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AUTHOR Cowart, Susan Cooper

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ABSTRACT

Background information is provided on the development and activities of Project Cooperation, a demonstration project to help institutions improve educational effectiveness by employing outcomes measures and assessment strategies. After highlighting the various activities of the project (e.g., a national survey, research on different plans and models at demonstration sites, summer workshops, and institutional effectiveness workshops), the report outlines the process by which selected institutions can serve as project demonstration sites by developing and implementing model student assessment practices using American College Testing (ACT) Program instruments. The outline provides information to help institutions: decide upon the "value-added" or "predictive" assessment effort to be undertaken; identify the factors critical to project success and ways to achieve success; and successfully implement the plan. The stages in developing the project proposal and implementation plan are listed, along with the purposes of each stage. Next, the following research models are presented: (1) a value-added model using ACT's Collegiate Assessment of Academic Proficiency (CAAP) instrument as both pre- and post-test to measure students' acquisition of general education skills and information; (2) a value-added model using ACT's Assessment Student Skills for Entry Transfer (ASSET) instrument for skills assessment at entry and CAAP as a measure of value added; and (3) two predictive research models using either CAAP or the ACT's College Outcome Measures Project instrument to assess transfer students' general education knowledge and predict their four-year college performance. Participating institutions and project officers are listed. (JMC)

PROJECT COOPERATION

A joint effort of community college educators and ACT to answer questions about institutional effectiveness and outcomes assessment

ncsd ACT NCIA

A RESPONSE TO A NEED: After decades of unprecedented expansion and success in providing wider access to higher education, community colleges are being called upon to provide objective evidence of student growth and success. As the assessment movement progresses in response to these demands, educators are increasingly recognizing the value of outcomes assessment, not only as a way of demonstrating results but as a means of improving institutional quality and student success. As they consider the variety of options open to them, administrators basically want to know how to ask the right questions and use the results to improve programs and student persistence.

Project Cooperation grew out of this interest and concern. In developing a position statement on value-added instruction, the National Council of Instructional Administrators (NCIA) Task Force on Value-Added Education asked for ACT's assistance. ACT's subsequent involvement is a natural extension of its long tradition of working cooperatively with community college educators. The long standing cooperative relationship between the National Council for Student Development (NCSD) and ACT highlighted the need to consider an institution's effectiveness from a student development as well as academic perspective and resulted in NCSD's becoming a full partner in the Project. The project will bring together a number of community college interest groups and associations resulting in more highly targeted and focused services for community college educators. Plans for Project Cooperation include developing a national survey on institutional effectiveness and a monograph based on survey results; conducting a 1988 Summer Institute on Institutional Effectiveness at Howard Community College in Columbia, Maryland; and establishing a number of model programs using outcomes measurement at pilot sites across the country.

TEAMWORK: Project Cooperation involves a partnership between the National Council for Student Development (NCSD), the National Council of Instructional Administrators (NCIA), two Councils of the American Association of Community and Junior Colleges (AACJC), and the American College Testing Program (ACT).

GOALS

- To develop a position statement that recommends specific models for evaluating institutional effectiveness in regard to both an institution's general education curriculum and student support services.
- To provide support to AACJC in informing community college educators about issues involved in assessing institutional effectiveness.

- To provide, as part of NCSD's leadership development series, a Summer Institute on Institutional Effectiveness Through Outcomes Assessment for community college student services and academic administrators.

- To establish pilot sites to model recommendations generated by Project Cooperation. Activities at these sites will include:

  --Developing institutional effectiveness assessment instruments and techniques

  --Piloting an instrument that meets the institutional effectiveness needs of community colleges

  --Implementing institutional effectiveness evaluation models at selected community colleges to develop and demonstrate successful institutional effectiveness evaluation methods

HOW COMMUNITY COLLEGES CAN PARTICIPATE: Project Cooperation will provide many services for community college educators, including:

- A national survey of community colleges that will gather information which will help define institutional effectiveness from both an instructional and student services perspective. The survey will also help identify successful practices and establish an understanding of both current and desired outcomes assessment practices at two-year colleges. Results of the survey will be published in cooperation with AACJC and cooperating councils.

- A 1988 Summer Institute focusing on institutional effectiveness through outcomes assessment both in the instructional and student services areas.

- A monograph on institutional effectiveness through outcomes assessment which will include specific recommendations for the AACJC Board of Directors' consideration.

- A series of national seminars on institutional effectiveness through outcomes assessment for community college educators sponsored by the ACT National Center for the Advancement of Educational Practices during the spring of 1989.

A FOUNDATION FOR THE FUTURE: Project Cooperation brings together NCSD's interest in advancing leadership training for student services leaders, NCIA's interest in advancing the understanding of community college administrators of the issues surrounding assessment, and ACT's interest in supporting the development of programs that address the needs of community college educators. Through the strengths of its member organizations, Project Cooperation will provide a foundation of professional experience, shared purposes, and resources that community college educators can draw on in developing the most appropriate assessment strategies for their institution.

