

Report of the Stony Brook Task Force on
Assessment of the Diversified Education Curriculum:
A Plan for Assessing General Education at Stony Brook

1. **EXECUTIVE SUMMARY**

A plan for assessment

- We propose an assessment of the DEC which will measure students' skills and knowledge when they enter Stony Brook and again just before they graduate.
- Initially, assessment will be limited to students who enter as freshmen.
- The assessment will measure students' growth in six general areas: critical thinking, reading comprehension, writing, quantitative reasoning, understanding scientific principles and inquiry, and understanding social and cultural issues.
- The assessment instrument will be designed to measure the extent to which students analyze complex issues from multiple perspectives.
- The assessment will use a single integrated instrument rather than separate tests for the various goals of the DEC.
- The assessment instrument will be developed at Stony Brook so that it is tailored to the DEC's specific goals.

Assessment Implementation

Oversight.

- The Provost will name an assessment coordinator and convene an executive committee to guide the development of assessment instruments, oversee data collection and analysis, and prepare assessment reports.
- The assessment will take advantage of the expertise of Stony Brook faculty.

Timetable.

- Construction of assessment instruments will begin in spring 1999 for pilot testing during 1999-2000.
- This pilot will include administration to freshmen in USB 101 in fall 1999 and administration to graduating seniors during the academic year: at least in spring 2000 and possibly also in fall 1999.

Resources.

- Faculty will be given release time to develop the instrument, organize the data-collection process, and oversee the scoring and analysis of the data collected.
- Graduate assistants will be hired to complete the scoring and analysis of the data.

2. THE TASK FORCE AND ITS CHARGE

In August 1998, the President of the University Senate at Stony Brook's, Robert Kerber, and the Stony Brook Provost, Rollin Richmond, agreed to convene a joint task force with the purpose of developing a program for assessing Stony Brook's general education program, the Diversified Education Curriculum (DEC). The formal charge to the task force was formulated as follows:

Charge for the Senate/Provostial Task Force on Assessment of Stony Brook's Diversified Education Curriculum

The Diversified Education Curriculum at Stony Brook was the result of a detailed and thoughtful faculty review that culminated in the introduction of new general education requirements in the Fall of 1991. The overall intentions of the DEC are described in the Undergraduate Bulletin in the following terms: "General education requirements help students to place the more specialized parts of their undergraduate study, their major and pre-professional training, in a cultural and historical context. They also develop the intellectual skills necessary to enhance learning during the university years and later. In this complex world, distant places and history have a major effect on all human life. The knowledge of the variety, richness, and interdependence of the human experience that students gain during their undergraduate years will enrich their future professional and personal life. The person with a broad education in the arts and sciences and with well-developed communication and quantitative skills is most likely to flourish in changing times."

As with any curricular revision, a number of questions concerning the efficacy of the DEC have been raised but only partially answered. We ask that you undertake two tasks for the University:

Design a means for determining whether the DEC does provide students with the intellectual skills they need for their further education. In particular, does the DEC improve students' ability to think critically, solve problems, and communicate effectively both orally and in writing? This is a pressing issue, thus we would like to have at least an interim report on this issue by 1 January 1999.

Consider whether the content of the DEC should be reviewed by the University. By content, we mean both the categories and distribution of course type as well as the particular set of courses that currently satisfy DEC requirements. We would like to have this assessment completed by the end of the Spring semester of 1999.

In September, Mark Aronoff was asked to chair the task force in his capacity as Associate Provost and as a member of the faculty who regularly teaches courses that are part of the DEC. The following faculty and staff members also agreed to serve on the committee:

Robert Cerrato, Associate Professor, Marine Sciences Research Center
William Collins, Associate Professor, Neurobiology
Richard Gerrig, Professor, Psychology
Norman Goodman, Distinguished Service and Teaching Professor, Sociology
Elaine Kaplan, Assistant Dean, Arts & Sciences, representing the Undergraduate Council
Philip Lewis, Professor, Computer Science
Kay Losey, Associate Professor, English; Director, Program in Writing and Rhetoric
Mary Rawlinson, Associate Professor, Philosophy; Associate Dean, Arts and Sciences
Emily Thomas, Director, Planning and Institutional Research

The committee met on a weekly basis between October 15 and December 3 and formulated this report at its final meeting of the Fall semester, on December 17. Unfortunately, we had no success in finding any undergraduate students able to serve on the committee. Our meeting time during the business day also precluded us from including on the committee any alumni or members of the business community, as we had hoped. We plan, however, to include members of both these groups in the next stage of the process.

