retaining and graduating the students it accepts varies as a function of the selectivity of the institution and whether or not it has more students than it can easily accommodate. One might argue that, in the past, since the University enrolled more students than it could instruct well and was not highly selective in admitting students; retaining and graduating a high percentage of students was not an institutional priority. As enrollments decline and the University pays more attention to selecting students most likely to benefit from the educational experiences the University is prepared to provide, retaining and graduating higher percentages of accepted students will become increasingly important.

The research literature on retention has changed dramatically over the past several decades. Much of the early literature focused on demographic correlates of retention (e.g., gender, socioeconomic status). The problem with this approach is that it does not explain why students drop out and it identifies correlated variables about which nothing can be done. More recently, the work of Pascarella (1982) and Tinto (1987) have provided theoretical models that try to explain what occurs in the process of dropping out. Willingham (1988) has provided a taxonomy of drop-out types that has implications for institutional policy making. The eleven types he identified are as follows:

- Graduate
- Complete other goal
- Planned transfer
- Elect new alternative (e.g., job, marriage)
- Revise cost-benefit (e.g., family finances)
- Involuntary withdrawal (e.g., health discipline)
- Voluntary withdrawal (weak goal commitment)
- Disaffected transfer elsewhere (strong goal)
- Positive redirection (change plans to something incompatible with University
- Academic dismissal
- Academic withdrawal

Certain aspects of our student population need to be considered in discussions of a student progress indicator: (a) significant numbers of our students do not enroll for all quarters (i.e., they "stop out"); (b) the number of years to graduation is high (i.e., an average of over five years); (c) we have many part-time students; and (d) about half of our baccalaureate graduates transferred into the University.

Some arguments in favor of a retention indicator are that it is easier to calculate, is more likely to reflect quickly any attempts to improve the freshman year experience, reflects year-to-year (e.g., freshman-to-sophomore) retention rates, and focuses on the aspect of the undergraduate experience (i.e., the freshman-sophomore years) that is perceived to be problematic. Finally, research on the prediction of college grades indicates it is easier to predict first year grade point average than subsequent year or overall grade point averages; this same phenomenon is likely to be true for predicting retention and graduation. Seemingly small

changes in retention rates will have important implications for the University's overall enrollment management process.

Perhaps we should consider that measuring retention as a quality indicator with the sophomore year instead of the freshman year. Currently, our official policy remains to give students relatively free access to the University, but to enforce a relatively strong weeding-out process in the freshman year. If the University continues to move in the direction of increased selectivity, then a freshman-to-sophomore year retention indicator would be more congruent with institutional goals and objectives.

Deciding which one or two of a myriad possible retention indicators should be used must begin by listing those that can be calculated without extensive programming costs. Numerous reports and computer programs already exist that report retention percentages and enrollment patterns (e.g., the percentage of students enrolled for all three quarters) for each of the University's undergraduate colleges. The challenge will be to identify the specific indicators that will be the most meaningful to the University's constituencies.

Selecting one or two retention indicators should not preclude the development of a more extensive set of indicators that would be useful to particular programs, departments, offices and colleges on campus. For example, colleges need to know not just freshman-to-sophomore year retention rates, since often persistence-to-graduation indicators have implications for advising and instruction. In addition, retention indicators must be reported separately for identifiable subgroups of students (e.g., transfer students, older-than-average students, students of color, athletes, women, handicapped students, men, and high ability students).

Indicator 7: Instruction of Lower Division Students

Who teaches our students, what they are taught, and how well they are taught are three obvious questions to ask about the quality of undergraduate education on the Twin Cities campus. As with the case for some of the other indicators, information about who teaches our students may be useful in portraying the reality of undergraduate education on this campus and in gradually changing both the perceptions and the reality. The current reality is probably less positive than we might wish it to be if the data were to be widely publicized outside the University. We are not alone, however, in that many large, research universities rely heavily on graduate teaching assistants to provide lower division instruction. We must be careful in any discussions of data for this indicator to place the results in an appropriate context. Moreover, we must avoid assuming that a course taught by a faculty member is necessarily better than the same course taught by a teaching assistant.

Currently, instructional data are readily available through the Office of Management Planning and Information Services. These data should be combined

with student data from the active student file in an indicator that reflects actual student experiences on the Twin Cities campus.

There are at least three ways to think about this indicator in the University's undergraduate colleges. The first is from a faculty instructional responsibilities perspective, which would suggest an indicator such as the percentage of faculty members who teach at least one undergraduate course each year or every quarter. The second is from the perspective of curriculum, which would yield an indicator such as the percentage of 1-xxx, 3-xxx and 5-xxx level courses that are taught by faculty at which ranks. The third is from the perspective of students, in which an indicator such as the percentage of students, by year in school, who have had at least one regular faculty member during each of the quarters in a given year, would be calculated. The most directly and easily interpretable indicator would be one that looks at instructional responsibilities from the perspective of students.

Discussions about the various indicators might be especially sensitive and important for this indicator, since trying to improve on the indicator has immediate and obvious implications for faculty. Unless actions are taken to gradually change the reward system as it relates to teaching undergraduates, the indicator may fail to show any significant improvements.

Indicator 8: Undergraduate Curriculum

What is taught to students is at least as important as how it is taught in defining quality in undergraduate education. Professor Allan Bloom's (1986) book The Closing of the American Mind, Education Secretary William Bennett's frequent proclamations about what constitutes valuable college-level coursework, and Stanford University's recent widely publicized revision of its curricular requirements, all attest to the importance of curriculum in defining quality in undergraduate education. There is considerable disagreement today about what should constitute the required curriculum in colleges and universities, although most agree that curriculum is important in providing quality experiences to students.

Given the diversity of opinion about what constitutes a desirable curriculum, it is impossible to develop a quality indicator that focuses on quantifying the "goodness" of the content of curriculum in undergraduate education. The importance of curriculum in preparing our graduates for the next century suggests that we would be remiss if we did not include an indicator that reflected on curriculum. That suggests we develop an indicator that summarizes the level of current discussion on the Twin Cities campus about curricular issues in undergraduate education.

Although there is danger in assuming that certain processes relative to curriculum (e.g., number of meetings of the curriculum committee) will result necessarily in curricular reform, the processes must occur if change is to result. One way to obtain relevant process data is through

departments' responses to the Departmental Survey of Practices in Undergraduate Education. This 22-page survey, an outgrowth of the work of the Committee on the Quality of Undergraduate Teaching and Learning, is intended to be used as a means for the Office of the Provost to collect information about departments' attention to undergraduate education. The questions that pertain to curriculum could be aggregated to form an indicator that reflects current activities in reforming curriculum in undergraduate education.