FOR MORE INFORMATION: Contact any of the following steering committee members:

NCSD

Stephen Maier, Co-chair
Dean of Instruction for Student and Community Development and President, NCSD
New Mexico Junior College
Lovington Highway
Hobbs, NM 88240

Walter Bumphus
Dean of Students and President-Elect, NCSD
Howard Community College
Little Patuxent Parkway
Columbia, MD 21044-3197

Robert Keys
President and AACJC Staff Liaison
John Wood Community College
150 S. 48th Street
Quincy, IL 62301-1498

NCIA

Carol J. Viola
Provost, Open Campus and President, NCIA
College of DuPage
Lambert Road and 22nd Street
Glen Ellyn, IL 60137

William Christopher
Dean for Instruction, NCIA Board Liaison, and Director of National Issues
Whatcom Community College
5217 Northwest Road
Bellingham, WA 98226

Wayne E. Giles
Vice Chancellor, Educational Services and Chair, NCIA Task Force on Value-Added Education
Metropolitan Community Colleges
3200 Broadway
Kansas City, MO 64111

ACT

Richard D. Rowray, Project Administrator
Executive Director
ACT National Center
American College Testing Program
2201 N. Dodge Street
PO Box 168
Iowa City, IA 52243

ACT

Project Cooperation: A Joint Effort of Community College Educators and ACT to Answer Questions About Institutional Effectiveness and Outcomes Assessment

Project Cooperation involves an ongoing partnership initiated in 1988 between the National Council for Student Development (NCSD), the National Council of Instructional Administrators (NCIA), and the American College Testing Program (ACT). It is one of the first, if not the first, major collaborative efforts by two councils of AACJC. ACT has worked with AACJC and various others of its councils over a number of years. Indeed, it was knowledge of such a working relationship between ACT and NCSD that led the head of a special Task Force of NCIA to contact ACT for help in 1987. AACJC had charged the NCIA with the task of studying the concept of "value-added" education. In the process of probing this matter of "value-added," more questions arose. Ideas started to develop, and many ideas for cooperative efforts across several groups began to take shape while even more questions arose. As a result, Project Cooperation was established. Project Cooperation is a multifaceted approach to answering some of those questions by helping to determine the right questions to ask and the best uses to make of the answers in order to increase institutional effectiveness by assuring student success.

The entire higher education community is being called upon to provide convincing evidence of student growth and success. As the assessment movement progresses in response to this challenge, educators are increasingly recognizing the value of outcomes assessment as a source of that evidence and as a means of improving institutional quality and student success. Indeed, this was a part of AACJC's 1988 Public Policy Agenda: to "develop appropriate student outcomes measures and promote student success."

Project Cooperation focuses on the use of student outcome measures for assessing institutional effectiveness. The four principal facets of Project Cooperation represent four different contexts from which information will be drawn to address the issue.

A National Survey

A survey questionnaire was sent to the CEO's of all members of AACJC in the fall of 1988. The objective was to obtain responses to a comprehensive set of items that will help determine the student outcomes that are currently being measured, which are being used in assessing institutional effectiveness, what impacts these uses are having on the institutions, what practices and needs seem likely for the near future, and how our institutions have organized their assessment efforts. Preliminary results of the survey, which had a 53 percent response rate, were presented at conferences throughout the nation including the AACJC and AAHE meetings. Final results, which will be published in November of 1989, will provide a picture of the current status and future status of assessment in the two-year college community.

Demonstration Sites

The second aspect of Project Cooperation features institutions selected to serve as demonstration sites. NCSD and NCIA each nominated institutions, and a number of campuses were eventually selected to serve as demonstration sites

2201 North Dodge Street, P.O. Box 168
Iowa City, Iowa 52243
(319) 337-1000

(see below*). Different plans or models have been developed for using student outcomes measures to assess institutional effectiveness and these will be tested at the demonstration sites. Basically there are two different types of models: a value-added model and a predictive or transfer model which will assess students who are ready to transfer to a four-year institution. The demonstration site facet of Project Cooperation allows for investigation in a "real life" situation, and it provides the opportunity for fine tuning our instruments and models.

Project Cooperation Summer Workshops

The third facet of Project Cooperation involves a workshop setting to which individuals who have exhibited a special interest or involvement in this issue are invited by NCSD and NCIA. This aspect is an extension of NCSD's week-long Leadership Conferences which have had ongoing cooperation from ACT since their initiation in 1984. The first of these workshops dedicated to exploring issues related to Project Cooperation was hosted in 1988 by Howard Community College in Columbia, Maryland. In keeping with the cooperative spirit of Project Cooperation, NCIA took the lead in organizing this summer's workshop which was held in Nashville July 9-11. Representatives from demonstration sites, from the National Council for Research and Planning, and the partners involved in Project Cooperation heard from nationally recognized leaders in institutional effectiveness, value-added assessment, and student success. Demonstration site teams worked toward development of the research design to be implemented on their campuses. The 1990 workshop is planned for St. Louis.

Regional Institutional Effectiveness Conferences

The fourth component provides a medium by which the issues identified and the alternatives delineated through other phases of Project Cooperation can be shared with colleagues in two-year institutions throughout the nation. The ACT National Center devoted its 1989 National Conference Series for Two-Year Institutions to Project Cooperation. The conferences were sponsored by ACT with participation and collaboration by representatives of NCSD and NCIA. The 1990 conference series is scheduled for the following cities and dates: Baltimore, MD, February 15; Charlotte, N.C., February 27; Irvine, CA, May 1; and Detroit, MI, May 17. In the coming year we also anticipate that Project Cooperation will be represented once again on national programs such as AACJC and the AAHE Assessment Forum.

Written reports on each of the first three components of Project Cooperation will be distributed to AACJC members, and a final report on Project Cooperation will also be prepared and distributed.

