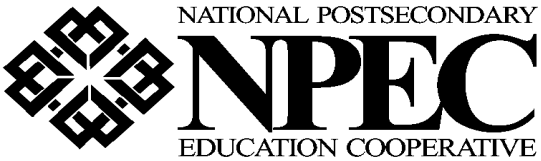
The NPEC Sourcebook on Assessment, Volume 2: Selected Institutions Utilizing Assessment Results

National Postsecondary Education Cooperative
Student Outcomes Pilot Working Group:
Cognitive Intellectual Development



The NPEC Sourcebook on Assessment, Volume 2: Selected Institutions Utilizing Assessment Results

National Postsecondary Education Cooperative
Student Outcomes Pilot Working Group:
Cognitive and Intellectual Development

Prepared for the National Postsecondary Education Cooperative (NPEC) and its Student Outcomes Pilot Working Group by T. Dary Erwin, Center for Assessment and Research Studies, James Madison University, Harrisonburg, VA, under the sponsorship of the National Center for Education Statistics (NCES), U.S. Department of Education.

U.S. Department of Education
Richard W. Riley
Secretary

Office of Educational Research and Improvement
C. Kent McGuire
Assistant Secretary

National Center for Education Statistics
Gary W. Phillips
Acting Commissioner

The National Center for Education Statistics (NCES) is the primary federal entity for collecting, analyzing, and reporting data related to education in the United States and other nations. It fulfills a congressional mandate to collect, collate, analyze, and report full and complete statistics on the condition of education in the United States; conduct and publish reports and specialized analyses of the meaning and significance of such statistics; assist state and local education agencies in improving their statistical systems; and review and report on education activities in foreign countries.

NCES activities are designed to address high-priority education data needs; provide consistent, reliable, complete, and accurate indicators of education status and trends; and report timely, useful, and high-quality data to the U.S. Department of Education, the Congress, the states, other education policymakers, practitioners, data users, and the general public.

We strive to make our products available in a variety of formats and in language that is appropriate to a variety of audiences. You, as our customer, are the best judge of our success in communicating information effectively. If you have any comments or suggestions about this or any other NCES product or report, we would like to hear from you. Please direct your comments to:

National Center for Education Statistics
Office of Educational Research and Improvement
U.S. Department of Education
1990 K Street
Washington, DC 20006

March 2000

The NCES World Wide Web Home Page address is
http://nces.ed.gov

Suggested Citation

U.S. Department of Education, National Center for Education Statistics. *The NPEC Sourcebook on Assessment, Volume 2: Selected Institutions Utilizing Assessment Results,* NCES 2000-172, Prepared by T. Dary Erwin for the Council of the National Postsecondary Education Cooperative Student Outcomes Pilot Working Group: Cognitive and Intellectual Development. Washington, DC: U.S. Government Printing Office, 2000.

Contact
Nancy Borkow
202–502-7311

National Postsecondary Education Cooperative
Student Outcomes Pilot Working Group:
Cognitive and Intellectual Development

Members:

Toni Larson, Executive Director, Independent Higher Education of Colorado (Chair)

Paul Brinkman, Director, Planning and Policy Studies, University of Utah

Sal Corrallo, Consultant, Potomac Management Services

Eric Dey, Associate Professor, Higher Education, University of Michigan

Mary Golladay, Program Director, Education and Human Resources Group, National Science Foundation

Henry Hector, Executive Director, Alabama Commission on Higher Education

Jacqueline King, Director, Federal Policy Analysis, American Council on Education

Cheryl Lovell, Assistant Professor, University of Denver

Meredith Ludwig, Director, Postsecondary Statistics Support, ESSI

Vivian Makosky, Consultant

Larry Mayes, Coordinator, Institutional Research, University of Kentucky Community College System

Margaret Miller, President, AAHE

John Muffo, Director, Academic Assessment Program, Virginia Polytechnic Institute and State University

Michael Pavel, Assistant Professor, Washington State University

Gregory Smith, Vice President, Information Resources and Planning, Community College of Denver

Consultant to the Working Group

T. Dary Erwin, Center for Assessment and Research Studies, James Madison University

NPEC Staff

Brenda Albright, Consultant to NPEC

Hans L'Orange, Director, SHEEO/NCES Communication Network, State Higher Education Executive Offices

Roslyn Korb, Program Director, Postsecondary and Library Cooperative Programs, NCES

Nancy Borkow, NPEC Project Director, NCES

Robert Wallhaus, Consultant to NPEC

Table of Contents

PREFACE

The National Postsecondary Education Cooperative (NPEC) was authorized by Congress in 1994. It charged the National Center for Education Statistics to establish a national postsecondary cooperative to promote comparable and uniform information and data at the federal, state, and institutional levels. In accordance with this charge, the projects supported by the Cooperative do not necessarily represent a federal interest, but may represent a state or institutional interest. Such is the case with this Sourcebook. While there is no federal mandate to assess the cognitive outcomes of postsecondary education, some states and many institutions have identified cognitive assessment as a way of examining the outcomes of their educational programs. This project was undertaken to facilitate these efforts.

The National Postsecondary Education Cooperative (NPEC), in its first council meeting held in the fall of 1995, identified student outcomes as a focus area. The NPEC Steering Committee appointed two working groups, Student Outcomes from a Policy Perspective and Student Outcomes from a Data Perspective, to explore the nature of data on student outcomes and their usefulness in policymaking. The exploratory framework developed by the policy working group is presented in the paper *Student Outcomes Information for Policy-Making* (Terenzini 1997) (see http://nces.ed.gov/pubs97/97991.pdf). Recommendations for changes to current data collection, analysis, and reporting on student outcomes are included in the paper *Enhancing the Quality and Use of Student Outcomes Data* (Gray and Grace 1997) (see http://nces.ed.gov/pubs97/97992.pdf). Based on the work undertaken for these reports, both working groups endorsed a pilot study of the Terenzini framework and future research on outcomes data and methodological problems.

In 1997, a new working group was formed to review the framework proposed by Terenzini vis-a-vis existing measures for selected student outcomes. The working group divided into two subgroups. One group focused on cognitive outcomes, and the other concentrated on preparation for employment outcomes. The cognitive outcomes group produced two products authored by T. Dary Erwin, a consultant to the working group: *The NPEC Sourcebook on Assessment, Volume 1*: *Definitions and Assessment Methods for Critical Thinking, Problem Solving, and Writing;* and *The NPEC Sourcebook on Assessment, Volume 2: Selected Institutions Utilizing Assessment Results*. Both publications can be viewed on the NPEC Web site at http://nces.ed.gov/npec/ under "Products."

The NPEC Sourcebook on Assessment, Volume 2: Selected Institutions Utilizing Assessment Results, provides eight case studies of institutions that have addressed policy-related issues through the use of the assessment methods. Administrators, faculty, and others in postsecondary education can use Volume 2 as a resource to learn about how these eight institutions are using student outcomes assessment methods for both internal and external policy-related purposes.

Working group members, a consultant to the group, testing companies, test developers, and heads of higher education organizations identified the institutions presented as case studies in Volume 2. These institutions are illustrative rather than representative of all types of higher education institutions. *The NPEC Sourcebook on Assessment, Volume 2,* is designed to convey the experiences of these eight institutions in using higher education assessment data of student competencies in the areas of writing and critical thinking. The analyses are not an endorsement or a criticism of any specific assessment method.

The *NPEC Sourcebook on Assessment, Volume 1*, a companion to Volume 2, is a compendium of information about specific tests used to assess critical thinking, problem solving, and writing cognitive skills. The interactive version of Volume 1 (see http://nces.ed.gov/npec/evaltests/) allows users to specify their area(s) of interest and create a customized search of assessment measures within the three domain areas: critical thinking, problem solving, and writing.

Your comments on the case studies are always welcome. We are particularly interested in your suggestions concerning student outcomes variables and measures, potentially useful products, and other projects that might be appropriately linked with future NPEC student outcomes efforts. Please e-mail your suggestions to Nancy Borkow (Nancy_Borkow@ed.gov), the NPEC Project Director at the National Center for Education Statistics.

Toni Larson, Chair
NPEC Student Outcomes Pilot Working Group:
Cognitive and Intellectual Development

EXECUTIVE SUMMARY

In 1994, the United States Congress authorized the establishment of the National Postsecondary Education Cooperative (NPEC) under the auspices of the National Center for Education Statistics (NCES). NPEC's overarching goal is to produce better decisions through better data. This Executive Summary describes one project undertaken by NPEC.

At the first NPEC Council meeting, "student outcomes" was identified as an issue of great importance to higher education. Since NPEC's inception, several working groups have focused on selective aspects of this topic. *The NPEC Sourcebook on Assessment, Volume 2: Selected Institutions Utilizing Assessment Results* (Erwin 2000), the main focus of this Executive Summary, is just one of the products produced by NPEC's Student Outcomes Pilot Working Group: Cognitive and Intellectual Development.

The main purpose of the NPEC Student Outcomes Pilot Working Group project is to find a better way to link student outcomes information with decisionmaking by external constituents and policymakers. In 1996, during the first phase of the Student Outcomes project, an NPEC working group developed a framework for linking student outcomes to policy issues. The framework is described in *Student Outcomes Information for Policy-Making* (1997), written by Patrick T. Terenzini, a consultant to the project. In 1997, another working group was appointed and given the task of applying the framework to outcome variables in the cognitive and intellectual development domain. A pilot test was conducted that examined the effectiveness of applying specific criteria described in the framework to cognitive and intellectual development in the context of policy issues.

The framework presented in the Terenzini paper has four parts: (1) a taxonomy of postsecondary education policy issues, (2) a taxonomy of student outcomes, (3) a matrix for linking student outcomes and policy issues, and (4) a set of criteria divided into three screens (i.e., first screen—relevance, utility, applicability; second screen—interpretability, credibility, fairness; third screen—scope, availability, measurability, cost) for evaluating whether information about a given student outcome variable is valuable for policymaking.

The Student Outcomes Pilot Working Group selected three outcome variables—problem solving, critical thinking, and writing—in the cognitive and intellectual development domain. *The NPEC Sourcebook on Assessment, Volume 1: Definitions and Assessment Methods for Critical Thinking, Problem Solving, and Writing* (2000), was also developed by T. Dary Erwin. It is a compilation of tests that measure these three variables in students. Beyond its usefulness for the student outcomes project, the sourcebook is designed to help institutions and states select methods that assess the three cognitive outcomes. The sourcebook includes an analysis of scope, availability, measurability, cost, and other methodological considerations for the various test instruments included in the book.

In the next phase of the Student Outcomes Pilot Working Group project, (1) sites were identified where several of these assessment methods described in the sourcebook are used, (2) a questionnaire was developed for use in the interview process, and (3) telephone interviews were conducted with people at eight postsecondary sites. The eight institutions selected for the case studies segment of the project were as follows: Eastern New Mexico University (Portales and Roswell), East Tennessee State University, Mercer County Community College, Northwest Missouri State University, Santa Fe Community College, Southeast Missouri State University, Tennessee State University, and Washington State University. The individual interviewed at each site was someone actively involved in student assessment. *The NPEC Sourcebook on Assessment, Volume 2: Selected Institutions Utilizing Assessment Results* (Erwin 2000) presents the results of the case studies conducted as part of the Student Outcomes Cognitive project.

The main purpose of the case study project was to discover when and how student outcomes assessments in the three cognitive areas are used. In this instance, the case study approach was not intended to provide in-depth insights into the many aspects of student assessments.

A most important finding of the project is that information on student outcomes is typically not used outside the boundaries of the campus. Several other common themes emerged from the case studies:

- The primary goal of student outcomes assessment is to understand student competencies in order to facilitate improvements in curricula and teaching methods.
- Assessment is used most often by and within institutions for institutional improvement, by campus boards, and by accreditation agencies. External usage by legislative and executive branches and other bodies is limited.
- The data from the assessment process can be used for funding, accreditation, program restructuring, and remediation decisions.
- For half the institutions where interviews were conducted, assessment is mandated by the state.
- There is general satisfaction with the assessment methods used but also a desire for additional methods in other areas of general education.
- There is a desire for the design of computer-based assessment methods.
- Faculty members are involved in and supportive of the assessment process.
- Campuses are encouraging more faculty development through conferences and other activities.
- Campuses have considerable interest in developing local assessment methods, particularly in the area of writing competencies.
- Data collection is limited and difficult, and scoring is complex.
- Institutions see a strong need for flexibility in the use of assessments, and there is a movement away from a single exam.
- Students must be motivated to take assessment seriously.
- Collaboration with other institutions is a growing trend.
- The political atmosphere will influence assessment and will probably lead to more state mandates in this area.

Based on information from these institutions, the author identified some issues that were considered likely to arise.

- Expect measures to be mandated in other states that have norm-referenced rankings that can be used for comparative purposes or for performance budgeting. External constituents still find institutional averages an easy referent to understand.
- Although some states mandated assessment measures that could be interpreted as norm referenced, these measures were later replaced by institutions seeking more up-to-date measures more valid for their curricula. There was widespread use but movement away from the American College Test—College Outcomes Measures Project (ACT—COMP), College Level Academic Skills Test (CLAST), and New Jersey College Basic Skills Placement Test (NJCBSPT).
- There was movement toward seeking more criteria-referenced interpretation in outcome measures. For instance, several schools are now using ETS's Academic Profile with its levels of proficiency. For some schools, this action meant more locally developed measures, but most institutions lack the expertise and resources to design credible measures. Couple this pursuit for measures of diagnostic criteria with the desire to improve programs internally, not just to respond to state mandates.

