Abstact

This report describes the process undertaken at Midland Technical College (MTC) for developing and implementing an institutional effectiveness assessment project using student outcomes measures as an integral part of the assessment methodology. First, the report presents the background to the project, reviewing MTC's involvement as a model demonstration site in Project Cooperation, a joint assessment training effort of three educational organizations. Then, the report describes the process undertaken to develop a series of research topics that would generate data to assess the institution's effectiveness, including college wide discussions and the formation of an institutional effectiveness unit at the college. This section describes the four phase testing strategy using American College Testing instruments to assess value added cognitive growth among students. The next section discusses factors critical to the success of the project as identified by the project planning team, including communicating project goals and expected results to target constituencies and relating the assessment project to the college's mission. Elements described as critical to successful project implementation include involvement of faculty and staff in all phases of the project plan, and the motivation and understanding of students. (GFW)
MAKING THE VISION A REALITY

PROJECT COOPERATION DEMONSTRATION SITE MODEL:

ASSESSMENT

OF

STUDENT LEARNING AND DEVELOPMENT

FROM ENTRY THROUGH EXIT

AND

TRANSFER TO FOUR YEAR COLLEGES

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There is a need nationwide for more accurate assessment information on the effectiveness of community colleges in meeting student and community needs. Valid assessment procedures and methodologies designed specifically for use by community colleges to assess their effectiveness must be developed if community colleges are to be assessed accurately.

Midlands Technical College has made a major commitment to institutional effectiveness collegewide. Even before South Carolina adopted the "Cutting Edge" legislation requiring colleges to develop local effectiveness measures, President James L. Hudgins and college personnel were initiating a local planning and evaluation program designed to enhance student success and college development. Mandates from the Southern Association of Colleges and Schools and the South Carolina Commission on Higher Education, along with recommendations from the AACJC Futures Commission on "Building Communities", led to the adoption of a multidimensional Institutional Effectiveness Program, with student outcomes assessment as an integral part of the overall assessment methodology.

In 1989-90, Midlands Technical College was designated as the lead institution for institutional effectiveness for South Carolina's two-year technical/community colleges. In June 1990, the college received a third year of funding from the Commission on Higher Education to develop a model academic program assessment system and to provide leadership for faculty development, evaluation of developmental education programs, and dissemination of exemplary methodologies, products and practices in instruction. The college also received a grant from AACJC and the Kellogg Foundation to serve as a Beacon College for the development and replication of assessment methodologies and the development of institutional effectiveness programs throughout South Carolina technical/community colleges.
Goals and Objectives

In addressing the question "How effective is our institution?", six broad performance characteristics that are of paramount importance for the ultimate success of the college have been identified:

* Accessible, Comprehensive Programs of High Quality
* Student Satisfaction and Retention
* Post-Education Satisfaction and Success
* Economic Development and Community Involvement
* Sound, Effective Resource Management
* Dynamic Organizational Involvement and Development

These performance characteristics are called Critical Success Factors. As defined in the North Carolina Community College System Effectiveness Model, Critical Success Factors are "the key things that must go right for the system to flourish and achieve its goals". In order to monitor and measure college performance relative to each critical success factor, indicators of effectiveness and a set of measurable criteria have been developed for each factor.

The indicators of effectiveness shown on page 4 provide a structure and mechanism for organizing the review and evaluation of Midlands Technical College's effectiveness in key areas. In 1990, internal assessment activities will include, but not be limited to:

1. continued refinement of the measurement criteria used to determine effectiveness for the College's six critical success factors;
2. continued work on the development of general education core competencies;
3. continued implementation of academic program reviews and the instructional effectiveness program;
4. full implementation of a retention and attrition study;
5. surveys of alumni, employers, and continuing students;
(6) implementation of a developmental education longitudinal study;

(7) ongoing work on a transfer study;

(8) administration and analysis of an exit test (CAAP);

(9) development of an instrument and process for assessment of student development; and

(10) assessment of library services use.