Susan Cooper Cowart
Research Specialist,
Educational Services

* Institutions serving as Project Cooperation Demonstration Sites:
Bakersfield College; Chemeketa Community College; Dyersburg State Community College; Howard Community College; Macomb Community College; Massachusetts Bay Community College; Metropolitan Community Colleges of Kansas City - Longview, Maplewoods, and Penn Valley; Midlands Technical College; Orangeburg Calhoun Technical College; Scottsdale Community College; St. Louis Community College - Florissant Valley, Forest Park, Meramec; Technical College of the LowCountry.

PROJECT COOPERATION

DEMONSTRATION SITE RESEARCH PROPOSAL AND PLAN

AN INTRODUCTION TO THE PROJECT

The primary purpose of the demonstration site phase of Project Cooperation is to have selected institutions develop and implement student assessment practices to a point where they could serve as templates for other two-year colleges. This can best be accomplished via an energetic collaboration between each demonstration site and ACT. This collaboration requires that:

- o each demonstration site will
  - a) develop and implement appropriate student outcomes assessment practices and procedures, and
  - b) pilot student assessment instruments that meet the institutional effectiveness needs of community colleges
- o ACT will
  - a) provide academic proficiency instruments at a reduced cost, and
  - b) provide consultative support

The collaboration between the demonstration sites and ACT is needed because there is a desire in the two-year college sector to generate new student assessment practices and implement those practices into the fabric of the institution. Two-year colleges have expressed a desire for more information on and illustrations of successful assessment practices because of the pressures to demonstrate how institutional effectiveness contributes to student growth. Following the adoption and implementation of the new practices brought forth by the demonstration sites, it is believed that two-year institutions will provide new and improved assessment behaviors, processes, and functions.

The Demonstration Site Outline follows (Section 3) and is offered as a beginning point in the dialogue between ACT and those colleges that have been identified as demonstration sites.

A well-written plan, mutually agreed upon, will help clarify the commitment being made by each site and ACT. The plan outlined in Section 3 represents two ingredients required for the success of this aspect of Project Cooperation: a desire to innovate through involvement and a sustained commitment through planning.

The plan is driven by the purpose of Project Cooperation--to recommend successful strategies and models of student assessment needed for institutional effectiveness. It is offered with a vision of the monograph to be written, the specific recommendations to be forwarded to the AACJC Board of Directors, and the inquiries coming from colleagues looking for assistance and direction. This project represents the intent of the demonstration sites and ACT to design particular approaches and analyze their contribution to institutional effectiveness.

OUTLINE OF THE PROCESS

In order for the efforts of each demonstration site to be effective it is necessary to prepare a proposal specific to each site. This outline will serve as a guide to 1) identifying, clarifying, and defining the model effort to be undertaken; 2) describing the factors critical to the success of the project; 3) outlining the tasks required to fulfill the critical success factors, and 4) successfully implementing the plan by monitoring, evaluating, and preparing recommendations. To accomplish these results the proposed development and plan implementation is divided into six stages. Stages I, II, and III are designed to help formulate a proposal. Stages IV, V, and VI represent the project plan, reporting, and follow-up.

Project Proposal

Stage I Information
- o nature of the demonstration site opportunity
- o desire for involvement
- o the five demonstration site models
- o identify a possible model/option
- o review agreement stages
- o establish steps to reach Stage II

Purposes:1) To establish open communications with each recommended demonstration site and ACT; 2) To identify and select ACT and campus project coordinators for each site; 3) To understand the assessment opportunity to be pursued and outlined in Stage II.

Stage II Defining the Project
- o model option selected
- o project title
- o project purpose
- o project outcomes

Purposes:1) The selection and clarification of the project to be pursued; 2) Following tentative approval of the project proposal by the demonstration site and ACT person .el, complete the planning stage (Stage III) in order to determine if the project is operationally feasible; 3) Resolve conflicts over envisioned outcomes, responsibilities, resources, and the time schedule.

Stage III Designing the Project Proposal
- o situational analysis
- o critical success factors
- o preliminary implementation task matrix

Purposes:1) Stage III is to further detail the proposal identified in Stage II and to determine if the project is go or no-go; 2) Conduct a "gap analysis" between what is and what should be and determine if Stage III fills the gap; 3) Turn Stage III into an explicit Action Plan that is supported unequivocally by all key parties. (Note: In this stage the proposal converts to an agreed upon plan.)

Project Plan

Stage IV Implementation and Evaluation Matrix
- o monitoring and control
- o project modifications
- o project progress report
- o project evaluation

Purposes: 1) Jointly monitor and control the flow of the project; 2) Identify and document project modifications and adjustments; 3) Check adherence to time and budget schedules; 4) Evaluate the model undertaken and document results and recommendations; 5) Avoid surprises and crises; 6) Ensure project implementation that produces "models" by describing exemplary use of ACT programs and services; and 7) Document on-campus processes required to establish and implement successful assessment practices.

Stage V Written Report(s) and Releases
- o Preparation of written report(s) including:
  - (a) documentation of the process (required and optional topics)
  - (b) results of the research
  - (c) recommendations (based on Stages I-IV)
- o Distribution of final report and product

Purposes: 1) Address the major process variables and document the results; 2) Develop documentation related to key issues critical to assessing institutional effectiveness and the use of the information; 3) Prepare and release to the AACJC Board of Directors a monograph reflecting the results and recommendations; 4) Use project findings in the summer conference, the national seminar series and other settings; and 5) Determine next steps with each site.

Stage VI Follow-up
- o project history
- o project emulation

Purposes: 1) To determine, after a period of 2-3 years, what new practices have become embedded in the institution; 2) Determine whether other institutions will profit from this demonstration site experience.