Indicator 9: Use of Sound Educational Practices and Priorities

One of the indicators of the quality of undergraduate education that is often overlooked is the extent to which institutions engage in practices that theory, research and experience suggest contribute to high quality in undergraduate education. Indicators of the processes in place in particular institutions are often overlooked because they are more difficult to define than input measures, and seem less objective than certain easily quantifiable outcome measures. Process measures of educational practices have the additional advantage of being useful in explaining what contributes positively to achieving specific educational outcomes for students.

If one accepts that some of the quality indicators should reflect an institution's educational practices, it is by no means obvious how to define relevant educational policies and practices regarding collecting appropriate data to use in constructing an indicator. Virtually unlimited possibilities exist, so an initial task is to decide which of a number of reasonable strategies is most likely to be fruitful. The nature and influence of the University's reward system affects all of the University's missions. A measure of whether departments have in place, or perceive an incentive system to improve undergraduate education, could tell us much about this important motivational variable. In particular, we might attempt to develop an indicator that reflects the institution's commitment to improving the quality of teaching on campus. As a campus, it is important for faculty and staff to come together and discuss how to proceed in defining the relevant assessment dimensions.

One possible strategy is to use a set of seven "principles of good practice in undergraduate education" (Chickering and Gamson, 1987) that has received considerable recent attention nationally and at the University of Minnesota. These seven principles are based on five decades of applied research on good teaching and learning in colleges and universities. They present a perspective, much in vogue today, about what constitutes good teaching. It is in strong contrast to classical high education in which individual students operate as isolated, independent, reflective learners. The synthesis of the research was cosponsored by the American Association for Higher Education and the Education Commission of the States (Chickering and Gamson, 1987). The principles suggest that good practice in undergraduate education has seven characteristics:

- Encourages contacts between students and faculty
- Develops reciprocity and cooperation among students
- Uses active learning techniques
- Gives prompt feedback
- Emphasizes time on task
- Communicates high expectations
- Respects diverse talents and ways of learning

These seven principles are already being used in two new assessment initiatives on campus. First, questions pertaining to several of the principles have been included in the Baccalaureate Degree Candidates Survey that is being conducted for all Spring quarter 1988 graduates. Second, the Departmental Survey on Undergraduate Education Practices, to be sent to all academic departments that teach undergraduates, includes a section on the departments' efforts to implement each of the principles. Data from one or both of the above data collection processes might serve as the basis for calculating an indicator that reflects the University's status in implementing good practices in undergraduate education. One interesting possibility is to look at the discrepancies that exist between graduates' and departments' perspectives across the set of seven principles.

In addition, Chickering and Gamson are developing an Institutional Self-Assessment Survey that focuses on faculty perceptions of activities in support of each of the seven principles, They expect to have a form available for institutional pilot testing beginning Fall 1988. We have been invited to be one of the institutions to participate in pilot testing their instrument. We expect to administer their survey to approximately 1000 faculty on the Twin Cities campus.

Indicator 10: Class Size Experiences of Students

There are advantages and disadvantages to including an indicator of class size in the set of indicators to assess the quality of undergraduate education. Historically, legislators and the general public often have focused on class size at the elementary and secondary levels in making judgments about educational quality. As the University's undergraduate population decreases, it is reasonable to hope that average class size will decrease. The reality is that unless something is done to force that to occur, average class sizes are unlikely to decrease and, in fact, might increase. Another problem is that the research literature on the effects of class size in higher education are inconclusive. Smaller classes do not guarantee a higher level of student achievement; larger classes do not mean impersonality and lack of student-faculty contact.

A compelling reason for including a class size indicator is to reflect another of the public's perceptions of undergraduate education, especially in the first and second years at the University. The perception is that most new students encounter only courses that enroll hundreds of students. Our current class size reporting procedures focus on average class size by course level, department, and college, rather than from the perspective of the experience of a student across a specified period of time.

A more meaningful class size indicator for our purposes would require analyzing students' course registrations as noted on their transcripts together with course data from the Quarterly Course Inventory. The result would be an indicator such as one of the following: percentage of freshmen that had at least one course each quarter that enrolled 50 or fewer students; percentage of freshmen that had all courses in their first year enrolling 100 or fewer students; or percentage of freshmen who had at least one quarter in which 75 or fewer students enrolled in each of the courses.

One of the first tasks in developing this indicator is to determine the class-size categories that should be used for particular types and levels of courses. For example, 25 or 30 might be used for many freshman courses in composition, foreign languages, and laboratory and recitation sections for science and mathematics. Sound pedagogical principles should be used as one of the bases for constructing appropriate class-size categories.

Indicator 11: Grades Received

The problem with grades indicators is that grades can be influenced easily if those assigning grades believe that judgments about quality will be made on the basis of grade point averages. A second problem is that grade fluctuations, grade inflation in the minds of some, occur without necessarily reflecting changes in the rigor of instruction or characteristics of students. Although an overall grade point average indicator is rejected as meaningless, particular grade codes may yield useful information.

The W (withdrawal) grade code is suggested as one indicator, since high rates suggest problems in: (a) not giving students good information about courses prior to registration; and (b) instructors not living up to expectations about instructional quality. Reducing the rate of course withdrawals is important in another way: to increase the availability of the course for other students who were unable to register for the course. The indicator would be useful to the University in assessing the impact of implementing a more sophisticated system of course descriptions and program requirements for use by academic advisers.

Calculating the indicator should be relatively straightforward, since it requires no additional data beyond what is currently available. In addition to the summary indicator for the Twin Cities campus; collegiate,

departmental, and course level indicators could be provided as a mechanism to identify and influence rates that deviate greatly from the norms. Two simple operational definitions of the indicator would be the percentage of total course registrations that resulted in grades of W, or the percentage of individual students with at least one grade of W.

Indicator 12: Training of Teaching Assistants

Indicator 7 focuses directly on statistics concerning who teaches our undergraduates, so there is no need to define a specific indicator that describes teaching assistants' responsibilities for teaching lower division students. We would be remiss, however, if we did not include a process indicator that describes the level, nature, and quality of attention given by our departments to training future generations of college teachers. The lack of attention given to developing the teaching talents of teaching assistants in large research universities is often cited, by faculty in our nation's colleges and universities, as a factor in the low value given to teaching, and undergraduate teaching in particular.