3. BACKGROUND: THE DRIVE FOR ASSESSMENT

The call for program assessment beyond what we do routinely as teachers in determining students' grades has a long history within SUNY. The SUNY University Faculty Senate published a *Guide for the Evaluation of Undergraduate Academic Programs* in the early 1980's and SUNY Provost Burke issued a set of *Principles of Undergraduate Assessment for the SUNY System* in 1988. This trend continued in the SUNY University Faculty Senate with a series of meetings devoted to assessment and general education, which led in turn to a number of publications, all of which are readily available from the SUNY senate (September 1992, May 1994, January 1998).

Quite separately, the SUNY system administration and Board of Trustees have recently conducted their own deliberations on general education and assessment. SUNY Provost Salins, too has recently provided an overview and recommendations to improve general education system-wide and has also suggested that SUNY conduct a system-wide assessment of general education programs. Most recently, the Board of Trustees has approved a proposal for a SUNY-wide general education curriculum that incorporates

some aspects of the Senate's recommendations and is similar to the DEC, though somewhat more specific in certain areas.

Within states throughout the country, there have been several waves over the last decade of calls for outcomes assessment from governors, state legislatures, and oversight bodies. These calls have been motivated by many factors, from fiscal accountability (are education dollars being well spent?) to ideology (are students being taught the sorts of things that we want them to learn?). Where successful, these external calls have sometimes resulted in the imposition of standardized tests statewide. Most recently, the call for improved or more stringent standards in K-12 education, such as have led to tightening of the New York State Regents examinations, have had some spillover into public higher education. Both ACT and ETS have responded to these calls for standardized assessment and have each developed a series of outcomes assessment instruments. Once these instruments exist, there is a natural drive to create a market for them, resulting in more pressure for standardized assessment testing.

Nationally, the most tangible result of the assessment movement is the federal mandating of assessment as a central part of the college and university accreditation process. Stony Brook, for example, is accredited by the Middle States Commission on Higher Education, which requires for its five-year periodic report of Stony Brook, due in 1999, that we provide 'evidence of continuous institutional self-study and planning to include . . . outcomes assessment', with, however, no further specification of what is meant by outcomes assessment.

Assessment and examination

In recent years, the term assessment, especially outcomes assessment, has been used as an Orwellian synonym for examination of individual student achievement. In several states (Florida, Georgia, Massachusetts, Oklahoma, and Texas) a test of one sort or another is required of all students in state universities and colleges for either admission to junior status or graduation. The possibility of instituting such a test within the SUNY system has been discussed by members of the board of trustees. We do not believe that assessment should be confused with examination of individual students. Our intent is to only to assess the effectiveness of the general education program at Stony Brook, not to test individual student achievement or to use assessment as a form of examination.

General Education within SUNY

The final report of the SUNY University Faculty Senate and faculty council of community colleges joint task force on general education (January 1998) contains a set of recommendations for general education SUNY-wide, as well as an analysis of how each campus's general education program meets these recommendations.

The Task Force made four recommendations, two of which we quote here in part (The full text of the recommendations may be found in the report):

RECOMMENDATION 1

The Task Force recommends the adoption of the following definition of general education:

General education is a set of nonspecialized, coherent and focused educational experiences throughout the college year aimed at enabling students to acquire knowledge and skills that are useful and important for all educated persons regardless of their jobs or professions.

RECOMMENDATION 2

The Task Force . . . recommends that the following Skills and Knowledge/Inquiry Domains comprise the goals and objectives of the four year general education programs within SUNY.

SKILLS

To develop in students the ability to write and speak English effectively as well as to read and listen critically.

To develop in students the ability to unify factual, creative, rational, and value-sensitive modes of thought.

To develop in students knowledge of the basic sources of information and their location, as well as how to access and manipulate them.