RESEARCH MODEL FOR TWO-YEAR INSTITUTION WITH SUPPLEMENTAL OPTIONS

Each institution involved with the demonstration site project agrees to participate in a basic research model consisting of the use of at least one or two ACT programs related either to a "value-added" or a "predictive" study. In addition, institutions will be given the opportunity to extend the basic design to at least one additional related topic of mutual concern in such areas as assessing student development outcomes, studying the utility of CAAP as a transfer support tool, carrying out an image analysis, developing a secondary school outreach program, or developing an adult, business/industry outreach program. Institutions will be given a number of choices in the demonstration site project, but ACT will have a coordinating role in order to ensure that all models are represented. It is also intended that the model sites will address the research projects from one or more perspectives such as: age, sex, ethnicity, special populations, and program type. Thus the demonstration sites should be considered models that will be of maximum benefit to all community colleges.

DEMONSTRATION SITE CAAP-CAAP RESEARCH MODEL

Purpose: Two-year institutions are committed to contributing to student learning and development, and they need to be able to show that they are achieving this mission. This research is aimed at demonstrating a procedure through which convincing evidence of institutional effectiveness can be provided. In this case the evidence of institutional effectiveness focuses on change in student learning and development that may take place between time of entry and time of "exit," i.e., program completion at a two-year institution or transfer to a four-year institution. Research of this type may be labeled "student growth" or "value-added."

A "value-added" research model requires that a base of information be collected for students at the time they enter the two-year institution in order to establish a measure against which to compare information collected at the time students are ready to leave the institution. This base may serve a variety of other purposes as well: determination of whether remedial instruction is needed, placement of students in regular collegiate-level courses, evaluation of student needs, and evaluation of the level of student development at time of entry.

ACT offers numerous instruments to help in establishing this base of information, and each demonstration site will be using some of these assessment instruments for this purpose.

The Model: The CAAP-CAAP research model uses the Collegiate Assessment of Academic Proficiency--ACT's instrument designed specifically to assess outcomes. This model provides the most direct measure of "value-added" with respect to student acquisition of information and skills included in a general education curriculum. CAAP is modular in form and includes a module for each of the core areas of a college curriculum: reading, writing, mathematics, critical thinking, and science reasoning. CAAP is designed to assess attainment of general foundational skills typically attained within the first two years of college. The research design will determine the number and choice of modules to be administered.

A student's score at or near time of exit is expected to differ from that attained on an entry assessment. It is reasonable to expect that difference to reflect growth in a student's knowledge and skills related to a general education curriculum. That is to say that the exit-time score may be viewed as being a function of the student's score at entry, the curriculum taken at the two-year institution, the student's performance in these courses, and the personal non-cognitive development that takes place during the period between entry and program completion.

Performance on the entry assessment is most likely a function of high school courses taken and performance in those courses for students entering shortly after high school completion. This is likely to be a less significant impact on entry assessment scores of students who are entering after a few years of work, military service, or other similar activities.

The difference between entry scores and exit scores can be seen to be a function of all these factors: high school performance, activity since high school, courses completed at the two-year institution and performance in those courses, and some development factor that relates to personal growth and maturity that takes place during the collegiate experience.

The Sample: In order to fulfill the requirements of this research, it is essential that the sample be selected according to specific, predetermined criteria. ACT asks that the sample be from among the student population enrolled in a degree program, transfer program, or a shorter program of study that is less than two years but more than a single semester. Further, the sample is to be of students who are enrolling in a program of study that has some general education component as a requirement. This requirement simply assures that students included in the sample have taken at least some of the courses that the assessment instrument targets. In addition, each institution will be asked to sample for a focused investigation of either gender, age, race/ethnicity, or educational objective. ACT will assist the institution in determining how to draw the sample.

A high rate of sample attrition may be anticipated during the period between entry testing and "exit" testing. In order to assure an adequate sample size for students who are near program completion, institutions should plan to test on a ratio of 4 to 1, i.e. four entering students for each "exiting" student needed. This ratio may be adjusted if institutional retention/attrition data would argue for either an increase or decrease. A sample size of either a minimum of 100 students or approximately 10% of the group of students at or near program completion--whichever is larger--is desired for the "exit" test sample. Sites involved in research on a target student population are advised that these same criteria should hold for the focused subsample: a ratio of four entering students for each exiting student to be in the subsample with a minimum being the larger of either 100 students or 10% of the target population. The model uses a longitudinal design in that the exit sample is from the sample of students tested upon entry.

Additional Data Needs: Basic demographic information on students will be collected on the CAAP instrument. These items include sex, age, race/ethnicity, program/major at the two-year institution, whether English is the student's native/first language, and previous post-secondary enrollment.

High school transcript information is needed as well as complete transcript information from the two-year institution on courses completed, course grades, and hours per semester through time of exit.

A survey will be administered to students to provide one indication of student development and satisfaction with institutional attributes. An ACT survey will be available to obtain information needed for this aspect of the research.

DEMONSTRATION SITE ASSET-CAAP RESEARCH MODEL

Purpose: Two-year institutions are committed to contributing to student learning and development, and they need to be able to show that they are achieving this mission. This research is aimed at demonstrating a procedure through which convincing evidence of institutional effectiveness can be provided. In this case the evidence of institutional effectiveness focuses on change in student learning and development that may take place between time of entry and time of "exit," i.e., program completion at a two-year institution or transfer to a four-year institution. Research of this type may be labeled "student growth" or "value-added."