- Although the schools contacted for this study felt comfortable responding to external policy questions about writing and critical thinking, several schools were less comfortable responding to questions about other areas in general education. Experiments with the Academic Profile and College-BASE tests were mixed. There is a need for measures in other areas of learning and development.
- Several institutions were successful in obtaining state monies for instructional improvements. Identifying weaknesses through assessment and trying to correct them were generally well received externally. Other schools would be wise to act in similar ways rather than sit back and wait for less educationally relevant mandates to come down from funding sources.
- There has been greater use of technology in instructional delivery and testing. Several of these colleges, although campus based, are experimenting with Web-based courses. Also notable was a trend away from paper and pencil tests to computer-based tests such as Accuplacer or Compass. Groups revising existing outcome measures or creating new measures should seriously consider computer-based tests that can deliver new types of multimedia-based questions or adaptive tests. Computer-adaptive tests tailor each test question to the student's ability as determined by performance on prior test questions.
- All of the colleges contacted for this study expect greater accountability demands about higher education in general, not just for their individual institutions. The thought of a common set of assessment methods concerns many administrators and faculty, but the institutions described herein are preparing for that possibility.

Based on the findings from the two phases of the Student Outcomes Pilot Working Group project, the group has recommended that subsequent steps be taken:

- Expand the sourcebook to include other variables.
- Expand the sourcebook to include other types of measures (e.g., portfolios, competencies).
- Link with other similar projects to bring the findings together and produce more information for practitioners.
- Identify ways to make the information more accessible and useful for decisionmaking (e.g., using the NPEC Web site, sponsoring forums).

Identifying, measuring, and using student outcomes information is a priority area for NPEC. To fulfill the challenge before NPEC—to elicit more readily available, better, and more usable information—the task continues. Future projects will need to address how campus-based assessment information can be more effectively and completely linked to decisionmaking at all levels—student, parent, campus, accreditation, and government.

INTRODUCTION

Higher education assessment data pertaining to student competencies in the areas of writing and critical thinking have been used increasingly in recent years to address various policy questions. More specifically, colleges and universities are generating student outcomes data for funding purposes, accreditation requirements, determination of employer satisfaction with the skills of graduates, and to address the needs of diverse student populations that are of concern to external stakeholders. Unfortunately, information about the degree to which assessment data are being used for external purposes is not widely available. Therefore, the primary objective of this project was to compose a series of case studies, based on the experiences of a variety of different types of institutions, to provide highly visible examples of the successful use of assessment data for external policy-related decisionmaking purposes. Publication over the Internet will enable administrators and faculty affiliated with other colleges and universities throughout the country to learn from the experiences of others in order to derive effective methods for appropriately addressing pressing policy questions. Participation in this effort was limited to a few selected schools; the procedures used to identify appropriate institutions, along with the methods used to acquire the information necessary for formulating the case studies, are outlined below.

METHODOLOGY

From the outset, the goal was to include institutions that differed in geographic location, size, type, and actual assessment methods used. However, this sample of institutions is not to be taken as representative of the types of postsecondary education. This report conveys the experiences of eight different institutions. Fourteen institutions were originally contacted and invited to participate. A few of the individuals who were contacted believed that they could not devote the time required to adequately address the project. Other reasons for declining participation were varied. For example, the representative of one institution mentioned that the institution was currently restructuring its entire assessment program. He felt that what the institution would be doing in the near future had relevance to the project, but that previous work in assessment was probably not relevant to this study.

The process of identifying potential institutions began by contacting members of the Student Outcomes Pilot Working Group: Cognitive and Intellectual Development, of the National Postsecondary Education Cooperative, testing companies, test developers, and heads of higher education organizations in a number of different states throughout the United States. Test developers were obtained from Volume 1 (see http://nces.ed.gov/npec/evaltests for this sourcebook, which reviews major critical thinking, problem solving, and writing collegiate assessment methods), and assessment methods are listed in appendix D, Assessment Methods Reviewed for Sourcebook. Each of these information sources was asked to provide the names of institutions that have successfully used assessment data to address policy issues. Often, the name of a key contact person was provided as well. In cases in which names were not given, academic affairs offices were contacted to identify the most appropriate individuals to contact regarding possible participation. Once a list of institutions and affiliated personnel was composed, Web sites were visited to gather background information pertaining to each of the colleges and universities and to locate any information relevant to their assessment work. Telephone calls were then made to explain the study, derive more information regarding assessment practices, and ascertain interest in the project. Based on this preliminary screening, letters inviting administrators to participate were mailed. A copy of the survey to be used as the basis for the 30-minute interview was enclosed to enable potential participants to make an informed judgment regarding the appropriateness of including their respective universities in the project and to prepare for the interview in the event that they agreed to participate. The survey is provided in appendix A, Case Study Questions. Approximately 1 to 2 weeks after the letters were sent, calls were made to schedule interviews with those who remained interested. A number of the interviews went beyond 30 minutes, yet none of them exceeded 60 minutes. Extensive notes were taken during the interview, and the case studies were composed using a general framework (see appendix B, NPEC Case Study Categories).

ANALYTIC APPROACH

The institutions included in this report vary in size, geographic location, and mission, and the history and scope of assessment efforts were likewise found to differ considerably from one institution to the next. Nevertheless, a number of common themes emerged that provide considerable insight into the climate of the practice of student assessment for the purpose of addressing policy questions in the United States. This final segment of the document attempts to compile the diverse experiences of the institutions examined. It is hoped that the reader will be provided with a sense of where higher education stands regarding the use of student writing, critical thinking, and problem-solving outcome data for external decisionmaking purposes.

FINDINGS

The primary stated goal of student outcomes assessment voiced by the administrators polled was understanding student competencies to facilitate improvements in curricula and teaching methods. Although the administrative representatives interviewed all tended to have more of an internal focus, they were all using assessment data for external decisionmaking to some extent (e.g., for accreditation), and they all seemed aware that external demands for student outcomes data pertaining to writing and critical thinking were likely to increase in the future. Many of those interviewed anticipated statewide accountability in the form of performance-based funding and mandated assessment. As a result, a number of institutions seemed to be acting in anticipation of mandated assessment. In their attempts to be well prepared for what is anticipated, several institutions were engaging in self-study of their courses and programs, piloting instruments, and attending professional development workshops.

Institutional representatives seemed to be motivated not only by expected legislative changes but also by an appreciation for the use of assessment to enhance educational quality. A number of administrators conveyed success stories in which initial assessment data suggested very low student competencies in the areas of writing and critical thinking. These data prompted serious consideration of the objectives of particular programs, extensive consultation with professionals beyond the local campus setting, collaborative efforts within the institutions, and changes to the content and delivery of courses, with the result that student competencies were enhanced. Many of those interviewed mentioned initial frustration with low scores and a sense of not knowing where to start with changes. However, once the wake-up call was heeded and positive changes were introduced, faculty and administrators tended to gain a more comprehensive understanding of the importance of assessment.

According to the experiences of those interviewed, promotion and tenure decisions for individual faculty members are not currently based on assessment data. Nonetheless, substantial changes to curricular offerings and program modifications have resulted from the data generated, creating both the development of new positions and the elimination of existing positions.

There is also considerable evidence of institutions collaborating with other colleges and universities within their respective states in an effort to conduct meaningful assessments of student outcomes. The sharing of experiences and knowledge across institutions seems to be occurring much more frequently than in the past, with a great deal of interest expressed about how others are approaching various assessment issues. A few schools mentioned that committees were formed with representatives from several institutions across the state to locate appropriate assessment measures, coordinate multi-institution piloting of commercially available tests, and possibly develop new assessment methods specifically designed to address the student population in a particular state.

A number of administrators mentioned that their institutions were encouraging faculty development through funding attendance at national teaching conferences where faculty could learn teaching methods for stimulating critical thinking and the development of writing skills. Institutions have also often financed speakers and professionals to conduct faculty development seminars. Funds for bringing in external review teams have also been more available than in the past.

Some reluctance for using commercially developed instruments was revealed in the interviews, with considerable interest in and plans for developing local assessments, particularly in the area of writing competency. The dissatisfaction that was voiced related primarily to perceptions that the content of commercial tests inadequately matched the skills believed to be developed in local curricula. A number of individuals mentioned course-embedded assessments of writing, using authentic curricular products. Concerns about the appropriateness of many commercially available tests for documenting the skills and needs of diverse student populations (e.g., first-generation college students, rural residents, older students, and economically disadvantaged students) were also mentioned. On the other hand, a number of the institutional representatives voiced apprehension about exclusive reliance on locally developed tests, stressing the importance of knowing how their students compared to others nationally. Many schools seem to be heading toward using a combination of locally developed and nationally normed assessment methods.

A trend away from state-developed placement tests such as New Jersey's College Basic Skills Placement Test (NJCBSPT) and Florida's CLAST was evidenced in the conversations. This change seems to be predicated on the advantages of using one of the commercially available computer adaptive tests such as the Accuplacer.

Motivating students to take assessments seriously when the results do not preclude further study or graduation or have any other direct implications for individual students is an issue encountered by most institutions. A variety of approaches have been tried in addressing this issue. Most common among these approaches are the use of incentives such as raffles, gifts, and cash for students achieving particular scores, along with educational programs designed to help students understand the importance of assessment for promoting quality programs and services. Another strategy is to send students' scores to their advisors, who may use the information in composing future student references.

Few institutions collected data that they were not using, and most of the interviewees mentioned the need for data that are not currently available. A couple of administrators indicated the need for mid-career and senior assessments for the purpose of conducting pre- and post-longitudinal studies of program effectiveness. Others noted the need for assessment methods that are directly linked to the missions of their institutions. For example, stimulating interest in life-long learning is an often cited objective of undergraduate education, but little is known about how it is achieved or measured.

CONCLUSION

Personnel affiliated with each institution highlighted in this project should be commended for their success in using student outcome data to effectively improve the quality of the educational opportunities provided. Moreover, the institutions included herein were selected based on their efforts to address policy-related assessment issues. The innovation and diligence exemplified by their efforts to move in this direction can serve as excellent models to inspire others to follow.

The table presented on the following pages summarizes the institutional responses to the questionnaire in appendix A.

	ENMU Portales	ENMU Roswell	ETSU	MCCC	NMSU	SFCC	SMSU	TSU	WSU
Type of inst.	Regional Comp. 4-yr. & grad.	2-year	Regional Comp. 4-yr. & grad.	2-year	Regional Comp. 4-yr. & grad.	2-year	Regional Comp. 4-yr. & grad.	Land Grant Comp.	Land Grant Comp.
Method(s)	CAAP Writing & Crit.	CAAP Writing & Crit.	College BASE	NJCBST Accuplacer	CAAP Crit. Academic Prof. Locally developed writing measure	CLAST Accuplacer	Academic Prof. Calif. Crit. Thinking Locally developed writing measure	ACT COMP CTAB	Locally developed writing measure
Assessment generally mandated by state	N	N	Y	N	Y	N	Y	Y	Y
Basis for Selection:									
State	N	N	N	N	N	N	N	Y	N
Match w/ curriculum	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cost	I	I	I	I	Y	Y	Y	N	Y
Use of Data:									
Funding	N	N	Y	N	Y	N	Y	Y	Y
Accred.	Y	Y	Y	Y	Y	Y	Y	Y	Y
Program restruct.	Y	Y	Y	Y	Y	Y	Y	Y	Y
Personnel decisions	N	N	N	N	N	N	N	N	N
Remed. placement	I	Y	I	Y	I	Y	I	I	Y

	ENMU Portales	ENMU Roswell	ETSU	MCCC	NMSU	SFCC	SMSU	TSU	WSU
Using all avail. data	Y	N	N	Y	N	Y	I	I	I
Satisfied w/method (s)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Need for additional data	Y	Y	Y	Y	Y	I	Y	Y	Y
Developing new meth. locally	Y	Y	Y	N	Y	N	Y	N	Y
Collaborating w/other insts.	Y	Y	Y	Y	Y	Y	Y	Y	I
Student competencies enhanced based on chgs. to curr. indicated by data	Y	Y	Y	Y	Y	Y	Y	Y	Y
Faculty involved/ supportive	Y	Y	Y	Y	Y	Y	Y	I	Y
Political trends in immed. future likely to impact assess.	Y	Y	Y	Y	N	I	Y	N	N
Long-range political trends likely to impact assess.	Y	Y	Y	Y	N	I	N	Y	Y

KEY: Y=yes; N=no; I=insufficient information

FUTURE ISSUES

What role will student outcome assessment have in postsecondary institutions in the future? What can be learned from these institutions with active assessment programs?