OPERATIONALIZING INSTITUTIONAL EFFECTIVENESS

In 1989, in order to provide an administrative structure for the institutional effectiveness program, the President formed an institutional effectiveness unit, named an Associate Vice President for Institution Effectiveness, and created an internal institutional effectiveness committee. However, the collection of information that will provide the data needed to determine the college's performance against a given standard is not assigned to a single person or unit. Assessment studies and data collection has been decentralized and delegated to the division or department with the best access to the information or with the knowledge, staff, or resources to conduct the gathering activity. As the diagram on page five illustrates, all divisions of the college are involved in coordination and tracking of assessment activities to avoid duplication of efforts.

The Role of Project Cooperation

In Spring of 1989 college personnel considered participation in Project Cooperation, a joint project of the National Council of Instructional Administrators (NCIA), the National Council on Student Development (NCSD) and American College Testing (ACT) to develop model student outcomes assessment methodologies for two-year colleges. After considerable investigation the decision was made to enter the project. Project Cooperation has provided an opportunity to initiate student outcomes assessment in the general education core and to examine cognitive and affective factors that impact student success. Related activities in some way support most of the college's
CRITICAL SUCCESS FACTORS
AND
INSTITUTIONAL EFFECTIVENESS INDICATORS

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<td>B-1 Student Satisfaction and Retention</td>
<td>B-2 Successful Achievement of Students' Goals</td>
<td>B-3 Program Completion Rates</td>
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<td>F-1 Dynamic Organizational Involvement and Development</td>
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<td>F-4 Support for Faculty/Staff Salary Equity</td>
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six critical success factors. The following statement was adopted as the goal of the student assessment program at Midlands Technical College:

The purpose of the Midlands Technical College student assessment program is to assess student learning and development from entry through exit and the post Midlands Technical College experience in order to yield information that will be used to enhance student learning and development and the overall effectiveness of the institution.

Following extensive discussions with various college constituencies, especially academic departments, a series of research topics, all of which support the college’s Critical Success Factors, were identified for Project Cooperation:

(1) ASSET-CAAP/CAAP-CAAP Relationships that Assess Value-added Cognitive Growth

(2) Assessment of Developmental Studies Program Effectiveness

(3) Transfer Student Outcomes

(4) Cohort Variables that Contribute to the Success of Minority and At-Risk Students

(5) Appropriateness of ASSET and CAAP for Assessing Student Learning and Development

Proposed outcomes of the study at Midlands Technical College include:

(1) establishment of a process for entry-exit testing;

(2) assessment of the effectiveness of the Developmental Studies Program on students’ future academic success and satisfaction;
determination of key factors that influence the academic success and satisfaction of Midlands Technical College students who transfer to four-year colleges;

identification of cohort variables that contribute to the success of minority and at-risk students for use in improvements of programs and services; and

development of an improved student database that facilitates the educational planning process.

CRITICAL FACTORS FOR PROJECT SUCCESS

In order to successfully plan and initiate Project Cooperation, a project planning team was established. This planning team identified key challenges and critical factors for project success:

(1) communicating project goals and expected educational results to target constituencies;

(2) relating the assessment project to the college's mission statement and institutional effectiveness program;

(3) obtaining institutional commitment;

(4) identifying and obtaining required resources;

(5) designing a research and evaluation plan;

(6) training faculty and staff who would be involved;

(7) monitoring the plan and findings, with revisions as needed;

(8) evaluating and communicating findings; and

(9) using results to improve student learning and development and to enhance institutional effectiveness.
To guide the successful implementation of project criteria in support of institutional effectiveness, a project guide was prepared, outlining tasks, completion dates, person(s) responsible and associated costs for each project success factor.

**ASSESSMENT PLAN/METHODOLOGIES**

In designing the assessment plan for Project Cooperation, the characteristics and goals of Midlands Technical College students were considered and included in the design. Decisions were made to:

1. Integrate entry assessment on CAAP as closely as possible into the instructional program.
2. Assess all students in entry-level math and English classes on CAAP regardless of previous coursework or completion of ASSET. Data on all entry-level students would then be available while allowing identification of first-time freshmen who had also taken ASSET in the research analysis.
3. Conduct post-CAAP assessment upon completion of 60 quarter hours of credit and the general education core, since transfer students comprise twenty-five percent (25%) of the college population and few transfer students remain at Midlands Technical College through graduation.