A "value-added" research model requires that a base of information be collected for students at the time they enter the two-year institution in order to establish a measure against which to compare information collected at the time students are ready to leave the institution. This base may serve a variety of other purposes as well: determination of whether remedial instruction is needed, placement of students in regular collegiate-level courses, evaluation of student needs, and evaluation of the level of student development at time of entry.

ACT offers numerous instruments to help in establishing this base of information, and each demonstration site will be using some of these assessment instruments for this purpose.

The Model: The ASSET-CAAP research model uses ASSET and the Collegiate Assessment of Academic Proficiency (CAAP)--ACT's instrument designed specifically to assess outcomes. ASSET is ACT's entry skills assessment instrument designed for course placement in two-year institutions. Almost one-third of the two-year student population is tested annually with ASSET. This model provides the opportunity to determine whether this commonly used entry assessment instrument (ASSET) might be coupled with CAAP to measure "value-added" with respect to student acquisition of information and skills included in a general education curriculum. If this proves to be feasible, this finding will mean that institutions that use ASSET for placement purposes will need no additional entry assessment in order to obtain a measure of value-added for students who have completed their program of study.

For purposes of this research, both ASSET and CAAP must be administered as entry assessment instruments, with only CAAP to be administered at or near time of exit. CAAP is modular in form and includes a module for each of the core areas of a college curriculum: reading, writing, mathematics, critical thinking, and science reasoning. CAAP is designed to assess attainment of general foundational skills typically attained within the first two years of college. The research design will determine the number and choice of modules to be administered in conjunction with the ASSET.

A student's score at or near time of exit is expected to differ from that attained on an entry assessment. It is reasonable to expect that difference to reflect growth in a student's knowledge and skills related to a general education curriculum. That is to say that the exit-time score may be viewed as being a function of the student's score at entry, the curriculum taken at the two-year institution, the student's performance in these courses, and the personal non-cognitive development that takes place during the period between entry and program completion.

Performance on the entry assessment is most likely a function of high school courses taken and performance in those courses for students entering shortly after high school completion. This is likely to be a less significant impact on entry assessment scores of students who are entering after a few years of work, military service, or other similar activities.

The difference between entry scores and exit scores can be seen to be a function of all these factors: high school performance, activity since high school, courses completed at the two-year institution and performance in those courses, and some development factor that relates to personal growth and maturity that takes place during the collegiate experience. In this research the difference between the CAAP exit score and the CAAP entry score estimated from the ASSET entry score will be computed and compared to the difference between the actual CAAP entry score and the CAAP exit score. This is designed to provide the basis for determining the form of the statistical relationship between ASSET and CAAP that will indicate whether ASSET can be substituted for CAAP as the entry instrument in a value-added model.

The Sample: In order to fulfill the requirements of this research, it is essential that the sample be selected according to specific, predetermined criteria. ACT asks that the sample be from among the student population enrolled in a degree program, transfer program, or a shorter program of study that is less than two years but more than a single semester. Further, the sample is to be of students who are enrolling in a program of study that has <u>some</u> general education component as a requirement. This requirement simply assures that students included in the sample have taken at least some of the courses that the assessment instrument targets. In addition, each institution will be asked to sample for a focused investigation of either gender, age, race/ethnicity, or educational objective. ACT will assist the institution in determining how to draw the sample.

A high rate of sample attrition may be anticipated during the period between entry testing and "exit" testing. In order to assure an adequate sample size for students who are near program completion, institutions should plan to test on a ratio of 4 to 1, i.e. four entering students for each "exiting" student needed. This ratio may be adjusted if institutional retention/attrition data would argue for either an increase or decrease. A sample size of either a minimum of 100 students or approximately 10% of the group of students at or near program completion--whichever is larger--is desired for the "exit" test sample. Sites involved in research on a target student population are advised that these same criteria should hold for the focused subsample: a ratio of four entering students for each exiting student to be in the subsample with a minimum being the larger of either 100 students or 10% of the target population. The model uses a longitudinal design in that the exit sample is from the sample of students tested upon entry.

Additional Data Needs: Basic demographic information on students will be collected on both the ASSET and the CAAP instruments. These items include sex, age, race/ethnicity, program/major at the two-year institution, whether English is the student's native/first language, and previous post-secondary enrollment.

High school transcript information is needed as well as complete transcript information from the two-year institution on courses completed, course grades, and hours per semester through time of exit.

A survey will be administered to students to provide one indication of student development and satisfaction with institutional attributes. An ACT survey will be available to obtain information needed for this aspect of the research.

DEMONSTRATION SITE TRANSFER RESEARCH MODEL USING CAAP

Purpose: Two-year institutions are committed to contributing to student learning and development, and they need to be able to show that they are achieving this mission. This research is aimed at demonstrating how a measure of student learning outcomes can be used to predict student success in a subsequent learning environment. In this case the evidence of institutional effectiveness focuses on the performance of two-year college students in their junior year at a four-year institution.

A predictive research model requires that a base of information be collected near time of exit for students who intend to transfer to a four-year institution. This base is needed in order to establish a measure against which to compare information collected on the students after one year of study at the transfer institution. If the CAAP scores appear to be reliable predictors of student performance at the four-year institution, then these scores might come to assist in the admissions decision as well as to facilitate the transition of students to the four-year institution in the absence of formal or applicable articulation agreements.

The exit data would be most useful to two-year institutions in the assessment of many attributes of their institution, for example: to evaluate strengths and weaknesses of the curricular offerings and content at two-year institutions, to delineate essential courses for students to take as a part of the general education requirements, and to possibly modify the general education component of various degree or program requirements.