At the outset of this project, the NPEC Student Outcomes Pilot Working Group and this author expected more widespread use of assessment data for external policy purposes. Certainly, the rhetoric associated with accountability data related to student learning is clear. "Institutions of higher learning are going to have to do a far better job of explaining what they are asking people to pay for, and what the value of it is" (Chauncey 1995, 30). The institutions in this review anticipate that performance-based funding mandates will increase but are "wary of the prospect." Based on information from these institutions, here are some issues that are likely to arise.

First, expect measures to be mandated in other states that have norm-referenced rankings that can be used for comparative purposes or for performance budgeting. External constituents still find institutional averages an easy referent to understand.

Second, although some states mandated assessment measures that could be interpreted as norm referenced, these measures were later replaced by institutions seeking more up-to-date measures more valid for their curricula. Note the widespread use, but movement away from, the American College Test—College Outcomes Measures Project (ACT—COMP), College Level Academic Skills Test (CLAST), and New Jersey College Basic Skills Placement Test (NJCBSPT).

Thirdly and similarly, note the movement toward more criteria-referenced interpretation in outcome measures. For instance, several schools are now using ETS's Academic Profile with its levels of proficiency. For some schools, this action meant more locally developed measures, but most institutions lack the expertise and resources to design credible measures. Couple this pursuit for measures of diagnostic criteria with the desire to improve programs internally, not just to respond to state mandates.

Fourth, although these schools felt comfortable responding to external policy questions about writing and critical thinking, several schools were less comfortable responding to questions about other areas in general education. Experiments with the Academic Profile and College-BASE tests were mixed. Certainly there is a need for measures in other areas of learning and development.

Fifth, several of these institutions were successful in obtaining state monies for instructional improvements, suggesting that a proactive strategy was worth the effort. Identifying weaknesses through assessment and trying to correct them were generally well received externally.

Sixth, note the greater use of technology in instructional delivery and testing. Several of these colleges, although campus based, are experimenting with Web-based courses. Also, notice the trend away from paper-and-pencil tests to computer-based tests such as Accuplacer or Compass. Groups revising existing outcome measures or creating new measures should seriously consider computer-based tests that can deliver new types of multimedia-based questions or adaptive tests. Computer-adaptive tests tailor each test question to the student's ability as determined by performance on prior test questions.

Seventh and last, all of these colleges expect greater accountability needs about higher education in general, not just for their individual institutions. It would be desirable for all of higher education if collective groups of postsecondary institutions, such as all 4-year colleges within a given state, were able to tell an aggregated, single story about the value of higher education. The thought of a common set of assessment methods raises concerns for many administrators and faculty, but the institutions described herein are acting toward that possibility. Hopefully, educational institutions will lead with the selection and design of their own common assessment.

Future demands on institutions of higher learning requiring clear specification of curricular objectives, precise descriptions of what colleges and universities are purporting to do in the classroom context, and provision of convincing evidence that they are achieving their objectives efficiently, can only be expected to increase. Further, the demand for increased accountability has naturally led to greater government and oversight regulations in higher education. As colleges and universities are increasingly being held responsible for the writing and critical thinking competencies of their graduates, it behooves institutions to generate credible data needed for external as well as internal audiences.

Eastern New Mexico University

Portales, New Mexico

Interviewee: Dr. Alec M. Testa,
Executive Director of Planning and Analysis

Institutional Background

Eastern New Mexico University (ENMU), established in 1934, is a regional comprehensive university encompassing three separate facilities. The main campus is located in Portales, a city with a population of 12,000, near the eastern border of the state. A 2-year branch campus is located in Roswell, in the Pecos River valley, and an off-campus instructional center is situated in Ruidoso, in the mountains west of Roswell. Enrollment at the Portales campus is approximately 4,000 (57 percent female) with 47 undergraduate and 15 graduate degree programs offered in liberal arts and sciences, education, business, fine arts, and selected vocational/technical areas.

Eastern New Mexico University is committed to continuous self-examination and has a history of innovation directed toward enhancement of the quality of education provided to students. The university has invested over 10 years in outcomes assessment, leading the state and much of the southwestern United States in higher education assessment. ENMU conducts outcomes assessment with the primary goal of enhancing understanding of student learning and growth to facilitate improvement of programs and services. The Assessment Resource Office is currently funded at a rate of $150,000 per year through a research and public service project assistance program with the New Mexico legislature. The Assessment Resource Office's stated purpose is "to support the University's ongoing analysis of its growing body of assessment data, to broaden the scope of Eastern's outcomes assessment and teaching/learning efforts, to disseminate these findings within the state, and to enhance student learning."

Description and History of the Assessment Method

In 1986, when ENMU initiated its assessment program, it used the ACT—COMP test. However, ENMU switched to the Collegiate Assessment of Academic Proficiency (CAAP) in 1993 because of the closer content match between items on the CAAP and the ACT entrance exam. This match facilitated longitudinal studies of student achievement. Dr. Testa further noted that the choice of the CAAP was motivated by close observation of the success of other schools, such as Northeast Missouri State (now Truman State University).

Both the CAAP Writing and Critical Thinking tests are administered to ENMU's rising juniors (those having completed 55–65 credit hours). Assessment at ENMU has expanded to include measures of academic achievement in the majors, students' values and attitudes, and students' reported satisfaction with the university as well. CAAP writing scores have been centered around the national mean for 4-year public colleges in recent years. Moderate correlations between two introductory English courses and CAAP writing scores were recently reported (R's = .44 and .49). CAAP assessment data are not used to determine advancement or graduation for individual students, and Dr. Testa mentioned that ENMU is considering establishing a passing criterion score because low student motivation on the standardized tests has become a pressing concern in recent years.

Use of the Data to Address Policy Issues

Performance-based funding does not currently exist in New Mexico, but Dr. Testa estimated the probability of statewide accountability in the future at about 50 percent. Although previous initiatives in this direction were blocked in the legislature, support for state-mandated testing is growing. ENMU's early recognition of the need for colleges and universities to monitor and measure their efforts has positioned the institution well should the transition to statewide accountability occur. The initial and continued use of assessment data is primarily for program enhancement and for accreditation purposes. ENMU is accredited by the North Central Association of Colleges and Secondary Schools, and a number of the graduate programs are accredited by various agencies (e.g., NCATE).

Formative personnel decisions (e.g., promotion and tenure) at ENMU are generally not based on test data. However, Dr. Testa mentioned that data generated from an ETS major field test were used to build a case for a new faculty member with expertise in cellular biology for the Biology department. A similar case occurred in the Economics department.

The Assessment Resources Office at ENMU has conducted extensive employer surveys to assess the degree to which employers of Eastern graduates believe ENMU's former students are well prepared for the workforce. Among the specific skill areas addressed in the employer survey are reading, writing, decisionmaking, oral expression, math, listening, creative thinking, recognition of problems, computer usage, leadership, trainability, responsibility, and accountability. In the area of written communication, 74 percent of the employers surveyed indicated that writing skills were either important or very important at their particular agencies, and 58 percent indicated that the writing skills of the ENMU graduates were above average. In terms of creative thinking skills and the ability to generate new ideas, 74 percent of the employers surveyed mentioned that these skills were important or very important in their particular employment contexts, while 58 percent indicated that the ENMU graduates that they employed were above average in this skill area.

Future Political Trends Expected to Have an Impact on Assessment

Assessment data that exist at ENMU but are not currently being used include those pertaining to student satisfaction with services such as advising and financial aid. Dr. Testa also noted that incoming freshmen complete an intention to transfer survey, which could be examined more closely to develop means for enhancing retention rates. Needed data include tests to address variables that are related to the mission of the university, such as students' interest in life-long learning. Finally, when questioned about attempts to derive assessment data to answer policy questions by means other than traditional forms of assessment, Dr. Testa indicated that ENMU is exploring alternative methods of assessing student learning such as portfolio assessment and locally developed tests.

ENMU's assessment efforts have been well received both internally and externally. In particular, the funding for the Assessment Resource Office provided by the state is very impressive given that it is from nonformula funds. Recognition through financial support by the legislature and the governor is unparalleled in the other 23 publicly supported higher education institutions across the state.

Eastern New Mexico University

Roswell, New Mexico

Interviewee: Dr. Judy Armstrong,
Assistant Dean of Instructional Support

Institutional Background

Established in 1958, the Roswell Campus of ENMU is governed by the Board of Regents and a Community College Advisory Board composed of representatives of the community school district boards. Roswell is located in the eastern area of the southern Rocky Mountains region and is a semi-urban community with a population of 52,000. Roswell serves as the main financial, business, medical, and transportation center for much of southeastern New Mexico. The curriculum consists of both vocational-technical and academic programs with specialties in computer information systems, aviation technology, and nursing. Enrollment is approximately 2,600, with 1,600 full-time students (32 percent academic transfers, 19 percent vocational-technical, 44 percent nondegree seeking, and 5 percent concurrent enrollment). The average student age is 32; 60 percent of the students are female. The ethnicity of the students represents the surrounding region (57 percent Caucasian, 35 percent Hispanic, 3.5 percent Native American, 3 percent Black), and approximately 70 percent receive financial aid. In 1991, Roswell was put on a 10-year continuing accreditation cycle by the North Central Association of Colleges and Schools.

Description and History of the Assessment Method

Students in the academic transfer track take the CAAP after completing their studies, and those in the vocational track are administered the Student Occupation Competency Aptitude test. Assessment was not mandated, but between 1985 and 1986, a task force was developed to examine the college's assessment policies. Roswell decided to adopt a nationally normed assessment measure, based on its interest in determining how well its students were achieving compared to others around the country. The CAAP was chosen based on the congruence between the test content and Roswell's curricular goals.

Use of the Data to Address Policy Issues

The initial intended use of the CAAP data was to identify curriculum weaknesses so that instructional changes designed to build student competencies in needed areas could be introduced. The early assessments revealed student deficiencies in critical thinking skills. The college responded by providing in-service speakers to teach the faculty about critical thinking and to introduce teaching methods designed to develop critical thinking competencies. Five Roswell faculty members attended national conferences and shared the information with their colleagues. Extensive changes were made to the curriculum, and comparisons between pre- and post-data indicated that students were becoming more skilled in this area as a result of their classroom experiences at Roswell. The institution has worked diligently to provide critical thinking skills training across the curriculum, and it now offers a course in critical thinking. Data generated with the CAAP are also used for accreditation purposes. The data are not used for individual summative faculty evaluation purposes, yet program modifications have resulted in personnel changes that have been introduced based on assessment data.

Dr. Armstrong mentioned that some data, such as results from the Pre-Professional Skills Test, that are not currently being used to address policy questions could theoretically be used in the future. Roswell is developing an assessment of writing competency and is considering the use of a portfolio in the future.

Implications of the Data Generated

Dr. Armstrong noted that the faculty have witnessed positive changes in the curriculum based on information derived from the CAAP, and they are generally very supportive of assessment efforts. However, she also added that it has been frustrating at times to identify exactly what changes are needed to develop particular skills. Stakeholders have generally been very satisfied with assessment efforts. The Board of Regents has also been pleased with assessment efforts undertaken at Roswell. Employer survey data indicate that 90 percent of employers are content with the knowledge and skills of Roswell graduates. Data from the main campus in Portales further indicate that Roswell transfer students achieve comparable or better grades, on average, than students who enroll as freshmen at the main campus. Alumni data suggest that students are satisfied with the education that they receive at Roswell as well. Freshmen at Roswell complete an essay at the end of a College Success course; Dr. Armstrong noted that approximately 10 percent report that attending college has changed their lives entirely.

Dr. Armstrong noted that the legislature is trying to pass an accountability report card in the state, and, in response to this anticipated change, 17 community college presidents have developed a council with the explicit purpose of sharing experiences and coordinating assessment efforts.

Future Political Trends Expected to Have an Impact on Assessment

As advice for future policymakers, Dr. Armstrong mentioned greater emphasis on performance-based measures, noting that interpretation of figures alone can be frustrating when educators are seeking substantive information about how to fortify educational experiences. She also emphasized the importance of collecting longitudinal data over several years before implementing major changes. She expects assessment in the future to become increasingly technologically based. Finally, Dr. Armstrong believes that in the future we will have a much clearer, more standardized understanding of the competencies that students should be expected to develop based on their college experiences.

East Tennessee State University

Johnson City, Tennessee

Interviewee: Dr. Cynthia Burnley,
Coordinator of General Education and Performance Funding

Institutional Background

Established in 1911, East Tennessee State University (ETSU) is a state-supported institution governed by the Tennessee Board of Regents. The main campus is located in Johnson City, which is in the mountain and lake area of the Tri-Cities Tennessee/Virginia region. Off-campus centers include ETSU/UT at Kingsport, the Marshall T. Nave Center in Elizabethton, ETSU at Bristol, and ETSU at Greeneville. With an enrollment of approximately 12,000 students, the university offers more than 125 degree programs, including 2-year associate degrees and bachelor's, master's, educational specialist, doctor of medicine, doctor of education, and doctor of philosophy degrees. Although the majority of students (58 percent of whom are female) are from Tennessee and the surrounding southeastern region, 36 states and 37 foreign countries are represented in the student body. ETSU is also a leader in distance education.