The proposed "Departmental Survey on Undergraduate Education Practices" includes a section on departmental efforts in training their teaching assistants, especially new teaching assistants. It would be possible to use these data to construct an indicator that reflects departmental attention given to teaching assistants. The simplest of the indicators would be the percent of departments that offer some type of training activities for new teaching assistants.

Indicator 13: Monitoring of Student Experiences

There is considerable value to any organization in having feedback from its consumers concerning the services it provides to them. Usually, those feedback systems are most effective in improving services, processes and procedures when the student provides consumer reaction data close-in-time to when the service was provided. In a parallel fashion, the results should be quickly and routinely available to affected offices so that they can take action to improve services. Several examples exist of feedback systems that have been used recently or are being used currently.

During the 1985-86 year the Student Experiences Project, funded by the Office for the Vice President for Finance, developed a system for new students to provide feedback regarding 13 campus services: registration, financial aid, advising, housing, libraries, bookstores, bursar, parking, athletics and recreation, food services, health services, information on the University, and miscellaneous services . That project resulted in data that was especially valuable in getting a picture of new students' evaluations of diverse services across a two-quarter period of time.

Several other examples of consumer services surveys are those developed and implemented by particular offices on campus. These include registration surveys conducted by Student Support Services, advising surveys conducted by the Premajor Office in Liberal Arts Student Services, and user surveys of various services in Coffman Memorial Union. All of these are examples of feedback systems that are closely connected to the operation of particular offices on campus and, as such, have the potential for being used quickly to improve services.

Trying to construct a meaningful content-based student experiences indicator would be an impossible task, given the numbers of students served and the diversity of services provided. Sampling procedures would be necessary to insure that a representative group of students was used to generate student experiences data. Moreover, overall data about specific consumer reactions (e.g., time spent in line or consumer satisfaction) would have few clear implications for improvements. What is more relevant, then, is an indicator that focuses on the extent to which offices on campus do, in fact, collect consumer reaction data. The simplest of the indicators would be the total number of consumer reaction processes in place across the student services offices on the Twin Cities campus.

Indicator 14: Student Course Evaluation for Large Enrollment Courses

Debate continues about the value and validity of student evaluation of instruction. Some view its value only as feedback to instructors for the purpose of course improvement. Others see it as valuable in making administrative decisions about faculty hiring, promotion and tenure decisions, and salary increases. Others think it is helpful in advising students as to course selection. In terms of perspectives on the validity of course evaluation data, some argue that such information is "nothing but a popularity contest," whereas others suggest that students are able to make meaningful judgments about the quality of their classroom experiences. The role of course evaluation is related to department and individual faculty members' views about the nature of the educational process.

Including an indicator that reflects students' opinions about their classroom experiences is essential, since most of the other indicators do not relate directly to quality as students experience it in their coursework at the University. Curiously and unfortunately, most of the recent discussion about assessment in colleges and universities has not focused on quality assessment dimensions students perceive to be important.

The problem in using student evaluation of instruction data as an indicator of quality are many, not the least of which is defining the population of courses to be evaluated. Even if the University were to require that every instructor evaluate every course each time it is offered (using the same course evaluation form), the resulting normative data would be difficult to interpret. Moreover, using the data to improve instruction would be virtually impossible without identifying several types and levels of

courses. An alternative approach is to develop a student course evaluation procedure that focuses on a particular subset of University courses.

The question then becomes "How can we identify a subset of courses that would serve as the basis for an indicator of student course evaluation?" It seems reasonable, although perhaps risky politically, to focus on the course level that is most widely thought to be problematic, namely, 1-xxx level courses that enroll large numbers of students. If, indeed, such an indicator suggests problems with those courses, the potential is great for using the results to improve the educational experiences for large numbers of undergraduate students.

Developing an appropriate student evaluation questionnaire and working with affected colleges, departments, and courses would be a delicate, time-consuming effort. Once the instrument was developed, the process of administering and scoring the instrument could be handled through the Office of Measurement Services. Course evaluation indices for each of a specified number of high enrollment courses could be aggregated across courses to form a composite student course evaluation indicator.

The following list of courses is proposed as the starting point in developing the indicator. They represent the fifty 1-xxx level courses that enrolled the largest number of students during the three quarters of the 1986-87 academic year.

	N		N
Psy 1001	3611	Clas 1042	977
Comp 1001	3525	CPsy 1301	971
Soc 1001	2823	Phil 1002	963
Ast 1011	2749	Chem 1005	943
Math 1211	2719	Geog 1301	914
Math 1111	2529	Spch 1101	900
Math 1221	2152	Spch 1102	897
Biol 1101	2141	Phys 1271	885
Econ 1002	2121	Pol 1025	880
Biol 1009	2094	Geog 1401	852
Econ 1001	2014	Comp 1027	846
Th 1101	1906	Math 1142	825
Acct 1024	1811	Biol 1008	799
Mus 1001	1632	Anth 1101	778
Phil 1001	1622	GC 1131	717
Pol 1001	1528	Hist 1301	717
Math 1231	1405	Physics 1281	701
Math 1131	1236	Physics 1291	685
Chem 1004	1197	GC 1281	673
Geol 1001	1197	GC 1435	650
Acct 1025	1169	Stat 1051	648
Anth 1102	1134	Span 1102	593
GC 1421	1074	Fren 1101	592

Hum 1001	1020	Physics 1311	581
GC 1422	979	Span 1103	578

The above list may include courses that are too varied in terms of size and instructional strategies to yield interpretable data. Some courses are small multisectioned courses with discussion components, whereas others are large lecture classes. A small number of course categories should be developed as a framework for reporting these data.

Indicator 15: Students' Participation in Key University Activities

What distinguishes a baccalaureate graduate of the University of Minnesota? Few faculty, administrators, current students and citizens of Minnesota could readily and concisely articulate the differences between our graduates and graduates from other institutions in Minnesota. We are not alone in this failure to put a unique "stamp" on graduates that reflects the special experiences they have had in their undergraduate experience. The need to define what distinguishes our baccalaureate graduates has implications for the development of an indicator that reflects how well we are doing at ensuring that our graduates have had certain critical educational experiences. Developing relevant indicators is an important but extremely difficult task.