The Model: The CAAP predictive research model uses the Collegiate Assessment of Academic Proficiency--ACT's instrument designed specifically to assess outcomes. CAAP is modular in form and includes a module for each of the core areas of a college curriculum: reading, writing, mathematics, critical thinking, and science reasoning. CAAP is designed to assess attainment of general foundational skills typically attained within the first two years of college. The research design will determine the number and choice of modules to be administered.

A student's score at or near time of exit is expected to be a function of the curriculum taken at the two-year institution, the student's performance in these courses, and the personal non-cognitive development that takes place during the period between entry and program completion, and a set of demographic factors such as age, gender, and race/ethnicity.

Performance at the four-year institution is similarly modeled as being a function of scores on the CAAP plus curriculum taken at the four-year institution, performance in these courses, personal non-cognitive development that will take place during this period, and a set of basic demographic factors such as age, sex, race/ethnicity. In addition, some institution-specific attributes may be expected to impact on the student's performance. Demonstration sites will collaborate with the ACT consultant to develop an operational definition of "success."

The Sample: In order to fulfill the requirements of this research, it is essential that the sample be selected according to specific, predetermined criteria. ACT asks that the sample be from among the student population planning to transfer to a four-year institution and nearing completion of their degree or program of study at the two-year institution. Further, the sample is to be of students who are enrolled in a program of study that has some general education component as a requirement. This requirement simply assures that students included in the sample have taken at least some of the courses that the assessment instrument targets. In addition, each institution will be asked to sample for a focused investigation of either gender, age, race/ethnicity, or educational objective. ACT will assist the institution in determining how to draw the sample.

A high rate of sample attrition may be anticipated during the period between exit testing and completion of the junior at the four-year institution. In order to assure an adequate sample size for students who are near completion of their junior year, institutions should plan to test on a ratio of 4 to 1, i.e. four exiting students for each junior year student needed. This ratio may be adjusted if institutional retention/attrition data would argue for either an increase or decrease. A sample size of either a minimum of 100 students or approximately 10% of the group of students meeting these criteria--whichever is larger--is desired for the "exit" test sample. Sites involved in research on a target student population are advised that these same criteria should hold for the focused subsample: a ratio of four entering students for each exiting student to be in the subsample with a minimum being the larger of either 100 students or 10% of the target population.

Additional Data Needs: Basic demographic information on students will be collected on the CAAP instrument. These items include sex, age, race/ethnicity, program/major at the two-year institution, whether English is the student's native/first language, and previous post-secondary enrollment.

Demonstration site institutions will have to procure junior year transcripts from the four-year institution. The demonstration site institution will be responsible for obtaining this information, although ACT will provide a statement of purpose and research design to assure the four-year institution of confidentiality of the student records. Further, a waiver statement will be provided for students to sign stating that, for purposes of this research, permission is granted to obtain transcript information from the institution to which the student subsequently transfers. More than one transfer institution can be included in the research if that is necessary in order to secure an adequate participation rate.

A survey will be administered to students to provide one indication of student development and satisfaction with institutional attributes. An ACT survey will be available to obtain information needed for this aspect of the research.

DEMONSTRATION SITE TRANSFER RESEARCH MODEL USING COMP

Purpose: Two-year institutions are committed to contributing to student learning and development, and they need to be able to show that they are achieving this mission. This research is aimed at demonstrating how a measure of student learning outcomes can be used to predict student success in a subsequent learning environment. In this case the evidence of institutional effectiveness focuses on the performance of two-year college students in their junior year at a four-year institution.

A predictive research model requires that a base of information be collected near time of exit for students who intend to transfer to a four-year institution. This base is needed in order to establish a measure against which to compare information collected on the students after one year of study at the transfer institution. If the COMP scores appear to be reliable predictors of student performance at the four-year institution, then these scores might come to assist in the admissions decision as well as to facilitate the transition of students to the four-year institution in the absence of formal or applicable articulation agreements.
The exit data would be most useful to two-year institutions in the assessment of many attributes of their institution, for example: to evaluate strengths and weaknesses of the curricular offerings and content at two-year institutions, to delineate essential courses for students to take as a part of the general education requirements, and to possibly modify the general education component of various degree or program requirements.

The Model: The COMP predictive research model uses the College Outcome Measures Project instrument which was designed specifically to assess outcomes associated with acquisition of knowledge and skills generally attained upon completion of general education requirements. Demonstration sites will administer COMP at or near time of transfer to a four-year institution.

A student's score at or near time of exit is expected to be a function of the curriculum taken at the two-year institution, the student's performance in these courses, and the personal non-cognitive development that takes place during the period between entry and program completion, and a set of demographic factors such as age, gender, and race/ethnicity.

Performance at the four-year institution is similarly modeled as being a function of scores on the COMP plus curriculum taken at the four-year institution, performance in these courses, personal non-cognitive development that will take place during this period, and a set of basic demographic factors such as age, sex, race/ethnicity. In addition, some institution-specific attributes may be expected to impact on the student's performance. Demonstration sites may add up to 50 items to the COMP form. These items allow the institution to focus attention on factors that seem to affect students in their life experiences. The demonstration site, in collaboration with the ACT consultant, will develop an operational definition of "success" against which to compare results of the research.