ETSU is accredited by the Southern Association of Colleges and Schools (SACS), and a number of degree programs are accredited by agencies in associated disciplines. Nonaccreditable programs undergo an extensive academic program review every 5 years by a committee consisting of two external reviewers in every case. Each committee completes a standard checklist that is uniform for all institutions governed by ETSU's governing board, the Board of Regents. The committee also submits an extensive narrative report with recommendations for improvements. Each department is then expected to generate a response to the recommendations, which is taken to the dean for approval and planning and budgetary considerations. Dr. Burnley stressed that departmental assessment is taken very seriously at ETSU, with many improvements in the curricula resulting directly from this process.

Description and History of the Assessment Method

Students seeking admission as first-time freshmen must present a minimum composite ACT score of 19 or must have earned a minimum high school GPA of 2.3 (on a 4.0 scale). Tennessee residents who graduate from public high schools must successfully complete the Tennessee Proficiency Examination. Assessments to determine levels of proficiency are also required for entering freshmen who present ACT composite, English, or math scores below 19. The Collegiate Assessment of Academic Proficiency (CAAP) assesses academic preparation in writing, reading comprehension, and mathematics. The CAAP writing sample is a 25-minute, timed essay test designed to measure student ability to use standard written English (organization and development of the main idea; use of vocabulary and syntax to express ideas clearly; and command of sentence structure, punctuation, spelling, and grammar).

Performance funding at ETSU is based, in part, on data derived from administration of the College Basic Academic Subjects Examination (BASE) following completion of the general education curriculum and on senior assessment in the majors, with many departments using an adapted form of the ETS Graduate Record Exam. Departments are permitted to add locally developed items to their major field tests as well. The focus of this case study is on the College-BASE. Information used for funding decisions is also derived from an alumni survey that is sent out to former students 2 years after graduating and from an enrolled-student survey that is administered to a random sample of the student population. This survey assesses student satisfaction across many areas, including advisement, parking, and diversity issues. Only responses from students who have completed 24 credit hours or more are analyzed for

performance funding purposes. Written comments are examined systematically using a content analysis methodology.

In conjunction with the general education program, a number of nonperformance funding assessments are conducted at ETSU. For example, a 10-item measure of oral communication proficiency is completed by individuals supervising students in out-of-class learning experiences, such as a practicum. ETSU is also developing a writing proficiency measure. The general education program is composed of several core areas, and faculty in each area meet regularly to conduct a nonmandated self-study of the curriculum. Dr. Burnley noted that the faculty recognize the advantages of convening to discuss objectives for student learning in the context of general education program review required for funding purposes, and consensus resulted in the initiation of self-study efforts.

When performance-based funding was initially mandated, ETSU used the ACT—COMP. However, the decision to switch to the College-BASE was made for a number of reasons. Dr. Burnley noted that interpretation of the results for improvement of the general education curriculum was difficult, because the test focus is on application of knowledge rather than on general education knowledge. ETSU also experienced difficulty getting its students to take the COMP seriously because they frequently found the videos amusing and tended to view the assessment as somewhat of a joke. In addition, the College-BASE provided a much better match with the skills believed to be developed in the general education curriculum. ETSU decided not to use the essay component of the College-BASE because of the amount of time and expense involved. In general, both the faculty and the administration are more satisfied with the College-BASE. ETSU students take the College-BASE seriously, and motivating them to do their best has not been a problem. Although it does not serve as a barrier test, students are told about the connection between how well they do and funding for the university. Moreover, students are well aware that their individual reports are placed in their files for advisors to use for evaluations. Students also receive a copy of their test results.

Use of the Data to Address Policy Issues

College-BASE data are used to address various policy issues, the most salient being to demonstrate the efficacy of ETSU's general education program for funding purposes and for SACS accreditation. In Tennessee, performance funding is awarded at a rate of 5.45 percent of the state appropriation for a given institution. Points can be earned if scores on the College-BASE exceed state or national norms. Dr. Burnley noted that since this supplementary funding program has been in effect, correspondence with other institutions has increased. There has been much more cross-institution collaboration in relation to outcomes assessment, as well as an active exchange of experiences and ideas. Comfort with assessment has increased among faculty at ETSU and across the state. Dr. Burnley noted that ETSU faculty have moved beyond dissecting every measure to a sensitive appreciation for both the value and limitations of assessment. The performance funding program was developed by educators rather than by the legislature, and Dr. Burnley believes that this has been an important factor behind the acceptance and support evidenced in recent years. Although no summative personnel evaluations are made based on assessment data, program changes and reallocation of funds have resulted in new positions being allocated and existing positions being phased out.

The data generated by the initial state-mandated assessments indicated that the core curriculum needed to be changed. Modifications were made, resulting in a much more effective general education program. Dr. Burnley indicated that different forms of data reporting are generally needed for different stakeholders. The state provides a template for submitting assessment results that ensures uniformity across institutions and makes the task less cumbersome for individual colleges and universities. SACS is more interested in how the data are used, requiring more narrative reporting of information. Dr. Burnley noted that more extensive reporting (at the item level) is provided to the various departments.

Implications of the Data Generated

Dr. Burnley mentioned that ETSU has data that are not currently being used to address policy questions (e.g., enrollment and retention data). Assessment data that are not currently available but that have received attention by the general education committee include an acceptable writing assessment, a critical thinking measure (the Critical-Thinking Assessment Battery (CTAB) is currently being piloted at ETSU), and an assessment of familiarity with information technology. The general education committee is developing a writing competency measure in the context of the self-study groups described previously. As a result of having examined a number of standardized writing assessments and not finding a satisfactory one, ETSU's efforts have shifted to designing a method for assessing writing skills that is embedded in coursework.

Assessment data suggest that students are developing the needed skills and knowledge to function well in various employment contexts, to be successful in graduate training programs, and to grow as individuals and make worthwhile contributions to society. Moreover, stakeholders are generally satisfied with the return on their investment as exemplified by student competencies. Funding in recent years suggests this satisfaction, but Dr. Burley noted that ETSU is working diligently to improve funding beyond what has been achieved in recent years.

Future Political Trends Expected to Have an Impact on Assessment

Assessment data are currently used to prepare for the next accreditation cycle. Dr. Burnley mentioned that in the immediate future she sees the use of data to make positive curricular changes as being more routine and a part of the culture at ETSU. With regard to future assessment in the long term, she anticipates a much greater emphasis on course-embedded assessment that occurs throughout students' careers, rather than assessment as a separate process that is introduced at the beginning or end of various milestones. The provost of ETSU has argued for measures other than standardized assessments, and Dr. Burnley mentioned that the university has explored the use of portfolio assessments, suggesting a possible trend toward locally developed, nontraditional assessments emerging in the future.

Mercer County Community College

Trenton, New Jersey

Interviewee: Thomas N. Wilfrid,
Vice President for Academic and Student Affairs

Institutional Background

Mercer County Community College (MCCC), established in 1966, is a publicly supported comprehensive institution providing higher education opportunities through an open-door admission policy. In the fall of 1996, MCCC enrolled 2,732 full-time students (average age = 23) and 5,148 part-time students (average age = 31). Approximately 75 percent of the students are Mercer County residents (55 percent are women).

Transfer degree (AA or AS) programs at MCCC are designed primarily to enable students to enter the third year of baccalaureate study at 4-year colleges. The largest student enrollments in transfer degree programs are in humanities and social science and in business administration. Additional transfer degree programs include architecture, communication and visual arts, engineering science, and plant science. Career degree (AAS) programs are designed to prepare graduates for entry-level employment in occupations that require theoretical knowledge as well as practical skills. Mercer has AAS programs in fields as diverse as nursing, accounting, aviation, chef apprenticeship, surveying, electronics, ornamental horticulture, microcomputer systems administration, television, funeral service, and computer graphics. With 50 percent of Mercer graduates transferring to senior colleges or universities and 75 percent choosing to seek employment, a number actually do both. More than 17,000 additional students are enrolled in continuing education programs such as computer training, small business development, health career certification, high school equivalency programs, English for the foreign-born, pre-college instruction, youth programs, and more.

MCCC is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, and is authorized by the state of New Jersey's Commission on Higher Education to confer associate degrees. Many of the college's academic programs are also accredited by national professional associations and their representative boards of certification.

Description and History of the Assessment Method

Mercer has been using the New Jersey College Basic Skills Placement Test (NJCBSPT) in response to a state mandate in the early 1980s. The instrument was revised and validated throughout the 1980s and into the 1990s. Until the early 1990s, the state required extensive reporting of NJCBSPT data. However, in 1994, the governor eliminated the Department of Higher Education and replaced it with a far less regulatory structure entitled the Commission on Higher Education. This maneuver rendered autonomy for the individual institutions and ended further development of the NJCBSPT. The presidents of higher education institutions across the state remained very invested in placement testing and quality service delivery and, in response to this commitment, formed the President's Council to maintain communication across institutions. The council serves as a statewide task force for identifying key issues and establishing priorities and guidelines for higher education in the state. One subcommittee of the council addresses higher education assessment; Dr. Wilfrid currently serves on this subcommittee. Among the many assessment-related recommendations put forth by this subcommittee was one that strongly advised every college and university to continue to conduct basic skills placement testing. After examining a number of available measures, including the Accuplacer and the Compass, the subcommittee recommended use of the Accuplacer, primarily because its development was based largely on the NJCBSPT.

Dr. Wilfrid noted that at Mercer the decision to use the Accuplacer was motivated by the subcommittee's recommendation, as well as the match between item content and the curriculum. Mercer has been gradually phasing out the NJCBSPT and has been piloting the Accuplacer, with a plan to switch over to the Accuplacer completely by August 1998.

Use of the Data to Address Policy Issues

Mercer has a strong commitment to serving an urban population, and a large percentage of its resources are funneled into remedial education. Several state grants provide supplementary resources as well. For example, grant money has been used to fund a program at Mercer entitled "Project Future," which provides basic education to students who demonstrate multiple remediation need areas (deficits in reading, writing, and mathematics) on the placement test. Approximately 10 percent of incoming students fall into this category (40 percent have at least one area of need), and Project Future serves an average of 150 students per year. Dr. Wilfrid noted that the need for remediation is quite frequently very substantial, yet Mercer is committed to helping students develop the basic skills needed to achieve success in college. The process often involves much more than providing remedial courses; the students need a great deal of attention and encouragement. Several features of the program have been linked with success. For example, Project Future courses meet 2 additional hours per week, which provides more time on task in the classroom as well as more time in direct contact with instructors. The faculty to student ratio in these courses is 1:10. Further, Mercer also has recruited its highest caliber faculty to teach these courses, and several counselors work with the students enrolled in the program. Data generated from the placement testing, which indicated that a fairly large number of students needed a comprehensive approach to remediation, resulted in this positive curriculum change.

In addition to informing curricular decisions and providing placement information and performance feedback to individual students, placement data are also used for accreditation. Formative personnel decisions are not made based on assessment data at Mercer; however, student evaluations of teaching are used in decisions about which adjunct faculty will be hired each semester.

In addition to placement testing, Mercer administers a program evaluation survey to every other graduating class to assess student satisfaction with the educational training received at Mercer. Statewide data suggest that transfer students do at least as well (as reflected by grade point averages) as students who spend 4 years at an institution that grants bachelor's degrees. Employer surveys indicate satisfaction with Mercer graduates as well.

Data that are not presently available but that could theoretically be used to address policy issues include the need to measure the success of the curriculum by means other than student GPAs and retention rates. Mercer is looking into administering some form of standardized assessment at the end of the 2 years of training that would function as a post-test assessment.

Future Political Trends Expected to Have an Impact on Assessment

Dr. Wilfrid mentioned that performance-based funding has been discussed both in the legislature and by the governor, and presidents and finance officers affiliated with various higher education institutions are somewhat wary of the prospect. There is concern that funding decisions will be based on political agendas rather than on what will optimize services to students in New Jersey. Now that the NJCBSPT is being phased out, Dr. Wilfrid voiced some concern about continued validation of measures used in the future. He believes that, in the future, higher education institutions will be managed by individuals who make decisions based on sound data.

Northwest Missouri State University

Maryville, Missouri

Interviewee: Dr. David Oehler,
Director of Assessment and Information Analysis

Institutional Background

Northwest Missouri State University (NWMSU) is a state-assisted, 4-year comprehensive regional university founded in 1905. The university is governed by a state-appointed board of regents and is accredited by the North Central Association of Colleges and Schools. The university is located in Maryville, a rural community of 10,000 (90 miles north of Kansas City, 100 miles south of Omaha, 140 miles southwest of Des Moines). NWMSU confers bachelor's, master's and specialist in education degrees, and also offers 2-year certificate programs. NWMSU is a moderately selective institution that emphasizes programs in agriculture, business, and education. The current enrollment is 6,200. Although the university primarily serves 19 northwest Missouri counties, students from 42 states and 22 countries are represented in the student body. NWMSU has been a national leader in student-based computer technology since 1987. The university's "electronic campus" provides a networked personal computer in every residence hall room.