The place to begin this discussion is within the context of the University's characteristics that should have implications for undergraduate education. Among the relevant characteristics are the following: a research institution, a land grant university, an international institution, and an institution situated in a large metropolitan area with numerous businesses, social services, government offices, and arts organizations. These features provide opportunities that are not available to students in many other institutions. The question arises, "How good a job are we doing in connecting students with these opportunities?" At this point, we have an abysmal data base to use in answering the question. We need to be able to identify those key University activities necessary for our baccalaureate graduates to lead productive and satisfying lives in the twenty-first century.

This indicator would, of necessity, need to be an experience-based indicator that reflects the percentage of our baccalaureate graduates who have had particular types of experiences. The data could be obtained in two ways: (a) by asking students at graduation to indicate whether or not they have had particular experiences; or (b) by developing data systems in the offices and programs on campus responsible for arranging certain types of experiences. Being able to report the experiences data is the first part of a more extensive system that should collect data about the quality of the experiences and the extent to which the experiences lead to desired outcomes.

Among the experiences that might serve as the basis for this indicator are the following:

- Participation in specified extracurricular activities (e.g., student government) that research suggests are related to success after graduation;
- An opportunity to work with a faculty member on a research project (e.g., independent research credit, Undergraduate Research Opportunities Program (UROP);
- An experience that reflects a significant attempt to relate to a land grant activity;
- An intensive advising or counseling experience that gives the student an accurate appraisal of intellectual and personal strengths and weaknesses;
- A significant learning experience that is related to one of the University's international activities; and
- An internship or community service experience to apply classroom learning in the real world.

Once the data base was established, calculating the indicator would be relatively simple. One of the options for operationally defining the indicator would be the percentage of baccalaureate graduates who have had at least one, at least two, at least three, or all four of the experiences noted above.

Indicator 16: Graduates' Performance on Graduate Record Examination

Considerable recent national attention has focused on concerns about student learning in baccalaureate degree programs and the need for increased testing of baccalaureate degree candidates. Unfortunately, test development experts and testing corporations have devoted relatively little attention to developing the complex and comprehensive testing procedures to adequately assess important general learning outcomes that result from a baccalaureate education. The few tests that do exist (e.g., the Academic Profile by the Educational Testing Service and the College Outcome Measures Project by the American College Testing Program) do not yet have the perceived importance and relevance ascribed to tests students take prior to applying to graduate school (e.g., the Graduate Record Examination (GRE)).

Even though the primary purpose in developing the GRE was to predict performance in graduate school, it does have some utility as an indicator of college and university education, but only for those students interested in advanced degrees. Other states (e.g., South Dakota) and institutions have made the mistake of administering the GRE to all of their baccalaureate

graduates. The relevance of the test and the motivation of students not planning to apply to graduate school yielded uninterpretable results, results that were obtained with considerable cost and investment of students' time.

Obtaining performance data on the GRE for our baccalaureate graduates would require little in the way of additional costs or procedures, since ETS already routinely sends to the Graduate School reports of the scores for University students who have taken the GRE.

These test data become meaningful and can lead to curricular improvement when they are analyzed in more specific ways. First, comparisons among majors allows some ordering based on curricular paths chosen by students. Second, comparisons among majors allows some ordering based on curricular paths chosen by students. Second, comparisons between our graduates' performance and the performance of students in other sets of institutions (e.g., the Big Ten, the Alliance for Undergraduate Education) yields useful comparative data. Third, comparisons with national GRE normative data provides the most general basis for making conclusions about the academic readiness of our baccalaureate graduates hoping to attend graduate school.

Indicator 17: Employment Experiences of Graduates

We would be remiss if we did not include an indicator that reflects on the value of a baccalaureate education as it affects employability and employment after graduation. Nationally and within Minnesota there is considerable discussion about the economic value, to the individual and to the region, of higher education. The way in which this economic value is realized is through higher level, more productive, and more satisfying employment experiences after graduation. Believing in the need for an employment-related indication should not diminish, in any way, the value of the college experience as a liberalizing, intrinsically rewarding experience.

Although a campus-wide survey of baccalaureate graduates has not been conducted since the Former Student Survey Project in 1979, numerous collegiate and departmental studies of employment experiences of graduates have been conducted since then. Undoubtedly, results of those studies have proven to be useful to units conducting them to examine how curricula and related undergraduate activities might be improved in view of employment experiences after graduation. Perhaps these unit specific graduate surveys are the only plausible way for the University to collect these data, given the diversity of the University's baccalaureate degree programs.

Developing employment indicators would require extensive discussion. Different indicators would be needed for graduates from liberal arts programs and professional programs. The discussion probably would conclude with the need to have a complex, multidimensional set of indicators. Collecting the data periodically from all baccalaureate graduates five or

ten years after graduation would be an expensive, time-consuming effort that would require considerable financial support within the University. These data are impractical to collect for large numbers of students, although sampling strategies may be used. Providing these data in a timely fashion would be an impossible task.

If there is consensus that an employment indicator is critical, the next step is to identify a group of faculty on campus with expertise in the measurement of work-related dimensions. Several departments in at least three of our colleges have such expertise.

Indicator 18: Post Baccalaureate Educational Experiences

One of the goals of a baccalaureate education is to instill in students the values of continued learning and studying in order to continue to be educated citizens. Developing in students a passion for lifelong learning is a laudable goal, but one that is difficult to assess. What our graduates "know" at the point of graduation may no longer be relevant 15 or 25 years later, although our graduates will continue to be well-educated citizens if they have developed the skills and motivation to continue learning long after graduation. Although an indicator of this sort may be desirable, none are available currently that would meet our needs. Questions on surveys of graduates five to ten years after graduation sometimes include questions about educational experiences since graduation. Other scales and attitude surveys are available that attempt to measure motivation for continued learning.

In the abstract, indicators of this sort are desirable. The long payoff period, the cost of collecting these data, and the connections to what students experienced on campus all suggest that this is an impractical indicator. Alternatively, this series of questions may be one of the applied research projects that might be appropriate for the University to fund on a one-time basis.

Instead of ignoring this question completely, a related indicator, the percent of baccalaureate graduates who are admitted to graduate and professional programs within a specified, short time period after graduation, may be useful as an index of what our graduates do after they leave the Twin Cities campus of the University. Questions about attendance at graduate and professional schools could be combined with employment-related questions in a graduates' survey sent to a random sample of baccalaureate graduates. The survey might be conducted at some regular time interval, perhaps every five years, so that changes over time could be observed. The costs involved in implementing a campus-wide follow-up survey would be extensive, due, in part, to the costs incurred in locating students several years after graduation.