The Sample: In order to fulfill the requirements of this research, it is essential that the sample be selected according to specific, predetermined criteria. ACT asks that the sample be from among the student population planning to transfer to a four-year institution and nearing completion of their degree or program of study at the two-year institution. Further, the sample is to be of students who are enrolled in a program of study that has some general education component as a requirement. This requirement simply assures that students included in the sample have taken at least some of the courses that the assessment instrument targets. In addition, each institution will be asked to sample for a focused investigation of either gender, age, race/ethnicity, or educational objective. ACT will assist the institution in determining how to draw the sample.

A high rate of sample attrition may be anticipated during the period between exit testing and completion of the junior at the four-year institution. In order to assure an adequate sample size for students who are near completion of their junior year, institutions should plan to test on a ratio of 4 to 1, i.e. four exiting students for each junior year student needed. This ratio may be adjusted if institutional retention/attrition data would argue for either an increase or decrease. A sample size of either a minimum of 100 students or approximately 10% of the group of students meeting these criteria--whichever is larger--is desired for the "exit" test sample. Sites involved in research on a target student population are advised that these same criteria should hold for the focused subsample: a ratio of four entering students for each exiting student to be in the subsample with a minimum being the larger of either 100 students or 10% of the target population.

Additional Data Needs: Basic demographic information on students will be collected on the COMP instrument.

Demonstration site institutions will have to procure junior year transcripts from the four-year institution. The demonstration site institution will be responsible for obtaining this information, although ACT will provide a statement of purpose and research design to assure the four-year institution of confidentiality of the student records. Further, a waiver statement will be provided for students to sign stating that, for purposes of this research, permission is granted to obtain transcript information from the institution to which the student subsequently transfers. More than one transfer institution can be included in the research if that is necessary in order to secure an adequate participation rate.

A survey will be administered to students to provide one indication of student development and satisfaction with institutional attributes. An ACT survey will be available to obtain information needed for this aspect of the research.

Supplemental Research Options for Demonstration Sites

Each demonstration site will be required to conduct research in one of the following areas. The details of the research will be worked out in consultation with ACT and will be mutually agreeable.

1. **Student Development**

Statement of Purpose: To determine growth in student development that may take place between entry and program completion.

Requirements of the Study: 1. Define the critical student development outcomes to be analyzed. Suggestions include the following: (a) determining whether students completing remedial/development studies are prepared for regular college-level course work (b) the impact of some more intensive/extensive academic advising program for students in the research (c) the impact of a faculty (or staff) mentoring program on students in the research (d) the impact of a study skills course (e) the impact of an orientation course (f) a retention project

2. Identify and develop the means of assessing these outcomes. Some ACT programs and services that may be useful include:
   a. Evaluation/Survey Services Instruments
   b. Study Skills
   c. DISCOVER
   d. Career Planning Program
   e. ASSET
3. Implement and evaluate the assessment
4. Document the process

2. **Articulation**

Statement of Purpose: Two research options are related to the "articulation" research project: one involves articulation between two-year and four-year institutions and the other involves articulation between high schools and two-year institutions. The former will be referred to as "transfer" and the latter as "secondary school outreach."

Transfer: To determine the utility of CAAP as a transfer support tool and the impact of the community college transfer program of study on the subsequent success of a student at the four-year institution.

Secondary School Outreach: To impact the college-ready pool and/or institutional enrollment as a form of student development outcome or community impact outcome and assess results.

Requirements of the Study:

Transfer: Define the outcomes that are critical to academic success after transfer; assess these outcomes using the CAAP and other instruments or documentation; evaluate these approaches; and document the process.

(a) Administer all CAAP modules to a representative sample ofat least 100 students at or near completion of their program of study or a 10% sample from this group, whichever is larger.
(b) Provide a transcript for coursework completed through the end of the program at the demonstration site.
(c) Procure a transcript for coursework completed through the end of the junior year at the transfer institution.

Please see the **Student Development** option for a listing of ACT programs and services that might be useful in this research as well.

Secondary School Outreach: Define the outcomes that are critical to institutional enrollment; assess these outcomes using the P-ACT$^+$ and other instruments or documentation; evaluate these approaches; and document the process.

(a) Administer the P-ACT$^+$ to a mutually approved sample of students in key feeder high schools.
(b) Administer the High School Student Needs Assessment Survey to students in the tenth grade.
(c) Administer the Survey of Postsecondary Plans to this same population in their senior of high school.
(d) One year later. survey these students with the high School Follow-Up Survey
(e) Procure a complete, end of senior year high school transcript
(f) Provide a transcript of the first post-secondary coursework for each student.

Please see the **Student Development** option for a listing of ACT programs and services that may be useful to this research. In addition, the Enrollment Information Service is of particular relevance to this research option.

3. **Adult, Business/Industry Outreach**

Statement of Purpose: To impact adults, business/industry personnel enrollment as a form of student development outcome or community impact outcome and assess the results at either (a) the end of program completion or (b)completion of a short term of study.

Requirements of the Study: Define the outcomes that are critical to adult or business/industry personnel enrollment; assess these outcomes using ACT surveys, the CAAP (for students in longer-term programs), and other instruments or documentation; evaluate these approaches; and document the process.

Requirements (continued)

(a) Administer the ACT Adult Learner Needs Assessment Survey to key components identified for the research.
(b) Administer placement instruments as required, e.g. ASSET.
(c) Administer other surveys as required.
(d) Assess career needs using DISCOVER, CPP, or other instruments, as required.
(e) One year after program/study completion, survey businesses/industry to obtain feedback on effectiveness of collegiate program with respect to employee performance.
(f) One year after program/study completion, survey all those who completed the program/short-term of study with the Alumni Survey for Two-Year Institutions.