Description and History of the Assessment Method

NWMSU administers a number of nationally normed, commercially produced tests. These include the Academic Profile, which first-semester seniors are required to take, the CAAP Critical Thinking Test, which is given to first-semester juniors, and various major field exams. NWMSU also requires students to complete a locally developed end-of-core writing assessment. This is completed at the culmination of the composition sequence. Students are provided with two to five current articles 4 days before the scheduled essay exam. The exam is timed, with students allowed two 50-minute periods to respond to a prompt that requires them to develop an argument citing evidence from at least two of the articles, along with their own experience. After composing an initial rough draft during the first 50-minute period, students compose a final draft during the second 50 minutes. Each exam is holistically scored by at least two members of the English department faculty, with a third rater appointed if a significant discrepancy arises. The review process is blind. The majority of the students pass the exam; those who do not are provided an opportunity to write another essay. If the student does not pass the second time, the student is able to complete a third essay and submit a portfolio as a backup during the next semester in attendance. NWMSU is part of a statewide colloquium on writing assessment, and most Missouri schools are administering a similar type of exam. This colloquium has provided a forum for the exchange of ideas, experiences, and information across institutions.

For initial placement testing, NWMSU uses a formula derived from ACT scores and high school class rank. Incoming students attend an orientation in June during which they receive their schedules for the upcoming fall semester. Students find out at this time if they have been placed into a developmental writing composition course. If students are placed into the developmental course, they are provided with an opportunity during orientation to test out by taking a 1-hour timed essay test, which is a personal essay with a prompt that changes each semester and which uses a rubric different from the end-of-core rubric. Several years ago, NWMSU used a composition placement test, which was very time consuming and burdensome to the faculty to administer and score for 1,300 incoming freshmen. Research into a more efficient method revealed that use of the ACT scores in conjunction with high school rank was as reliable a placement strategy as the essay exam, leading to the decision to use the writing sample only as a challenge to placement in the developmental course.

Performance-based funding has been in effect in the state of Missouri for the past several years. Although state-supported institutions were mandated to collect student outcomes data, the choice of the particular method was left to the discretion of the individual institutions. The Academic Profile was selected at NWMSU based on the match between test content and the institution-wide goals, which include fostering students' communication, problem solving, critical/creative thinking, and computer and cultural competence. The measure was also believed to be more practically feasible to administer than other similar instruments. Although faculty and administrators at NWMSU are relatively satisfied with the Academic Profile, there is an interest in supplementing the nationally normed measure with locally developed, more performance-based, criterion-referenced assessment.

In 1993, the Outstanding Schools Act (OSA) called for the development of a new, primarily performance-based assessment system for Missouri's public primary and secondary schools. The focus is on the development of assessment methods that extend beyond measuring students' knowledge and skills to assessing their abilities to apply knowledge to different real world situations. By introducing more performance-based assessment measures into the state's higher education system, there will naturally be much more continuity between the two systems. Dr. Oehler commented that the use of frequent, authentic, curriculum-based assessments are needed to sufficiently monitor student progress toward target outcomes. He also discussed NWMSU's experiments with modularized instruction, which provides students with a variety of options in terms of course delivery. In modularized instruction, students are expected to achieve certain skill sets or competencies; however, they are given the flexibility to select modes of instruction that fit well with their individual learning preferences. The introduction of modularized instruction raises many new questions pertaining to the design of assessment methods that enable students to most optimally demonstrate the skills that they have acquired through diverse means.

Use of the Data to Address Policy Issues

Data generated through the various assessment activities at NWMSU have been used for funding and for accreditation purposes. Although the use of the end-of-core writing assessment data is not required for external decisionmaking, the data are often included in reports and have enhanced the image of the institution. Dr. Oehler noted that different levels of data aggregation are required for different internal administrators and external stakeholders. For example, assessment results provided for accreditation agencies and the board of regents are less detailed than what is provided to departments for formative purposes.

Assessment data have been used to extensively modify the curriculum. Each academic and service unit participates in a regular planning process in which they are required to identify exactly who they serve, delineate what their expectations are for the population served, specify how the curriculum has been designed to meet their expectations, and identify how the objectives will be assessed. When the data suggest that expectations have not been met sufficiently, modifications are introduced.

Dr. Oehler noted that one of the most positive effects of having instituted a comprehensive assessment program has been in the area of faculty development. The selection and development of assessment methods has necessitated much more collaborative work (e.g., to design rubrics for the writing assessments). He has been impressed by how the faculty have become more unified and consistent in their thinking about measuring student outcomes. Assessment is now a part of the culture of the university, and Dr. Oehler has noticed that many of the faculty members are now asking much tougher assessment-related questions than they have in the past. For example, previously faculty may have turned to assessment strategies to address questions such as, "What do students know?" or "What skills are they able to reliably demonstrate?" Now faculty are asking questions such as, "How can we determine whether we are maximizing every student's potential?" Each semester the university sponsors a quality classroom symposium, which provides an excellent opportunity for faculty to share their ideas and learn from their colleagues. Previous topics have included issues such as the use of technology in the classroom, learning theory, and modularized instruction.

Future Political Trends Expected to Have an Impact on Assessment

Dr. Oehler commented on how he believes that the role of higher education is changing as a result of technological gains and rapidly expanding means for acquiring information. He expects that colleges and universities will be responsible for helping students to achieve skills and learn how to evaluate information, rather than functioning simply as the dispensers of knowledge. He also discussed how faculty development should focus on providing educators with a "tool box" of instructional methods that can be drawn upon when ongoing, frequent assessment data indicate that changes are in order. He believes that part of the business of "selling assessment" to faculty lies in fostering their professional development in such a way that they develop an extensive repertoire of skills for facilitating knowledge acquisition.

Finally, Dr. Oehler mentioned that he believes that the different priorities of employers and policymakers need to be clearly communicated to academicians. However, assessment practices must be owned by faculty in order for the methods to be maximally effective. Therefore, faculty should be encouraged to be involved actively in the design and selection of assessment methods.

Santa Fe Community College

Gainesville, Florida

Interviewee: Dr. Pat Smittle,
Director of Academic Resources and Assessment

Institutional Background

Santa Fe Community College (SFCC) is a comprehensive postsecondary institution located in Gainesville, Florida, currently serving Alachua and Bradford counties in the north-central region of the state. Established in 1965, SFCC provides educational opportunities to 12,600 credit students and 20,000 noncredit students. Fifty percent of SFCC's student body is enrolled full-time, 54 percent are female, 18 percent are non-white, 65 percent are in the 15–24 age range, and 44 percent are from low-income families. In addition to being accredited to offer the associate degree by the Commission on Colleges of the Southern Association of Colleges and Schools (SACS), SFCC is a charter member of the League for Innovation in the Community College. The nationally recognized League, composed of 20 community college districts in 14 states and Canada, has worked diligently to stimulate innovation and experimentation in community college education. Specific educational offerings at SFCC include the AA and AS degree programs, as well as certificate programs. More AA graduates continue their studies at the University of Florida than at any other institution. The AS and certificate programs are in the workforce development division and prepare students to begin employment immediately after completing their degrees. Approximately 64 percent of the students are enrolled in the AA transfer degree program, with 36 percent enrolled in the workforce development programs.

Description and History of the Assessment Method

With an open-door policy, SFCC provides access to all high school graduates, many of whom are underprepared and placed in remedial courses to develop the basic competencies needed to succeed in college and the workplace. Dr. Pat Smittle was initially approached to discuss the use of data generated with the College-Level Academic Skills Test (CLAST) to address external policy questions, but he preferred to discuss the use of the Accuplacer, which has been used successfully for 2 years to screen incoming students for remedial coursework. Although CLAST is still administered at SFCC, it has been phased out considerably statewide because all Florida community colleges are now required to offer alternatives. Two thirds of the students at SFCC have opted not to take the CLAST.

Dr. Smittle felt that SFCC has a unique story to tell relative to its remediation program because it has been highly successfully in meeting the needs of diverse, traditionally underserved populations, particularly those of the economically disadvantaged. In addition to providing access to education for students from impoverished backgrounds, SFCC has developed a finely tuned remediation program that has resulted in both high retention and high achievement rates. Members of the community are particularly pleased, because many individuals who would otherwise not possess the knowledge and training needed to secure adequate employment are able to provide for themselves and their families without the aid of public assistance.

SFCC has created a learning environment that not only accurately identifies students requiring remediation, but faculty and administrators have worked to achieve a development curriculum that accommodates different learning styles and fosters success for academically disadvantaged students. Moreover, SFCC has achieved these goals without compromising the integrity of its academic standards and without incurring exorbitant costs. Retention rates are high, and test and GPA data clearly suggest that students enrolled in the remediation program are achieving skill levels that are comparable to their peers who test out of remediation. Stakeholders, particularly taxpayers, want institutions such as SFCC to

reach disadvantaged populations, and the achievement of SFCC in this arena is the focus of this case study.

In 1985, the state of Florida mandated college placement testing, leaving the choice of the particular assessment method up to the discretion of the individual institutions. At this time, SFCC adopted the ACT paper-and-pencil test. However, in 1996, the use of ETS's computer-adaptive placement test, the Accuplacer, was mandated. Accuplacer is a four-component system, developed by the College Board and Educational Testing Service, to provide placement, advisement, and guidance information for students entering 2- and 4-year higher education institutions. Accuplacer includes the Computerized Placement Tests (CPTs), which are used to determine which course placements are appropriate for college students and whether developmental studies are needed. CPTs can also be used to monitor students' in-course progress and to suggest whether further developmental studies are needed or whether a change in course assignment is recommended at the end of course completion. The CPTs include the following eight computer-adaptive test components: reading comprehension, sentence skills, arithmetic, elementary algebra, college-level mathematics, and levels of English proficiency with three components (reading skills, sentence meaning, and language use).

Each individual test consists of a small number of items (between 12 and 17 depending on the test) drawn from a test bank of approximately 120 items. These questions are clustered in groups according to their difficulty, and the first item on a specific test is drawn from a group of items of moderate difficulty. Subsequent items are drawn from groups of less or greater difficulty depending on the response to previous items. The final test score is a statistical extrapolation from the score of the (T) questions and is reported as a score out of (N). This score is not a percentage; due to the adaptive nature of the test, a percentage calculation would not be meaningful. The best way to conceptualize the score is to view it as representing a position on a scale of difficulty, with a higher CPT score indicating a greater ability to handle difficult items.

Use of the Data to Address Policy Issues

The remediation program, formally entitled the college preparatory program at SFCC, represents the primary component of the Academic Resources and Assessment department. The mission of the college preparatory program is to emphasize skills, knowledge, and work habits that enable students with diverse backgrounds, abilities, and learning styles to continue their educational training, achieve in their chosen occupations, and engage in lifelong learning. The faculty and staff at SFCC are also committed to continuous evaluation and innovative revision of the educational environment in their efforts to maximally foster student goals. Four of the primary objectives of the college preparatory program are as follows: (1) to maintain and encourage an open-door policy while keeping high academic standards through the provision of assessment services, preparatory instructional activities, and adult education; (2) to design, implement, review, modify, and/or eliminate curricula that prepare students for the degree and certificate programs; (3) to foster learning of academic and work-related skills and habits that help students set and attain academic, career, and personal goals; and (4) to encourage and provide ongoing professional development for faculty.

The college preparatory program incorporates multiple instructional methods to address different styles of learning, repetition of skills that build on a basic foundation, presentation of new material in small increments, structured activities, extensive feedback, and personalized attention. The comprehensive instructional model includes three components. First, large group lectures introduce skills and concepts (2 hours per week, taught by a full-time faculty member). Second, small group classes review material presented in the lecture component and help students apply it appropriately (3 hours per week, taught by adjunct faculty). Finally, individualized open labs provide students with additional opportunities to practice skills one-on-one with teaching assistants (average of 2 hours per week). SFCC has developed this concentrated and comprehensive program partially in response to legislative pressures for students to complete preparatory courses in one semester.

Implications of the Data Generated

Fall 1997 Accuplacer data revealed that 56 percent of entering students required remediation in at least one basic skill area. However, based on recognition that no single test always reflects a student's competency level, a placement validation program is in place to ensure that students enrolled in the preparatory course are correctly assigned. Specifically, on the first day of classes, students are administered a test, which is frequently an alternate form of the final exam for the course. If they pass the test, they are moved into higher level college preparatory courses or into college-level classes. Studies conducted over the past few years have indicated that very few students are inappropriately placed. For example, in fall 1997, only 4 percent of those enrolled in the writing preparatory course tested out and were moved up. Although the data suggest very few misplaced students, the faculty at SFCC have continued the practice, as it helps students accept their need for remediation in addition to ensuring that the content of the Accuplacer remains consistent with the curriculum.

SFCC has been successful fulfilling its program mission of preparing academically underprepared students for college-level work and various employment contexts. Data generated to answer the question of "how well do college prep students perform as they move through the college-level program?" have been very favorable. Recent evaluation results indicate a 64 percent passing rate in the college preparatory course, with a 3.4 percent official withdrawal rate. Recent data have further shown that preparatory students' passing rates in subsequent courses (57 percent) met or exceeded the overall passing rate for students not requiring remediation (55 percent). In the English language skills courses, the rates were 66 percent and 57 percent for preparatory and nonpreparatory students, respectively.