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-- DEPARTMENTAL SURVEY ON THE QUALITY OF UNDERGRADUATE EDUCATION --

This survey begins the implementation of a new procedure for monitoring the quality of undergraduate education on the Twin Cities Campus.

Such procedures are important for at least two reasons. First, we need to develop additional internal mechanisms to describe the quality of undergraduate education to guide our efforts to improve quality. Second, we need to respond to increasing requests from non-University constituencies interested in the quality of undergraduate education.

The departmental survey is one of several initiatives that have been designed in response to recommendations in the "Final Report of the Implementation Task Force on Undergraduate Education on the Twin Cities Campus of the University of Minnesota." Recommendation 14 stated: "The Office of the Provost should establish an administrative structure that is responsible for collecting, analyzing, and reporting the four types of information noted above. The Provost should also monitor the results of changes in the quality of undergraduate education and should provide annual reports to the Campus Assembly and the Board of Regents."

The four types of information called for include context variables, input variables, process variables, and output variables. The enclosed "Departmental Survey on the Quality of Undergraduate Education" is a set of process variables that describes aspects of the effort departments devote to undergraduate education.

Your department's completed survey should be returned to the Dean's Office by early June. Surveys then will be forwarded to the Office of the Provost. A summary of the results will be available during fall quarter 1989. If you have any questions about the survey, please call Darwin Hendel at 625-0129.

This questionnaire contains questions about diverse aspects of your department's approach to undergraduate education. The content of the survey is organized around several themes that characterize a department's approach to undergraduate education.

SECTION I: Undergraduate Curriculum

This series of questions asks you about curricular goals and course offerings in your department.

1. Please describe in a few sentences the goals for your undergraduate curriculum for majors and for non-majors. Subsequent questions ask how these goals are translated into the content and methods of undergraduate courses.

   a. Curriculum goals for majors:_____

   _____

   _____

   _____

   _____

   _____

   b. Curriculum goals for non-majors:_____

   _____

   _____

   _____

   _____

   _____

2. Does your department have a committee to address issues concerning the undergraduate curriculum? (Check one.)

_____ (1) No. If "No," skip to question 3 on page 4.
_____ (2) Yes, a committee that is specific to undergraduate studies.
_____ (3) Yes, but the committee deals with both undergraduate and graduate curriculum.
_____ (4) Other. Please describe the committee's structure and focus:

_____

_____

_____

a. If "Yes," approximately how many times did the committee meet during the 1988-89 academic year?

_____ times

b. If "Yes," approximately how many individuals are on the committee? Please indicate the number of individuals in each of the following categories:

	Number
Undergraduate students	_____
Graduate students	_____
Teaching assistants	_____
Instructors	_____
Assistant professors	_____
Associate professors	_____
Professors	_____
Other, Please specify:	_____

c. Please identify the position/rank of the person who typically chairs the committee:_____

d. If "Yes," please indicate which of the following topics were discussed at one or more of the undergraduate curriculum committee meetings during the 1988-89 academic year. (Check all that apply.)

_____(1) Multidisciplinary curricular initiatives with other departments.
_____(1) Ways to encourage student-faculty contact.
_____(1) Ways to encourage cooperation among students.
_____(1) Ways to promote active learning.
_____(1) How to give prompt feedback to students.
_____(1) How to teach effective time management and time on task.
_____(1) How to communicate high expectations to undergraduates.
_____(1) Ways to accommodate different ways of learning.
_____(1) How to improve departmental advising.
_____(1) Scheduling of classes.
_____(1) International education (e.g., study abroad opportunities).
_____(1) Curriculum changes.
_____(1) Honors programs.
_____(1) Remedial programs.
_____(1) Requirements for a minor in the department.
_____(1) Requirements for a major in the department.
_____(1) Other. Please specify:

_____

3. Please indicate the most recent year in which each of the following occurred in your department:

Year

_____ a. Departmental review of undergraduate courses.

_____ b. Departmental review of required courses in the major.

_____ c. Substantial change in the undergraduate curriculum (where "substantial" means not just changing courses, but includes defining curricular goals and objectives and planning how to achieve those goals).

_____ d. Inventory of courses "on the books" that are open to undergraduates.

4. Which of the following statements best describes your department's approach to reviewing its undergraduate curriculum? (Check one.)

_____(1) We review our curriculum on a regular schedule.
_____(2) We periodically review our curriculum, but not on a predetermined time interval.
_____(3) We review our curriculum on an irregular basis.

5. Does your department have a special review process just for its 1-xxx level introductory course(s)? (Check the <u>one</u> response that best describes your situation.)

_____(1) No, we review the 1-xxx courses as part of our general review of the undergraduate curriculum.
_____(2) Yes, we regularly review these courses as a special process.
_____(3) Yes, we have a special process but conduct it on an irregular basis.
_____(4) Other. Please describe:

_____

_____

_____

6. Please describe how classroom instructional time is spent in your department's introductory 1-xxx level course. If your department has several such courses, describe the course that <u>enrolls the largest number</u> of students. Estimate the approximate percentage of time spent in each of the following activities over the course of the quarter:

_____% In-person lecture(s)
_____% In-person demonstration(s)
_____% Lectures/demonstrations via television or film
_____% Recitations/discussions
_____% Laboratory activities
_____% Student presentations
_____% Individual student conferences
_____% Field learning experiences
_____% Small group activities
_____% In-class writing exercises
_____% Individual differences alternatives (e.g., mastery learning and computer assisted instruction)
_____% Tests and quizzes
_____% Other. Please specify:_____

_____ _____
100%

7. Please estimate how much emphasis is placed on each of the following learning objectives in your department's 1-xxx level introductory course(s). If your department has several such courses, describe the course that enrolls the largest number of students.

_____% Basic knowledge and principles
_____% Application of knowledge/principles
_____% Analysis, synthesis, and evaluation of knowledge and principle
_____% Skill, manipulation, practice
_____% Attitudes, values, self-awareness
_____% Other. Please specify:_____

_____% _____
100%

8. Does your department have detailed undergraduate course descriptions (e.g., course syllabi or other materials that go beyond the course descriptions contained in college bulletins) available to students in the department's office? (Check one.)

_____(1) Yes, for all courses
_____(2) Yes, but only for some courses — Answer 8a and 8b
_____(3) No ——→ Skip to Question 9

a. If such descriptions are available, what do these descriptions include?