To develop in students basic knowledge about and the ability to use quantitative data and processes to help them with decisions in their lives and careers.

KNOWLEDGE AND INQUIRY DOMAINS

To develop in students knowledge of the human condition and human cultures, especially in relation to behavior, ideas, and values expressed in works of art, literature, music and philosophy that engender appreciation of the arts and humanities as fundamental to the cultural health and survival of any society.

To develop in students an understanding of physical and biological principles, methods of scientific inquiry, and problems inherent in the technical application of these principles to the solution of real-world problems.

To develop in students knowledge of how social and behavioral scientists discover, describe, and explain the behaviors and interactions among individuals, groups, institutions, events, and ideas.

To develop in students knowledge of the ways in which individuals and groups are identified in society and how societies and institutions use characteristics such as class, culture, ethnicity, gender, race, and other differences to define and separate people.

To develop in students an understanding of the growing interdependence of nations and peoples, and the need to apply a comparative perspective to cross-cultural social, economic and political issues, ideally informed by the study of a foreign language(s) or a period of study abroad.

To develop in students an understanding of today's complex environmental challenges, and of the bio-physical principles and sociocultural systems that are the foundation for integrative and critical thinking about environmental issues.

To develop in students the ability to identify, discuss, and reflect upon the ethical dimensions of political, social, and personal life so as to exercise responsible and productive citizenship.

4. GENERAL EDUCATION AS PERSONAL DEVELOPMENT

The presumption lies behind this and any liberal arts curriculum that its overarching goal is not to inculcate a specific body of factual knowledge (though this may be the aim of education in the major) but to produce a flexible mature person who will be able to adapt in a changing world. SUNY Provost Salins, in his report on general education, points to the following three “important benefits to be derived from a rigorous and comprehensive general education:”

- General education gives students the academic foundation for successful career preparation – fostering skills necessary for intellectual growth.
- General education enables each student to function as a broadly educated person – expanding horizons of knowledge in key scientific and cultural areas.
- General education enriches society – enabling students to flourish as individual citizens and to benefit others.

Curriculum and content

As evidenced by Provost Salins's survey of general education studies and models, there is great diversity among general education programs nationwide. The 1996 Penn State study concludes that there are few specific common traits even among well-known programs. Broadly speaking, though, one can identify three questions that govern the construction of any educational curriculum:

- Domain of inquiry — what knowledge domains should be taught?
- Content — what body of facts, ideas, and principles should be learned?
- Skills — what skills should be acquired?

Different curricula will place more or less emphasis on each of these three. A pre-professional curriculum will have a focussed domain of inquiry and may require that students learn very specific sets of facts, principles, and skills. A liberal arts curriculum, by contrast, covers a wider range of domains of inquiry and places more stress on general skills, since the goal of such an education is to foster flexibility. Within liberal arts curricula, one can define two broad types, based on the relative value that is placed on content and skills. **Content-based** programs value shared knowledge, on the view that students can communicate better with one another if they enjoy a common foundation of facts, terms, and definitions. This view has been advocated most strenuously by E. D. Hirsch and it is often associated with the desire for standards. Content-based curricula normally allow students a fairly narrow choice among courses within the general education program. A **domain-based** program de-emphasizes specific knowledge in favor of inculcating skills that can be broadly applied within a domain of inquiry and flexible attitudes of open inquiry. Domain-based curricula usually permit a somewhat wider choice of courses within categories, because they place less emphasis on the acquisition of a highly specific body of factual knowledge.

General Education at Stony Brook, the Diversified Education Curriculum

Stony Brook's current general education program, the DEC was implemented in Fall 1991. It replaced a problematic core curriculum with a more articulated program of courses in three categories: university skills, disciplinary diversity, and expanding perspectives and cultural awareness. The DEC is designed to help students place the more specialized parts of their undergraduate study – their major and preprofessional training – in a cultural and historical context. The DEC clearly meets the recommendations of the SUNY Senate Task Force on General Education (see Appendix I of that document, especially p 25, which deals specifically with Stony Brook) and is designed to implement the more global goals that Provost Salins identifies. On the dimension of content versus skills, the DEC falls somewhere in the middle, but closer to the skills pole.