With regard to CLAST, data discrepancies between the college preparatory and nonpreparatory students were still evident; 63 percent of students who were enrolled in at least one preparatory course passed all parts of the CLAST, compared to 89 percent of those not requiring remediation. Students who fail the CLAST are required to remediate the skills in a CLAST lab. On the essay portion of the CLAST, data have been more supportive of the efficacy of the program. Specifically, in October 1997, 93 percent of former college preparatory students (compared to only 85 percent of the nonpreparatory students) passed the essay portion. Data generated in the AA transfer program indicate that former prep and nonpreparatory SFCC students achieve comparable GPAs in the state university system (both slightly under 3.00). This finding is particularly exciting because the college preparatory students would not have been admitted into the state university system due to their low placement scores.

Dr. Smittle noted several of the elements that combine to create the strong developmental program that is now in place at SFCC. These include administrative support, structured courses, mandatory counseling and placement, the award of college credit for college preparatory classes, the implementation of varied instructional methods, the use of instructors who volunteer to teach remedial classes (as opposed to being assigned), peer tutors, close monitoring of student behaviors and the use of intervention, interfacing the program with subsequent courses, and extensive program evaluation. Other strengths include the following: (1) a strong research foundation, with the development and maintenance of the program based on the work of national leaders in the field of developmental education; (2) the institution of a career/academic planning (CAP) component of the program, designed to help students choose appropriate career/academic paths based on their interests, academic competencies, and the available SFCC programs; and (3) collaborative efforts with area high schools.

SFCC administers the Accuplacer to 10th grade students and conducts high school counselor workshops. The primary objective of this feature of the program is to provide feedback to students pertaining to their readiness for college-level work, enabling them to remediate skill deficiencies while still in high school. This feature of the program was initiated 5 years ago, and the idea became a part of state legislation in 1996–97. Since this project was initiated, the number of entering freshmen needing remediation studies has dropped by 12 percent. Dr. Smittle noted that additional benefits of enrollment in

the program are that students coming from disadvantaged environments develop excellent social skills and gain confidence and self-esteem in addition to developing academically.

Considerable media attention in recent years has focused on the remediation costs in community colleges. Yet, the SFCC data indicate that the programs are not costly, with fewer than 3 percent of the 1996–97 total college budget being spent on the college preparatory program (for 6,216 seats in remedial courses and related activities). The fall 1997 Accuplacer data revealed that 56 percent of entering students required remediation in at least one basic skill area, and the SFCC college preparatory program is clearly playing a vital role in the college mission to provide access to quality postsecondary education for these underprepared students.

Southeast Missouri State University

Cape Girardeau, Missouri

Interviewee: Dr. Dennis Holt,
Associate Provost

Institutional Background

Southeast Missouri State University (SMSU) is a public institution founded in 1873 and located in Cape Girardeau, a community of 40,000 that serves as the major commercial and cultural center between St. Louis, Missouri, and Memphis, Tennessee. The university is a comprehensive state institution with over 150 academic programs; it offers associate's, bachelor's, master's, and specialist degrees, along with a doctoral program in education. With an undergraduate student body of approximately 8,200, SMSU is primarily a regional institution and maintains a strong commitment to the 25 surrounding counties of southeast Missouri. The North Central Association of Colleges and Schools accredits the university.

Description and History of the Assessment Method

Performance-based funding in the state of Missouri requires the use of at least one norm-referenced test, with $100 of support awarded for each student who scores at or above the 50th percentile. The first measure adopted was the ACT—COMP. However, it was discontinued based on practical concerns revolving around the time and cost of administration as well as reservations about the validity of the measure. The ACT—COMP was replaced by the short form of the Academic Profile, and this year the institution has decided to switch to the California Critical Thinking test after piloting the measure and analyzing the results. The cognitive part of the exam was administered to students in their freshman seminar class and to seniors in an interdisciplinary senior course, with significant differences detected between the two groups. The decision to adopt the California Critical Thinking test was also based largely on the cost; the Academic Profile was believed to be too expensive, given the limited information derived from the assessment. Essentially, data generated from the Academic Profile were not found to be useful for program improvement. Existing comparison data with norming groups suggest that student competencies at SMSU are comparable to those of students attending similar institutions.

Because SMSU has now discontinued administration of the Academic Profile and the university's experience with the California Critical Thinking Test has been limited, the focus of this case study is on SMSU's writing proficiency exams, which have been used for more than a decade. Although data derived from the writing assessment program are not used specifically for performance funding or for accreditation purposes, the state and accreditation boards have been very pleased with SMSU's work in this area.

A 1984 policy required all students to pass a writing proficiency test after completing 75 credit hours and prior to graduation. In 1985, state funding was secured to begin the writing outcomes program at SMSU, with the idea that it was to serve as a model for other institutions in the state. All entering freshmen take a holistically scored, timed essay exam (WP001), with the prompt requiring a personal-type writing sample. For example, students might be requested to describe their views on the nature of competition. Students are tested again as they exit the capstone English composition course (typically at the end of the freshman year or at the end of the first semester of the sophomore year). The writing proficiency exam at this point (WP002) involves a two-part, timed essay test. There is a referential or source-based analytic prompt, which requires the students to read a number of excerpts and then take a position on an issue, supporting their viewpoint with correct referencing of information from the excerpts. The second segment is a personal essay similar in form to the one used with entering

freshmen. Finally, the third writing proficiency exam (WP003) is administered upon completion of 75 credit hours, with the format being identical to that of the WP002. Unlike the WP003, the WP002 is not a barrier exam but functions as a warning to students who may need enrichment experiences prior to taking the last exam.

Students who perform marginally or fail the WP002 receive a letter inviting them to visit the writing center to receive feedback on the exam. Additional help with writing is also made available as needed. Scores on the WP002 exam account for 5 percent of the students' grades in the capstone course. Students must demonstrate competency on the WP003 test or, in the event that they fail, on an approved portfolio option in order to graduate. Longitudinal studies conducted with data generated from the writing proficiency exam administered at different points in SMSU students' college careers indicate relatively high scores on the analytic essay segment at the end of the capstone course and modest, statistically significant gains between the WP002 and WP003 administrations.

Rubrics have recently been developed for critical thinking, reasoning, and analysis (similar to the rubrics used on the GMAT and the ETS Tasks in Critical Thinking), enabling the essay exams to serve the dual purpose of measuring writing proficiency and critical thinking skills. Significant correlations were observed between scores on this locally developed assessment and the data derived from the piloting of the California Critical Thinking Test. Dr. Holt noted that SMSU is excited about validating its criterion-referenced measure with scores derived from a nationally normed test.

SMSU also administers graduate follow-up surveys and enrolled-student surveys that request students to report the degree to which they believe their coursework has enhanced their critical thinking and writing skills. Student self-report data have been favorable.

Use of the Data to Address Policy Issues

SMSU staff believe that their efforts in outcomes assessment generally and in the domain of writing assessment specifically have been ambitious, successful, and highly visible, resulting in positive effects on the reputation of the institution both at the state and national level. SMSU has been sensitive to the skills deemed essential for college students by external stakeholders. For example, first the university addressed assessment of writing competency in a systematic and comprehensive manner, and now it is concentrating its efforts on closely examining assessment of critical thinking competencies. Another direction that exemplifies SMSU's awareness of current political issues pertains to its recent efforts directed toward conducting controlled studies of the use of technology in the classroom. Dr. Holt noted that three recent proposals for conducting such experiments have received state funds.

Future Political Trends Expected to Have an Impact on Assessment

When Dr. Holt was asked about future developments likely to have an impact on assessment, he mentioned a statewide cooperative project that administrators representing 2- and 4-year institutions throughout the state are currently working on. The project focus is on the development of core educational objectives and the identification of common assessment methods to address the issue of controlling the quality of students transferring from community colleges to institutions granting bachelor's degrees.

In his advice for policymakers regarding the assessment of critical thinking and writing, Dr. Holt had a word of caution for presidents of institutions and coordinating boards regarding the overinterpretation of test scores. He voiced some concern that overzealous efforts directed toward efforts

to demonstrate student achievement may lead to higher education officials losing sight of the limitations of the methods from which the data are derived.

Tennessee State University

Nashville, Tennessee

Interviewee: Dr. Dennis Gendron,
Associate Vice President for Academic Affairs

Institutional Background

Tennessee State University (TSU) is a major state-supported, urban, land-grant, and comprehensive university governed by the Tennessee Board of Regents. TSU provides instructional programs and statewide cooperative extension services and conducts agricultural research. As a comprehensive institution, TSU provides programming in agriculture, allied health, arts and sciences, business, education, engineering and technology, home economics, human services, nursing, and public administration. The institution is comprehensive at the bachelor's and master's levels; however, doctoral programs are only available in the education and public administration areas. As an urban institution located in the capital city, TSU provides both degree and nondegree programs (day, evening, weekend, and at off-campus sites) that are appropriate and accessible to a working population. Moreover, TSU serves a diverse population of students—traditional, nontraditional, commuter, residential, undergraduate, graduate, nondegree, full-time, and part-time. Fall 1997 enrollment data indicate that 71 percent of the TSU student population is black, 25 percent is white, and 4 percent are of other races. Further, 65 percent of the students are enrolled full time, and 35 percent attend part time.

Description and History of the Assessment Method

Dr. Gendron indicated that the ACT—COMP has been used to address policy questions for the past 10 years, beginning when the use of the measure was mandated by the state. COMP data are used to assess the efficacy of the core curriculum as exemplified by the basic skills demonstrated by graduating seniors (essentially an exit test). Four years ago, the state allowed institutions to substitute the COMP with another measure if they so desired. Several schools switched over to the College-BASE. The decision to continue with the COMP was made at TSU largely based on its interest in conducting longitudinal studies of program effectiveness. TSU has recently adopted the ACT Critical Thinking measure (Critical Thinking Assessment Battery, CTAB). Use of a critical thinking test was not mandated by the state; however, TSU is working to develop critical thinking across the curriculum and selected CTAB as its assessment method in efforts to modify the curriculum and to develop new teaching methods that facilitate critical thinking in different content areas. The state has been supportive of TSU's efforts, providing financial incentives for the development of new curricula, including funding to support faculty leave to attend critical thinking workshops. The faculty who attend training sessions subsequently work with their colleagues to share their knowledge. Because the CTAB was instituted only a year ago, the focus of this report is on the COMP.

Use of the Data to Address Policy Issues

Dr. Gendron indicated that test data generated by the COMP are currently used to address a number of policy issues. In particular, state funding is based on the six skill areas of the COMP for accreditation purposes (SACS); to develop and maintain institutional effectiveness standards; and to promote the reputation of TSU at the local, state, and national levels. Faculty and administrators at TSU are generally very satisfied with the COMP. Data generated from the COMP have been used to provide diagnostic feedback to students (they are provided with scores for the different areas), for advancement of individual students, and to improve and restructure the curriculum, in addition to being used to augment

and reallocate financial resources and for accreditation purposes. Although no summative personnel evaluations (e.g., promotion and tenure decisions) are made based on the data generated, test scores are used for faculty development purposes. Dr. Gendron indicated that different forms of data reporting are generally needed to answer the questions of different stakeholders. For example, *U.S. News and World Report* requires extensive reporting, whereas other agencies are content with data summaries (available over the Internet). All of the data collected at TSU are used, and no attention has been devoted to deriving assessment data to answer policy questions by any other means than with the use of traditional forms of assessment.

In terms of data that are not available, TSU is currently lacking a rising sophomore test. TSU has felt the need to assess student competencies upon completion of the core curriculum and prior to entering the majors. The university plans to initiate use of the Academic Profile in the near future. Because norm-referenced results have not conveyed enough information, TSU is eager to implement the criterion-referenced Academic Profile. Dr. Gendron indicated that no plans for developing tests locally to generate data needed to address policy questions exist; however, TSU will consider a locally developed measure of critical thinking if the CTAB turns out not to meet its needs. TSU personnel have been working with individuals affiliated with East Tennessee State University, Tennessee Tech, and Middle Tennessee State University in the piloting of the CTAB. If a change is made, it will be made in cooperation with the representatives of these other institutions.

Dr. Gendron responded positively to the question about the degree to which TSU students are developing the skills and knowledge necessary to function well in various employment contexts. He noted in particular that employers are very satisfied with the values and social skills of TSU graduates. Student competency in interpersonal or social contexts is supported by the Functioning in Social Institutions COMP subscale data. Although generally satisfied, employer surveys have suggested the need for more preparation in the areas of critical thinking, writing, and technology. COMP data suggest that the areas where students perform the lowest are in the arts and humanities, but these areas have not been of serious concern to the majority of employers. Alumni surveys further indicate that students are satisfied with their education and feel well prepared for various work settings. Most of the students attending TSU represent the first generation in their families to attend college, and a large percentage are from economically disadvantaged backgrounds, necessitating high levels of dependence on student loans. As a result, most TSU graduates feel compelled to work immediately after graduating in order to repay loans. The majority also tend to become rapidly established in their careers and are generally not interested in attending graduate school. Students who pursue graduate studies are self-selected, highly competent, and therefore very successful.

With regard to data generated to examine the relative efficacy of different teaching methods, Dr. Gendron noted that although TSU is moving in the direction of more Internet-based instruction, controlled studies comparing student outcomes in technologically delivered versus traditionally delivered classroom formats have been limited. Studies comparing student satisfaction and academic performance in distance education courses versus traditional classroom settings have revealed lower satisfaction and performance with the distance learning format. In general, the students are dissatisfied with the lack of personal attention associated with distance learning, and presumably this dissatisfaction negatively affects performance. Although some instructors have attempted to compensate by traveling to different sites, this strategy is construed as defeating the purpose of distance learning and has been seen as an extra burden by faculty.