		Yes	No	Sometimes
i.	Course content	___	___	___
ii.	Instructional methods	___	___	___
iii.	Course learning objectives	___	___	___
iv.	List of required readings	___	___	___
v.	Basis for course grading	___	___	___

b. If descriptions are available, when was/were the description(s) of the introductory course(s) revised? Indicate year:_____

9. Not all of a departments' courses may be offered during a particular year. Please indicate numbers of unique courses (i.e., count multiple sections of the same course as one course) in each of the following categories:

Number

_____ a. Courses in the curriculum which undergraduates can enroll.

_____ b. Number of courses in which undergraduates enrolled during the 1988-89 academic year (fall, winter, spring quarter).

10. Please describe the processes used to determine which courses are offered, when during the year they are offered, and who teaches the courses:

a. Which courses? _____

_____

_____

b. When offered? _____

_____

_____

c. Who teaches? _____

_____

_____

11. Please describe your department's efforts to offer special sections of undergraduate courses to meet the needs of certain types of students (e.g., those who need remedial work and those who need honors opportunities). Answer the following questions relative to the period fall quarter 1988 through spring quarter 1989. (Please count multiple sections of the same course as one course.)

		1-xxx level	3-xxx level	5-xxx level
a.	Total number of courses offered	_____	_____	_____
b.	Number of courses with one or more honors sections offered	_____	_____	_____
c.	Number of honors courses (not sections of regular courses offered)	_____	_____	_____
d.	Number of courses with one or more remedial sections offered	_____	_____	_____

12. Are any of your faculty involved in activities that involve discussions with faculty in the Minnesota Community College System about course content and pedagogy in your discipline? (Check one.)

_____ (1) Yes
_____ (2) No
_____ (3) Uncertain

If "Yes," please describe:_____

_____

_____

_____

SECTION II: Responsibilities for Undergraduate Education

This series of questions concerns responsibilities for different aspects of undergraduate studies in your department.

13. Does your department specify someone to oversee undergraduate studies in your department? (Check one.)

_____(1) Yes If "Yes," please answer questions 13a through 13d.
_____(2) No If "No," please skip to question 14.

a. If "Yes," who is typically assigned the position of Director of Undergraduate Studies? (Check <u>one</u>.)

_____(1) Rotates among ALL faculty members.
_____(2) Rotates among MOST faculty members.
_____(3) Assigned primarily to new, nontenured faculty.
_____(4) Assigned primarily to experienced faculty.
_____(5) Generally assigned to whoever has the most time available.
_____(6) Generally assigned to whoever has the most interest.
_____(7) Assigned to assistant department head.
_____(8) Other. Please describe:

_____

_____

b. If "Yes," approximately what <u>percentage</u> of time is the person expected to devote to the position?

_____% of her/his appointment.

c. Briefly describe the particular tasks and responsibilities included in the position:_____

_____

_____

_____

d. If "Yes," how important is the position of Director of Undergraduate Studies relative to other departmental responsibilities (e.g., Director of Graduate Studies) faculty may assume? (Check one.)

_____(1) Much less important
_____(2) Less important
_____(3) Equally important
_____(4) More important
_____(5) Much more important

14. Please describe the role of your department chair in determining your department's approach to undergraduate education:

_____

_____

_____

_____

_____

_____

15. In general, how much attention to undergraduate education in your department (e.g., outlining curricular goals, reviewing of the quality of undergraduate courses, improving the educational environment for majors) have department heads given during the past three years? (Check one.)

_____(1) Little or no
_ ___(2) Some
_____(3) Much
_____(4) Very much
_____(5) Extensive

16. Does your department have a separate, identifiable budget item (or items) designated for expenses (e.g., instructional equipment, supplies, services) related to your department's undergraduate course offerings? (Check one.)

_____(1) Yes
_____(2) No

a. If "Yes," what was the total dollar amount budgeted for the 1988-89 academic year?

$_____

SECTION III: Faculty Involvement in Undergraduate Education

This section contains a few questions about your departments' hiring and promotion and tenure practices as they relate to undergraduate education.

17. How often does your department explicitly indicate in position descriptions the undergraduate teaching responsibilities for prospective faculty members? (Check one.)

_____(1) Almost never
_____(2) Sometimes
_____(3) About half of the time
_____(4) Usually
_____(5) Almost always

18. What changes, if any, have you seen in the importance of various factors in hiring new faculty during the past three years? (Circle one response for each of the following factors.)

	Much Less Important	Less Important	No Change	More Important	Much More Important
a. Publication record, research productivity scholarship, and potential for obtaining outside funding	1	2	3	4	5
b. Demonstrated high quality graduate teaching and advising	1	2	3	4	5
c. Demonstrated high quality undergraduate teaching and advising	1	2	3	4	5
d. Service accomplishments	1	2	3	4	5
e. Other. Please specify: _____ _____	1	2	3	4	5

19. Consider the relative contribution of each of the following factors in making promotion, tenure, and salary increase decisions for faculty in your department. Use the three-year period 1985-86 through 1987-88 in responding to this question.

	Promotion Decisions	Tenure Decisions	Salary Decisions
a. High quality undergraduate teaching and/or advising	____%	____%	____%
b. High quality graduate teaching and/or advising	____%	____%	____%
c. Publication record, research productivity, scholarship, and/or success in attracting outside funding	____%	____%	____%
d. Service activities	____%	____%	____%
e. Other. Please specify: _____	____%	____%	____%
TOTAL:	100%	100%	100%

20. What is your department's approach on who teaches undergraduate courses in your department? For each of the four types of courses noted in the columns below, indicate who typically teaches the particular type of course. (Check as many of the seven options as necessary.)

	1-xxx level courses for non-majors	1-xxx level courses for our majors	Advanced level courses for non-majors	Advanced level courses for our majors
a. By faculty who have the most time	_____	_____	_____	_____
b. By faculty with the most expertise in the area	_____	_____	_____	_____
c. Shared equally amongst all faculty	_____	_____	_____	_____
d. By whoever is willing to do the teaching	_____	_____	_____	_____
e. By new faculty	_____	_____	_____	_____
f. By teaching assistants	_____	_____	_____	_____
g. By faculty who are the best teachers of undergraduates	_____	_____	_____	_____

21. Please indicate the number of faculty in your department who received each of the following awards or grants during the three-year period (July 1, 1986 through June 30, 1989).