Previous assessment of the DEC

In 1996, an assessment of the DEC was undertaken, which focussed on student enrollment in DEC courses, with three major questions in mind:

1. Which courses do students complete to satisfy the general education curriculum under DEC?
2. Are there factors beyond the courses themselves that would help explain the choices that students make?
3. How do student choices match the intent of the DEC?

A separate aspect of the assessment evaluated how well individual courses in the DEC fit the intended purposes of the designated category, based on sample syllabuses and final examinations. The results of this assessment will help to shape our future work, but it must be kept in mind that this previous assessment and our own have very different foci.

5. A PLAN FOR ASSESSING THE DEC

General criteria

1. Our goal is to determine how well the DEC meets its stated objectives.
2. Our focus is on both students' intellectual growth and their levels of achievement.
3. We expect that assessment of the DEC will help in Stony Brook's undergraduate educational mission of building a student-centered research university.

Principles of assessment

1. Assessment should be locally driven and tailored to the needs of the campus.
2. Assessment should be dynamic and sustainable.
3. Assessment should not be perceived by anyone as a form of examination.
4. Assessment should address skills, inquiry domains, and content.

Assessment Methodology

We propose an assessment of the DEC with the following structure:

1. We will measure students' skills and knowledge when they enter Stony Brook and again just before they graduate to assess growth by measuring change in individual students: a "pre- and post-test" methodology.
2. During the phase-in period, while we wait for freshmen to make their way through their studies, we will assess the extent to which graduating seniors meet standards set by the faculty.
3. Initially at least, this assessment will be limited to students who enter as freshmen since transfers do not take all their general education courses at Stony Brook.
4. The assessment will measure students' growth in six general areas: critical thinking, reading comprehension, writing, quantitative reasoning, understanding scientific principles and inquiry, and understanding social and cultural issues. The assessment will not be designed to measure the extent to which students have learned specific course content, but rather to assess their ability to analyze complex issues within certain domains from multiple perspectives.
5. The assessment will be based on a single integrated instrument rather than separate tests for the various goals of the DEC. This instrument will be developed at Stony Brook so that it is tailored to the DEC's specific goals, and it will be designed so that

it can be scored by different people to measure capability in different areas. Most of students' responses will be in the form of essay writing, though some multiple-choice or short-answer questions may be included.

6. Students' entry-level skills and knowledge will be measured in a class—such as USB 101—or during orientation if the orientation program is extended. Seniors' skills and knowledge will be measured in venue that is yet to be determined.
7. Assessment scores will be combined with demographic and other information about the participating students to permit analysis of the validity of the sample and the correlation between assessment scores and other student characteristics.

Assessment Implementation

Oversight. The Provost will name an assessment coordinator and convene an executive committee to guide the development of assessment instruments, oversee data collection and analysis, and prepare assessment reports. The assessment will take advantage of the expertise of Stony Brook faculty. Participants should include Kenneth Feldman (Sociology) with expertise in testing and assessment; David Ferguson (Center for Excellence in Learning and Teaching) with expertise in student learning; Kay Losey (English and the Program in Writing and Rhetoric) with expertise in assessing writing; Judith Tanur (Sociology), Alan Tucker (Applied Mathematics), and Dusa McDuff (Mathematics) with expertise in quantitative reasoning; and Marci Lobel (Psychology), with expertise in psychological factors.

Timetable. Construction of assessment instruments will begin in spring 1999 for pilot testing during 1999-2000. This pilot will include administration to freshmen in USB 101 in fall 1999 and administration to graduating seniors during the academic year: at least in spring 2000 and possibly also in fall 1999. It will not be possible to complete a pre- and post-test assessment for six years—by which time most freshmen who are going to graduate from Stony Brook will be completing their studies. In the interim the assessment of graduating seniors will provide information on the extent to which their skills meet standards set by the faculty.

Resources. To support this assessment program faculty will be given release time to develop the instrument, organize the data-collection process, and oversee the scoring and analysis of the data collected. Graduate assistants will be hired to complete the scoring and analysis of the data.

Mark Aronoff

Chair, Stony Brook Task Force on Assessment of the Diversified Education Curriculum
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