With reference to logistical problems encountered in the administration of the COMP and other standardized tests, Dr. Gendron noted that a primary problem is with the listening segments of the tests. Many TSU students have poor listening skills, and when they have to sit still and concentrate on a passage that is delivered in a standardized, often monotone style, the students frequently lose their concentration. Discussions about resolving this problem have focused on the use of headphones, based on the assumption that more direct delivery would reduce distractibility. Dr. Gendron commented on the constant and varied stimulation that this generation of students has grown up with and noted how difficult it is to capture and maintain the students' attention for any length of time.

Future Political Trends Expected to Have an Impact on Assessment

When asked about advice for policymakers regarding the assessment of critical thinking or writing, Dr. Gendron commented that learning by rote is no longer useful in our rapidly changing and technologically advanced society. He believes that new methods designed to teach critical thinking skills such as synthesis and evaluation that go beyond analysis skills are greatly needed. He further noted that students must learn to quickly assimilate and discriminate information. From his perspective, students must be able to change their point of view for different audiences. Students need to be highly skilled users of the Internet, graphical programs, and presentation software, such as PowerPoint, in addition to being skilled writers, with the use of e-mail becoming so prevalent. Dr. Gendron felt it was impossible, from his vantage point anyway, to try to predict what assessment will be like in the year 2020, given the changes that have transpired over the past 2 decades.

Washington State University

Pullman, Washington

Interviewee: Dr. Bill Condin,
Writing Program Director

Institutional Background

Washington State University (WSU) is a land-grant university founded in Pullman in 1890. The university became a multicampus system in 1989 with the establishment of campuses in Spokane, the Tri-Cities, and Vancouver. Approximately 17,000 students (15,000 undergraduate and 2,000 graduate) are enrolled at WSU, with the majority on the Pullman campus (14,100). The branch campuses primarily serve students who are geographically restricted and would otherwise have limited educational opportunities. Enrollment is expected to double by the beginning of the next century as facilities and degree offerings are expanded. The university is composed of eight colleges, a graduate school, and the Intercollegiate Center for Nursing Education. WSU is accredited by the Commission on Colleges of the Northwest Association of Schools and Colleges, and many departments and colleges are accredited by professional accrediting associations recognized by the Council on Postsecondary Accreditation. The institution is also a member of the National University Continuing Education Association.

Liberal arts and sciences have always been strongly emphasized in the curriculum, together with business, education, architecture, pharmacy, nursing, and the traditional land-grant programs in agriculture, engineering, home economics, and veterinary medicine. There are nearly 100 major fields of study, with bachelor's degrees offered in all areas and master's and doctoral degrees available in the majority of fields. WSU has developed an extensive writing program that is nationally recognized for its innovation, scope, and effectiveness.

Description and History of the Assessment Method

The focus of this case study is on assessment of student writing competencies in the context of the WSU writing program, which has successfully incorporated writing throughout the curriculum (both across all disciplines and throughout the 4 years of undergraduate training).

The WSU writing program incorporates extensive, challenging writing experiences with a program of writing assessment that facilitates identification of students who need help with writing at various points in their college careers, while recognizing students with outstanding writing skills. The key features of the writing program at WSU include the following: (1) a writing placement exam; (2) a solid foundation in college-level writing in introductory composition courses that are tailored to different beginning competency levels; (3) a general education or honors program curriculum with a substantial amount of writing embedded throughout the coursework; (4) a junior-level diagnostic assessment of writing, referred to as the university writing portfolio and incorporating both a portfolio component and a two-part timed essay; and (5) two writing intensive courses in which students learn the forms of writing that are used in their chosen major fields.

The writing placement exam requires students to write two essays that are specifically designed to match the writing assignments encountered in the beginning English composition courses. The 2-hour timed exam begins with a passage of reading material and requires students to respond to the excerpt using college-level intellectual strategies (summarize, compare and synthesize different viewpoints, solve problems, etc.). One essay is an argument or analysis, and the other is essentially a reflection, requiring students to refer back to what they wrote for the first essay. The exams are diagnosed

by experienced English faculty, with the evaluation criteria focusing on the development of a main point, organization, persuasion, and evidence of having been proofread.

Initial English writing coursework is designed to meet the needs of students who vary quite dramatically in terms of their readiness for the challenges inherent in academic writing, from requiring additional assistance in discrete areas of composition (focus, organization, support, style, mechanics, etc.) to readiness for the accelerated honor's course. An introduction to academic writing for nonnative speakers of English is offered as well. Most first-year students enroll in a version of the English 101 course, which is considered the cornerstone of general education at WSU. The focus of this composition course is on aiding students in the transition to analysis, inquiry, and argument from the content writing that is emphasized in high school. Subsequent general education courses provide additional opportunities to build on writing competencies fostered in the foundation courses. Writing-intensive assignments in the majors are reviewed, critiqued, and revised for grading and assume various forms: research, synthesis, argument papers, proposals, laboratory and technical reports, memoranda, and progress notes. Dr. Condin noted that one goal of the WSU writing program has been to have students write at least 100 pages during their college careers.

Prior to finishing 61 credit hours, students submit a writing portfolio that includes three papers from courses taken at WSU and two timed essays. The portfolio is a mid-career assessment of writing skills (following the lower division general education courses and preceding upper division coursework in the major). The course papers must be signed off by the teacher of the course as "acceptable" or "outstanding" and may be library or laboratory research papers, reviews or critiques, technical reports, proposals, essays, case studies, fictional stories, or student self-evaluations. The examination component includes a 90-minute argument-type essay based on a short passage of prose and a 30-minute self-evaluation piece. This format is similar to the writing placement examination and enables longitudinal study of student writing competency. Portfolios are read by trained university faculty representing virtually all academic disciplines and are judged "pass," "pass with distinction," or "needs work."

Although the portfolio is designed as a diagnostic tool to facilitate the provision of support to writers needing additional help as they advance into their major courses and as recognition for exemplary writers, it is also a graduation requirement. Students must receive at least a "pass" on the university writing portfolio to graduate. Students who do not pass (approximately 10 percent each year) must take general education 302, which is a one-credit writing group that emphasizes revision, feedback, self-assessment, and collaboration. The university writing portfolio serves as a diagnostic aid to ensure that all students have enough support to respond successfully to the writing experiences presented in the major. The portfolio is also designed to commend the top 10 percent of students, who receive the designation "pass with distinction" on their transcripts. Beginning in the spring of 1996, students submitting the five best portfolios were each awarded a cash prize of $100.

The WSU portfolio scoring system was thoughtfully conceived and makes effective use of faculty time and energy through the use of a two-tier rating system. In the first tier, an initial group of faculty assigns ratings of "needs work," "pass," or "pass with distinction." For portfolios receiving a "pass," this is the end of the assessment process. However, the portfolios in the bottom and top categories are assessed by a second group of raters prior to officially awarding the "needs work" or "pass with distinction" designations; this represents the second tier of the process. The system allows for more faculty time to be spent with the less typical portfolios, facilitating finer discriminations.

Use of the Data to Address Policy Issues

In the late 1980s, the state of Washington mandated entry, mid-career, and end-of-program assessment of student academic competence, although the actual form of the assessment was left to the discretion of the various institutions. The university writing portfolio was approved in the spring of 1989

by the WSU faculty senate and became effective for students entering WSU in fall of 1991. The first assessment occurred in spring 1993, and currently more than 3,000 students complete the examination annually. The purpose of the initial and continued use of assessment data derived from the portfolio assessment was to acquire information needed to fortify the curriculum in order to effectively foster student writing skills. Although the portfolio assessment uses a holistic scoring approach, students requesting diagnostic feedback are provided the opportunity to have a conference with the faculty raters to clarify problem areas.

Every 2 years, a comprehensive self-study is conducted. The results have been very positive, suggesting substantial gains in student writing proficiency based on curricular experiences. The data derived have also been invaluable in generating educational assessment data needed for accreditation. Alumni survey data have further illustrated an increase in student satisfaction pertaining to the development of their writing skills while in attendance at WSU. Specifically, in the late 1980s, alumni generally expressed low levels of satisfaction with the WSU undergraduate writing skills training they had received, whereas recent alumni survey data have conveyed high levels of satisfaction pertaining to educational training in writing. Stakeholders such as the Higher Education Coordinating Board, taxpayers, employers, and graduate program personnel have been very satisfied with the writing abilities of WSU graduates.

Implications of the Data Generated

The data have suggested that changes may need to be implemented to meet more effectively the writing needs of nonnative speakers. Further, Dr. Condin noted the need for data related to the degree to which the program is effectively serving other factions of the student population, such as rural residents, transfer students, and economically disadvantaged individuals. WSU is developing a scoring rubric to assess critical thinking ability based on student responses to the timed essay portion of the portfolio and the placement test. The development of this rubric, which is in the final stages of pilot testing, is in response to the recent emphasis of various stakeholders on critical thinking skills.

Amazingly, the entire writing program runs on an annual budget of only $80,000, primarily because students are required to pay for each assessment ($9 and $12 for the placement and portfolios, respectively). Faculty involvement in the scoring of the assessments is voluntary, and faculty are paid by the hour. With only a half day of training required and involvement construed as service to the university, WSU has not experienced any difficulty recruiting interested faculty. Those who are most actively involved each year also receive letters acknowledging the time they have devoted to the program.

In terms of logistical problems, Dr. Condin noted that WSU has experienced some difficulty keeping the portfolio as a mid-career assessment, with approximately 25 percent of the students putting it off until their senior years. As a result, the assessment ends up functioning as a barrier test for some students rather than as the mid-career diagnostic that it was designed to be. In an attempt to rectify this problem, WSU is planning programs to educate the students regarding the benefits of completing the portfolio at the most appropriate time.

The success of the writing program, as reflected by student achievement, faculty investment and support, practical feasibility, and innovative features such as the use of an online writing lab, is truly commendable. Both the writing program and the assessment methods provide a useful and realistic model for other institutions considering implementing a program in which extensive coursework in writing is tied very closely to the assessment of student competency.

Future Political Trends Expected to Have an Impact on Assessment

Dr. Condin expects stronger external demands on assessment in the future. He believes that the writing assessments currently in place should more than satisfy the need for student writing competency data. He further anticipates that WSU will be required to invest energy in documenting student learning in other areas. In terms of advice for policymakers regarding assessment of writing, Dr. Condin recommends greater emphasis on performance-based assessment using actual curricular products, along with involvement of a broad group of faculty members holding various disciplinary affiliations.

REFERENCES

Chauncey, Jr., H. (1995). A Calm Before the Storm? *Yale Alumni Magazine 58*(7): 30–31.

Gray, M.J., and Grace, J.D. (1997). *Enhancing the Quality and Use of Student Outcomes Data. Final Report of the National Postsecondary Education Cooperative Working Group on Student Outcomes from a Data Perspective* (NCES 97–992). Washington, DC: National Postsecondary Education Cooperative.

Terenzini, P. (1997). *Student Outcomes Information for Policy-Making. Final Report of the National Postsecondary Education Cooperative Working Group on Student Outcomes from a Policy Perspective* (NCES 97–991). Washington, DC: National Postsecondary Education Cooperative.

APPENDIX A

Case Study Questions
National Postsecondary Education Cooperative
Student Outcomes Pilot Working Group:
Cognitive and Intellectual Development

Assessment Method: _____

Name of Institution: _____

Name of Interviewee: _____

Title of Interviewee: _____

Policy Questions:

1. What assessment data are actually being used to answer policy questions?

2. Was the assessment mandated? By whom?_____

3. If the assessment was mandated, was the use of this *particular assessment method* mandated?

4. If the *particular assessment method* was *not* mandated, what criteria were used to select the assessment method?

   Match with content knowledge represented by the current curriculum?

   Match with special cognitive skills?

   Match with skills/knowledge believed to be prerequisite for entering the work world after graduation?

   Other selection criteria?
   Please specify._____

5. What were the initial intended uses of the test data?

6. What policy questions were initially intended to be addressed by the data derived?

7. How were or are the data being used? (Has the institution found the assessment method useful?)

   To provide diagnostic feedback to individual students?

   For advancement of individual students?

   To improve, restructure existing programs (e.g., result in new course offerings)?

   To augment, reallocate resources?

For accreditation purposes?

Please specify _____

For external constituents such as state boards?

For summative personnel evaluation purposes (e.g., promotion and tenure decisions)?

Other uses?

Please specify _____

8. How can the assessment results affect the institution (positively and negatively)?

9. Are different forms of data reporting generally needed to answer the questions of different stakeholders?

10. What data exist that are not used, but could theoretically be applied to answer policy questions?

11. What data do not exist at your institution, but are needed to answer policy questions?

12. Are there appropriate existing measures to generate the needed data, or are there plans to develop tests locally to address policy questions that are currently unanswerable given the existing testing program?

13. Has any attention been devoted to deriving assessment data to answer policy questions by any means other than with the use of traditional forms of assessment?