4. **Image Analysis**

Statement of Purpose: To develop a means of documenting institutional effectiveness and communicating this to targeted audiences.

Requirements of the Study: Define the factors that are critical to documenting the institutional image and communicating this image; assess these factors; evaluate the process; and document the process.

Possible target audiences for an image analysis include:
(a) the secondary education community
(b) the post-secondary education community
(c) the local/regional community in general
(d) business/industry
(e) government/the public sector

A. Requirements: Each demonstration site must produce written documentation of the project. This documentation is to include the major process variables involved. At the outset these areas are to be defined clearly and the methods of documentation and evaluation specified. These process variables are:

1. Faculty/staff involvement and commitment including how it is obtained and how it is manifested operationally.
2. Procuring and sustaining student involvement and valid participation.
3. Specification of "effectiveness criteria" and operational definitions of these criteria, including data generated by ACT instrumentation as well as other data.
4. Using "effectiveness" information for both institutional decision-making and external report.

B. Options: Each site will be requested to develop materials (either independently or in cooperation with other institutions) on one or more issues critical to assessing institutional effectiveness and the use of the information. Each site will be expected to determine which issue(s) it will focus upon prior to beginning the implementation of the project plan and communicate this to ACT. ACT, in turn, will play a quality assurance role related to these options. Upon completion of these materials, ACT will facilitate in their publication. Each demonstration site may choose from among the following projects:

1. Development of case study documentation.
2. Development of a faculty handbook for guiding involvement in the assessment of institutional effectiveness.
3. Development of a handbook linking assessment of institutional effectiveness to institutional decision-making in relation to academic programming.
4. Development of a handbook linking assessment of institutional effectiveness to institutional decision-making in the affective sphere of student development.
5. Development of a resource handbook for securing and maintaining student involvement in assessing institutional effectiveness.
6. Development of a resource book to document effective methods of communicating the results of institutional effectiveness studies to the relevant external populations (e.g., legislatures, governing boards, accrediting agencies, media, etc.).
7. Development of a resource handbook for administrative and governing bodies for managing and utilizing the assessment of the institutional effectiveness process.

PROJECT COOPERATION
CHIEF PROJECT OFFICERS

Gerard I. Berger
Vice President for Academic Affairs
Chemeketa Community College
Salem, OR

Karen Bowyer
President
Dyersburg State Community College
Dyersburg, TN

Peter Ku
Vice President and Dean of Instruction
Howard Community College
Columbia, MD

Charles Eisenman
Dean of Arts and Sciences
Macomb Community College
Mt. Clemens, MI

Roger VanWinkle
President
Marjory A. Stewart
Dean for the Experimental College
Massachusetts Bay Community College
Wellesley, MA

Wayne E. Giles
Vice Chancellor of Educational Services
Metropolitan Community Colleges
Kansas City, MO

Sandy Oliver
Director of Admissions
Midlands Technical College
Columbia, SC

Barbara Pickens
Director of Student Services
Orangeburg-Calhoun Technical College
Orangeburg, SC

Arthur W. DeCabooter
President
Scottsdale Community College
Scottsdale, AZ

Richard Black
Dean of Instruction
(St. Louis Community College
Systems Coordinator)
St. Louis Community College at Meramac
Kirkwood, MO

Ann S. McNutt
President
Technical College of the LowCountry
Beaufort, SC

PROJECT COOPERATION
NETWORK LIST

Tom Gill
Assistant to the President
for Institutional Advancement
Chemeketa Community College
PO Box 14007
Salem, OR 97309-5008
(533) 399-5121

Buck Tarpley
Director of Institutional
Advancement
Dyersburg State Community College
1516 Nichols Avenue
Dyersburg, TN 38025-0648
(901) 286-3346

Dennis Thompson
Professor
Macomb Community College
14500 Twelve Mile Road
Warren, MI 48903-3896
(313) 286-2197

Donna Green
Associate Dean of
Research/Assessment
Massachusetts Bay Community College
50 Oakland Street
Wellesley Hills, MA 02181
(617) 237-1100, Ext. 152

Johnnie McClinton
Assistant Director of Assessment and
Instructional Services
Metropolitan Community Colleges of
Kansas City
(Longview, Maple Woods, Penn Valley)
3200 Broadway
Kansas City, MO 64111
(816) 756-0220, Ext. 318

Sandi Oliver
Director of Admission
Midlands Technical College
PO Box 2408
Columbia, SC 29202
(803) 738-7699

Barbara Pickens
Director of Student Services
Orangeburg-Calhoun Technical College
3250 Saint Matthews Road
Orangeburg, SC 29115
(803) 536-0311, Ext. 230

Virginia Stahl
Associate Dean of Instruction
Scottsdale Community College
(Maricopa CC District)
9000 E. Chaparral
Scottsdale, AZ 85256-2699

Gail Quick
Dean of Student and College Development
Technical College of the LowCountry
PO Box 1288
Beaufort, SC 29901-1288
(803) 525-8216

Martha Matlick
Associate Dean, Human Services
Howard Community College
Little Patuxent Parkway
Columbia, MD 21044-3194
(301) 992-4832

Barbara Greenfeld
Director of Admissions
Howard Community College
Little Patuxent Parkway
Columbia, MD 21044-3194
(301) 992-4858

Richard Black, Coordinator for Project
Dean of Instruction, Meramac
St. Louis Community Colleges (Florissant
Valley, Forest Park, Meramac)
11333 Bid Bend Boulevard
Kirkwood, MO 63122
(314) 966-7679