		Number
a.	Bush Sabbatical Awards	_____
b.	Educational Development, Small Grants or SEED Program	_____
c.	Morse-Amoco (now Morse Alumni Association) Awards for Outstanding Contributions to Undergraduate Education	_____
d.	Educational Development Program Grants	_____

22. Have faculty in your department received any external grants to enhance undergraduate education during the three-year period (July 1, 1986 through June 30, 1989).

_____(1) Yes
_____(2) No

If "Yes", please indicate the following for each grant

Title	Source of Funding	Amount of Funding
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

23. Please describe the duties that teaching assistants assumed in your department during the past year. Circle the response that best describes approximately how many of your teaching assistants had each of the following responsibilities.

	None	Few	Some	Most	Almost All
a. Independently, or under limited supervision, <u>designed</u> courses in their entirety (objectives, content, evaluation procedures, etc.)	1	2	3	4	5
b. Provided the principal classroom instruction for a course	1	2	3	4	5
c. Gave occasional lectures in a course that is the principal responsibility of a regular faculty member	1	2	3	4	5
d. Had complete responsibility for constructing and administering tests	1	2	3	4	5
e. Assisted regular faculty members in constructing and administering tests	1	2	3	4	5
f. Had complete responsibility for determining students' grades	1	2	3	4	5
g. Assisted regular faculty members in determining grades	1	2	3	4	5
h. Developed instructional materials for use in courses	1	2	3	4	5
i. Assisted students in developing independent study projects for extra credit	1	2	3	4	5
j. Talked with students about their progress in a particular course	1	2	3	4	5
k. Organized and/or conducted group discussion sessions	1	2	3	4	5
l. Designed laboratory assignments and/or experiments or other types of practical exercises	1	2	3	4	5
m. Advised students on course selection and major requirements	1	2	3	4	5
n. Provided tutorial assistance for particular students	1	2	3	4	5
o. Read, commented on, and graded students' papers and other written assignments	1	2	3	4	5
p. Provided feedback to regular faculty members about how well students are responding to the class	1	2	3	4	5

24. What is your department's approach to advising undergraduate majors in your department? (Check as many of the options as necessary to describe your department's approach.)

_____(1) By those faculty who have the most time
_____(1) By those with the most expertise in advising
_____(1) Shared equally by all levels of faculty
_____(1) By whoever is willing
_____(1) Primarily by new faculty
_____(1) By teaching assistants
_____(1) By those faculty who are the best advisors of undergraduates
_____(1) By professional support staff

SECTION IV: Principles of Good Practice in Undergraduate Education

This section concerns your departments' views about seven principles that have been advanced as indicative of good practices in undergraduate education[1].

For each of the seven principles:

- First, indicate how much attention your department has given to this practice during the past three years.
- Second, describe any plans your department has for promoting the practice in the future.

25. Principle 1: Good practice encourages student-faculty contact. Frequent student-faculty contact in and out of classes is an important factor in student motivation and involvement.

a. In the past three years, how much attention has your department given to increasing student-faculty contact? (Circle one response.)

Little	Some	Much	Very Much	Extensive
1	2	3	4	5

b. Please describe any current departmental plans for promoting the practice in the future:

_____

_____

_____

[1]Principles adapted from an article "Seven Principles for Good Practice in Undergraduate Education" by Arthur W. Chickering and Zelda F. Gamson that appeared in a special edition of the Wingspread Journal.

26. Principle 2: Good practice encourages cooperation among students. Learning is enhanced when it is a team effort -- collaborative and social.

a. In the past three years, how much attention has your department given to developing cooperative learning experiences? (Circle one response.)

Little	Some	Much	Very much	Extensive
1	2	3	4	5

b. Please describe any departmental plans for promoting the practice in the future:

_____

_____

_____

27. Principle 3: Good practice encourages active involvement. Students learn by talking about what they are learning, writing about it, relating it to past experiences, and applying it to their daily lives.

a. In the past three years, how much attention has your department given to fostering active involvement of students? (Circle one response.)

Little	Some	Much	Very much	Extensive
1	2	3	4	5

b. Please describe any current departmental plans for promoting the practice in the future:

_____

_____

_____

28. Principle 4: Good practice gives prompt feedback. Students need appropriate feedback on performance to benefit from courses, including assessing existing knowledge and giving them frequent opportunities to perform and receive suggestions for improvement.

a. In the past three years, how much attention has your department given to increasing the feedback about their learning given to students? (Circle one response.)

Little	Some	Much	Very much	Extensive
1	2	3	4	5

b. Please describe any current departmental plans for promoting the practice in the future:

_____

_____

_____

29. Principle 5: Good practice emphasizes time on task. Learning to use one's time well is critical for students. Some students need help in learning effective time management.

a. In the past three years, how much attention has your department given to helping students use their time well? (Circle one response.)

Little	Some	Much	Very much	Extensive
1	2	3	4	5

b. Please describe any current departmental plans for promoting the practice in the future:

_____

_____

_____

30. Principle 6: Good practice communicates high expectations. High expectations are important for all students--for the poorly prepared, for those unwilling to exert themselves, and for the bright and well motivated.

a. In the past three years, how much attention has your department given to developing high expectations of students? (Circle one response.)

Little	Some	Much	Very much	Extensive
1	2	3	4	5

b. Please describe any current departmental plans for promoting the practice in the future:

_____

_____

_____

31. Principle 7: Good practice respects diverse talents and ways of learning. Students bring different talents and styles of learning to college, and need the opportunity to show their talents and learn in ways that work for them.

a. In the past three years, how much attention has your department given to helping students use their different talents and styles of learning? (Circle one response.)

Little	Some	Much	Very much	Extensive
1	2	3	4	5

b. Please describe any current departmental plans for promoting the practice in the future:

_____

_____

_____

SECTION V: Evaluation of Departmental Quality

32. How would you rate your department's quality in terms of the educational experience provided to undergraduate students majoring in your department? Please circle the response that corresponds to your evaluation of your department on each of the following dimensions.

	Very Poor	Poor	Fair	Good	Very good	Excellent
	1	2	3	4	5	6
Courses						
a. The overall quality of the instruction?	1	2	3	4	5	6
b. The extent to which the courses appropriately challenge students' abilities?	1	2	3	4	5	6
c. The opportunity for students to learn about the research methods in the discipline?	1	2	3	4	5	6
d. The amount of discussion and team projects, rather than lecture?	1	2	3	4	5	6
e. The variety of courses available in the major?	1	2	3	4	5	6
f. The extent to which major requirements form a well-integrated program?	1	2	3	4	5	6
Instructors						
g. The amount of instruction done by regular faculty, rather than teaching assistants?	1	2	3	4	5	6
h. The accessibility of faculty to meet with students outside of class?	1	2	3	4	5	6
i. Faculty members' ability to communicate their knowledge to students?	1	2	3	4	5	6
j. The feedback students are given on their performance?	1	2	3	4	5	6
k. The overall quality of academic and career-related advising services provided to undergraduates?	1	2	3	4	5	6

SECTION VI: Evaluation and Improvement Activities

This section contains questions about your department's procedures for evaluating and improving the quality of undergraduate education.