14. Are there policy questions being answered that have not actually been asked? If so, what are they?

15. Do the data suggest that students are developing the needed skills and knowledge necessary to function well in various employment contexts? What are these skills?

16. Do the data suggest that students are developing the needed skills and knowledge to be successful in graduate school? What are these skills?

17. Do the data suggest that your students are developing the skills and knowledge needed to fit well into society and to make meaningful contributions? What are the skills that suggest high social adaptability?

18. Have data been generated to examine the relative efficacy of different teaching methods (e.g., technologically-based versus traditional instruction) in the fostering of skills deemed important by stakeholders?

19. Are stakeholders generally satisfied with the return on their investment, as exemplified by the impact of educational experiences at your institution on students' intellectual and personal growth? In not, what are the areas of discontent?

20. What advice do you have for policymakers regarding assessment of critical thinking (or writing)?

21. What future developments might have an influence on assessment at your institution?

22. Do you see any immediate developments?

23. If we did an assessment in the year 2020, what might it "look" like?

Operations Questions:

1. What was the cost of the test?

2. Were there any special features involved in the assessment procedure (e.g., addition of local questions to a commercial test, student incentives, etc.)?

3. What were the defining demographic characteristics of the student population?

4. How was the sample derived (number, percent of the full population, and method—random, stratified, etc.)?

5. When, where, and how was the test administered?

6. How frequently were the students administered the test?

7. What logistical problems, if any, occurred in the testing process?

APPENDIX B

NPEC Case Study Categories

I. Institutional Background

- Location
- Size, type of institution
- Student population served
- Programs offered
- Accreditation

II. Description of the Assessment Method

III. History of the Assessment Method

- Mandated by the state vs. selection by the institution
- Time frame, use of other measures prior to existing, and reasons for changes
- Satisfaction with the current measure for generating needed data, plans for changes

IV. Use of the Data to Address Policy Issues

- Description of the most relevant policy questions
- How the data are currently being used
  - Secure, reallocate funds
  - Accreditation
  - Students (placement, diagnostic feedback, advancement, graduation)
  - Improve, restructure programs
- How the data are likely to be used in the future

V. Implications of the Data Generated

- Development of student competencies (employment, academic, and personal competencies)
- Need for different forms of data, new/innovative methods

VI. Future Political Trends Expected to Have an Impact on Assessment

- Immediate
- Long-range

APPENDIX C

Definitions of Critical Thinking, Problem Solving, and Writing

Critical Thinking: Critical thinking is defined in seven major categories: interpretation, analysis, evaluation, inference, presenting arguments, reflection, and dispositions. Within each of these categories are skills and subskills that concretely define critical thinking. No single test measures every aspect of critical thinking; in fact, even with all of the tests combined, all critical skills are not assessed. Although a single comprehensive test is not available, many tests are still adequate measures of some critical thinking skills.

Problem Solving: Problem solving is defined as understanding the problem, being able to obtain background knowledge, generating possible solutions, identifying and evaluating constraints, choosing a solution, functioning within a problem-solving group, evaluating the process, and exhibiting problem solving dispositions. There is not an adequate measure of problem-solving skills, and the most comprehensive measure is the ETS Tasks in Critical Thinking.

> **Note:** There is considerable overlap in critical thinking and problem solving. For instance, the ability to state a problem; evaluate factors surrounding the problem; create, implement, and adjust solutions as needed; analyze the process and fit of a solution; as well as having an active inclination towards thinking, solving problems, and being creative are all skills necessary for both problem solving and critical thinking. Therefore, clear distinctions between problem solving and critical thinking may prove difficult to assess and tease apart in application.

Writing: Attempts to define writing often focus on the products (essays, formal reports, letters, scripts for speeches, step-by-step instructions, etc.) or the content of what has been conveyed to whom. When writing is defined only as a product, elaboration of the construct tends to entail specification of whether particular elements, such as proper grammar, variety in sentence structure, organization, etc., are present (suggestive of higher quality writing) or absent (indicative of lower quality writing). Attention is given to describing exactly what is generated and detailing the skill proficiencies needed to produce a given end-product. Although educators, researchers, and theorists in the writing field tend to prefer a process-oriented conceptualization of writing, research suggests that employers in industry are more interested in defining writing competence with reference to products (Jones et al. 1995).

A recent report on national assessment of college student learning (Jones et al. 1995) provided a comprehensive definition of writing that, in addition to including several subcomponents of the process, delineates critical aspects of written products. The general categories of key elements composing the construct of writing produced by these authors include awareness and knowledge of audience, purpose of writing, prewriting activities, organizing, drafting, collaborating, revising, features of written products, and types of written products. These researchers developed this definition based on an extensive review of relevant literature and feedback from a large sample of college and university faculty members, employers, and policymakers representative of all geographic regions in the U.S. Stakeholders were asked to rate the importance of achieving competency on numerous writing skills upon completion of a college education. Jones et al. (1995) found that in every area of writing there were certain skills that each respondent group believed were essential for college graduates to master in order to facilitate effective functioning as employees and citizens. However, there were areas of contention as well. For example, employers and policymakers placed less emphasis on the importance of the revision process, tending to expect their graduates to be able to produce high-quality documents on the first attempt. In addition,

employers found the ability to use visual aids, tables, and graphics as more important than faculty members, and faculty members attached more importance to being able to write abstracts and evaluations. The resulting definition produced by Jones et al., which only includes skills that were universally endorsed by all three groups, is based on a *consensus* derived empirically from groups that possess very different interests regarding the development of writing skill competency through undergraduate training. This definition is used in the sourcebook for examining writing assessments.

Source: U.S. Department of Education, National Center for Education Statistics, *The NPEC Sourcebook on Assessment, Volume 1: Definitions and Assessment Methods for Critical Thinking, Problem Solving, and Writing,* NCES, 2000, prepared by T. Dary Erwin for the Council of the National Postsecondary Education Cooperative, Student Outcomes Pilot Working Group: Cognitive and Intellectual Development. Washington, DC: U.S. Government Printing Office, 2000.

APPENDIX D

Assessment Methods Reviewed for Sourcebook

Assessment Methods for Critical Thinking and Problem Solving

Acronym	Test Name
A. PROFILE	Academic Profile
CAAP	Collegiate Assessment of Academic Proficiency
CCTDI	California Critical Thinking Dispositions Inventory
CTAB	CAAP Critical Thinking Assessment Battery
CCTST	California Critical Thinking Skills Test
CCTT	Cornell Critical Thinking Test
COMP	College Outcomes Measures Program—Objective Test
ETS TASKS	ETS Tasks in Critical Thinking
MID	Measure of Intellectual Development
PSI	Problem Solving Inventory
RJI	Reflective Judgement Inventory
WGCTA	Watson Glaser Critical Thinking Appraisal

Assessment Methods for Writing

Acronym	Test Name
CLEP	College-Level Examination Program
SAT-II	Scholastic Aptitude Test
AP	Advanced Placement
CAAP	Collegiate Assessment of Academic Proficiency
COMPASS	Computerized Adaptive Placement Assessment and Support System
TASP	Texas Academic Skills Program
CLAST	College-Level Academic Skills Test
SEEW	Scale for Evaluating Expository Writing
IIEP	Illinois Inventory of Educational Progress
NJCBSPT	New Jersey College Basic Skills Placement Test
COMP	College Outcome Measures Program
MCAT	Medical College Admission test
TWE	Test of Written English
GMAT	Graduate Management Test

The Academic Profile (1989)
Long Form: 144 items
Short Form: 36 items

Publisher: Educational Testing Service

Critical Thinking Component: The Academic Profile's critical thinking component contains seven subscores that include questions in the following areas: humanities, social sciences, and natural sciences. Humanities questions require the student to recognize cogent interpretation of a poem, distinguish between rhetoric and argumentation, draw reasonable conclusions, and recognize elements of a humanities selection that strengthen or weaken the argument presented. Social science questions require the student to recognize assumptions made in a piece of social science writing, recognize the best hypothesis to account for information presented in a social science passage, and recognize information that strengthens or weakens arguments in made in such a passage. Natural science questions require the student to recognize the best hypothesis to explain scientific phenomena, interpret relationships between variables in a passage, draw valid conclusions based on passage statements, and recognize information that strengthens or weakens arguments in the passage.

Writing Component: The optional, content-related essay is designed to assist institutions with their general education outcome assessment. Students are required to apply concepts to material read or studied in related to course work. The focus is on generating an analytic essay, integrating appropriate examples from coursework.

California Critical Thinking Skills Test, Forms A & B (1990–1992)
34 multiple-choice items

Publisher: California Academic Press

Critical Thinking Component: The CCTST provides a total critical thinking score, and also provides seven subscores that measure truth-seeking, open-mindedness, analytically, systematically, confidence, inquisitiveness, and cognitive maturity. Truth-seeking is defined as being eager for knowledge and having courage to ask questions, even if knowledge fails to support or undermines preconceptions, beliefs, or self interests. Open-mindedness is defined by tolerance for different views and self-monitoring for bias. Analytically is defined as prizing application of reason/evidence, alertness to problematic situations, and anticipating consequences. Systematically is defined as being organized, orderly, focused, and diligent in inquiry. Confidence is defined by trusting one's own reasoning process. Inquisitiveness is defined as curious/eager to acquire knowledge, even if applications are not immediate. And cognitive maturity is defined by prudence in making, suspending, or revising judgment, and awareness of multiple solutions.

College Assessment of Academic Proficiency (1988)
32 multiple-choice items
Essay component with 72-item multiple-choice segment

Publisher: American College Testing Program

Critical Thinking Component: The CAAP CTT measures the ability to clarify, analyze, evaluate, and extend arguments. Subscores also measure analysis of the elements of the argument; evaluation of the argument; and extension of an argument

Writing Component: The CAAP writing component measures writing skills that are considered foundational for performance in upper-level college courses. Students are required to read a passage, and are then given a specific context in which to write an essay that argues a particular point. The knowledge required for this measure is consonant with the training and experience of college-level sophomores.

College Basic Academic Subjects Examination (1989–1990)
Essay

Publisher: The Riverside Publishing Company

Writing Component: The College BASE is used to assess competencies usually achieved through a general education curriculum. It is typically administered at the end of the sophomore year, but can be used at different times to assess change as a result of college experience. The College BASE is useful for diagnosing strengths and weaknesses of individual students and curricula. It is not designed for student selection into particular programs.

College-Level Academic Skills Test (1984)
Narrative/persuasive essay
(multiple choice available)

Publisher: Florida State Department of Education

Writing Component: The CLAST is used for advancement to upper division courses and requires that students compose a persuasive essay. Essays are scored based on specifying a clear purpose; presenting a clear thesis; outlining an organized plan; presenting well-developed supporting paragraphs; providing specific, relevant details; using a variety of effective sentence patterns; making logical transitions; displaying effective word choice; and using correct, standard-English.

College Outcome Measures Program Objective Test (1976)
60 multiple-choice items
Writing skills assessment

Publisher: American College Testing Program

Critical Thinking Component: The COMP Objective Test provides a total critical thinking score and subscores for communicating, solving problems, clarifying values, functioning within social institutions, using science and technology, and using the arts. Communicating involves sending and receiving information in a variety of modes, within a variety of settings, and for a variety of purposes. Solving problems requires analyzing a variety of problems, selecting or creating solutions, and implementing solutions. Clarifying values involves identifying one's personal values and the values of others, understanding how personal values develop, and analyzing implications of decisions made on personally held values. Functioning within social situations involves identifying, analyzing, and understanding social institutions and their impact on one's self and others. Using science and technology requires identifying, analyzing, and understanding technology and its impact on one's self and others. Using the arts involves identifying, analyzing, and understanding art and its impact on one's self and others.

Writing Component: The COMP Writing Skills Assessment measures knowledge and skills acquired as a result of general education programs and that are important to effective adult functioning. This measure

assists in program evaluation, but was not developed for making judgments about individual students. The COMP Writing Skills Assessment emphasizes practical application, rather than an academic focus. Students are required to write a personal letter to a U.S. senator and to a radio station. Content areas of social science, technology, and fine arts are covered in the three essays.

Critical Thinking Assessment Battery (1997)
32 multiple-choice items
3 essays and 15 double multiple-choice questions
15 ranked sets of questions

Publisher: American College Testing Program

Critical Component: The CTAB critical thinking component assesses skills in clarifying, analyzing, evaluating, and extending arguments. The applied reasoning component assesses skills in analyzing problems, generating logical and reasonable approaches to solve and implement solutions, and reflecting consistent value orientations. The engagement in reasoning and communicating component inventories past involvement in community/social contexts that require the application of problem solving and communication skills.

Writing Component: The CTAB Persuasive Writing component assesses skills in written communication, including making contact with a relevant audience, organizing a persuasive message that develops a number of relevant ideas, and using language to present ideas clearly and effectively.

New Jersey College Basic Skills Placement Test (1978)
Essay

Publisher: State of New Jersey

Writing Component: The NJBSPT is used to determine which students admitted to college need remedial instruction in basic skill areas in order to successfully complete college programs. Students are required to write unified paragraphs, organize their ideas, develop a logical argument, provide specific examples, use complete sentences with correct spelling, maintain a consistent tone, and express ideas precisely.