33. Does your department have any special procedures or awards to recognize excellence in undergraduate teaching? (Check one.)

_____(1) No
_____(2) Yes, we have an award for teaching assistants only
_____(3) Yes, we have an award for faculty only
_____(4) Yes, we have awards for both teaching assistants and faculty

34. Does your department have any special procedures or awards to recognize excellence in undergraduate advising? (Check one.)

_____(1) No
_____(2) Yes, we have an award for teaching assistants only
_____(3) Yes, we have an award for faculty only
_____(4) Yes, we have awards for both teaching assistants and faculty

35. Does your unit have an organized training program for classroom teaching assistants? (Check one.)

_____(1) Yes ——— Answer Question 35a below.
_____(2) No ——— Go to Question 35b below.

a. If your unit has a training program, what is the content of the training? Please indicate which one of the following best describes the content of the training program:

_____(1) Program is basically administrative
_____(2) Mostly administrative, some pedagogy
_____(3) Mostly pedagogy, some administrative
_____(4) Program is basically pedagogical

b. If your department does not have a training program, what would you need to develop a program:_____

_____

_____

_____

36. Does your department offer training sessions, specifically designed to assist teaching assistants to perform their duties, for individuals with no prior experience as teaching assistants at the University of Minnesota? (Check one.)

_____(1) Yes
_____(2) No

If "Yes," please indicate which of the following topics are covered in those meetings by checking those that apply.

_____(1) Overview of the role and importance of teaching assistants at the University.
_____(1) Procedures for constructing good essay test questions.
_____(1) Procedures for writing good multiple-choice test questions.
_____(1) Grading practices and procedures.
_____(1) Specific discipline or course-related issues (e.g., use of texts and other materials).
_____(1) Responding to individual differences among students.
_____(1) Creating opportunities for collaborative learning.
_____(1) Developing effective strategies for active learning.
_____(1) Providing feedback to students.
_____(1) Setting and communicating high expectations.
_____(1) Classroom presentation skills.
_____(1) Laboratory skills and resources.
_____(1) Use of instructional equipment, including computers.
_____(1) Guidelines for organizing course content.
_____(1) Instructional goals and objectives.
_____(1) One-to-one interpersonal skills.
_____(1) Audio-visual resources.
_____(1) Overview of library resources and how to help students use those resources.
_____(1) Handling special student needs (e.g., disabled and foreign students).
_____(1) Directing students to special resources.
_____(1) Other. Please list topics:_____

_____

_____

37. What does your department do to help tenure-track faculty plan courses and improve their teaching skills? (Check all that apply.)

_____(1) Our department has no established mechanisms to help new faculty with undergraduate teaching.
_____(1) New faculty can ask for help as needed.
_____(1) Each probationary faculty is assigned to a senior faculty member.
_____(1) Undergraduate teaching is an item on a regular review with the department chair.
_____(1) We have an informal system to help new faculty with teaching undergraduates.
_____(1) We have a formal system to help new faculty with teaching undergraduates. Please describe:

_____

_____

_____

38. Does your department use any type of student evaluation forms to evaluate courses and instruction? (Check one.)

_____(1) Yes, we use the standard university forms
_____(2) Yes, we use forms we developed ourselves
_____(3) Yes, we use some of both (standard and unit-developed forms)
_____(4) No, we do not use student evaluation forms
_____(5) Other. Please describe:

_____

_____

39. Please indicate the approximate PERCENTAGE of courses in which your department used student evaluation forms during the 1988-89 academic year.

_____% 1-xxx level courses
_____% 3-xxx level courses
_____% 5-xxx level courses
_____% 8-xxx level courses

40. Does your department use procedures other than student evaluation forms (e.g., classroom visits by colleagues) to provide feedback to faculty about the quality of their undergraduate teaching? (Check one.)

_____(1) Yes
_____(2) No

If "Yes," please describe:

_____

_____

_____

41. If, through student evaluation forms or other methods, your unit finds that a faculty member needs assistance in improving his/her teaching skills, what steps are taken? (Check all that apply.)

_____(1) Have faculty member meet with department chair
_____(1) Reassign faculty member
_____(1) Closer supervision
_____(1) Counseling and advice
_____(1) Senior faculty appointed as mentor
_____(1) Referred to campus specialist to improve instruction
_____(1) Referred to teaching seminars and colloquia
_____(1) Other. Please specify:

_____

_____

a. Please describe what additional services you would like to see offered for this purpose:

_____

_____

42. Does your department have a written procedure available for students to follow if they have complaints or grievances about the quality of teaching or courses in your department? (Check one.)

_____(1) Yes
_____(2) No

If "Yes," briefly describe the procedure:

_____

_____

_____

SECTION VII: Basic Departmental Data

This section contains basic questions about faculty size and composition and departmental student credit hours. You may wish to provide the data for questions 44-46 or, alternatively, you may prefer that we obtain the data from central records.

43. Department Name:_____

44. How many tenured and tenure-track faculty are there in your department for the 1988-89 academic year? (Please consult academic personnel records in responding to this question.)

	Number
Tenured	_____
Tenure-track	_____

45. How many new tenured and tenure-track faculty did your department hire during the three-year period July 1, 1985, through June 30, 1988? (Please check academic personnel records in responding to this question.)

	Number
Tenured	_____
Tenure-track	_____

46. For the current academic year (September 16, 1988, through June 15, 1989), indicate the total number of individuals who held positions as teaching assistants in your department. (Please consult your academic personnel records in responding to this question.)

_____ Total number of teaching assistants appointed.

47. For each level of instruction in your department, indicate the approximate percent of your department's total student credit hours at that level of instruction for the period fall quarter 1988 through spring quarter 1989.

Level	Student Credit Hours
1-xxx	_____%
3-xxx	_____%
5-xxx	_____%
8-xxx	_____%
	100%

-- Thank you for your time and cooperation --

Please return your completed departmental questionnaire to the Dean's Office.