The Project Cooperation data collection plan is outlined below:

**Pre-Enrollment**
- Educational Planning Form
- ASSET (Reading, Writing Skills, Writing Sample, Numerical Skills and Elementary Algebra)

**First Year**
- CAAP Entry Testing (2 weeks into first term)
- Student Opinion Inventory/Non-Returning Student Survey (after end of 3rd term)
Second Year:  
- CAAP Post Testing (quarterly, beginning Fall 1990)  
- Student Opinion Inventory (with CAAP)  
- Non-Returning Student Survey (after two terms of non-attendance)  
- Service Utilization Data  

After Goal Completion:  
- Transfer Survey; Alumni Survey  
- Employment Data  
- Transfer Student Data (GPA, Performance in Target Courses at the four-year institution)  
- Midlands Technical College Student Transcript Data (GPA, Target Course Performance, Retention Data)  

Data elements to be examined include:  

- ASSET Educational Planning Information  
- ASSET Scores (Reading/Math/Writing)  
- CAAP Entry Scores (Reading/Math/Writing/Critical Thinking)  
- CAAP Exit Scores (Reading/Math/Writing/Critical Thinking)  
- Student Opinion Survey Data, with Local Items (midpoint and exit)  
- Withdrawing/Non-Returning Student Survey Data, with Local Items (two terms after non-returning)  
- GPA  
- Grades in target courses  
- Successful Goal Completion  
- Developmental Studies Data (grades in target courses after Developmental Studies/Without Developmental Studies)  
- Transfer Student Data (Grades in Target Courses/GPA)  

Relational, predictive and comparative models will be required to complete the analysis on the proposed research questions and achieve the desired project outcomes. Specific statistical applications are yet to be determined.
ASSESSMENT PLAN IMPLEMENTATION

Before Beginning Assessment

The aforementioned project planning team coordinated assessment implementation activities. This team included the Associate Vice President for Institutional Effectiveness, the Dean for Instructional Services, the Director of Student Assessment, and the Director of Research and Analysis, with the Dean for Student Entry and Enrollment Services serving as chairman. Joining in partnership with the major divisions of the college, the planning team maintained close communication and involvement with the college administration, Faculty Council, Student Assessment Committee, and individual academic units. Most critical to the success of planning and implementation was the support of top administration and the involvement of faculty and students.

Project consideration consisted of Executive Staff review, meetings with ACT representatives, and an examination of the relationship of the project to state requirements, the college’s institutional effectiveness plan and college goals. The project was then referred for detailed analysis and an examination of its impact on the college.

Project analysis involved extensive meetings with college personnel, a discussion session between ACT representatives and key faculty/staff, and an examination of the project’s impact on resources (monetary, staffing, computing requirements and research). This information enabled the planning team to develop a detailed project plan that outlined what, who, when, and the cost involved. Participation of the planning team at a NCSD/NCIA/ACT Summer Leadership Conference provided team members with the opportunity to share ideas with other colleges throughout the nation that were considering participation in Project Cooperation.

Project approval involved a series of approval stages in order to assure support from college constituencies. Endorsements were obtained from the Student Assessment Committee, the Educational Affairs Council, the Student Development Management Council, The Faculty Council and the Executive Staff.

Implementing Entry Level Assessment

Once the decision was made to begin outcomes assessment and the research topics identified, the next major issue was designing and implementing strategies for entry level assessment. Because the relationship between ASSET at entry and CAAP at exit
was under investigation, it was necessary to assess students on both the ASSET and CAAP upon entry and the CAAP again upon exit. Adding to the complexity of entry-level assessment was the fact that Midlands Technical College was not using ASSET for entry assessment at the time the decision was made to participate in Project Cooperation.

Challenges to entry-level assessment included:

1. Communicating changes in entry assessment to college constituencies (students/faculty/staff);
2. Defining the test population (all entering students/associate degree students only);
3. Deciding to test students pre-enrollment/post-enrollment or a combination;
4. Conducting in-class or out-of-class testing;
5. Using voluntary or mandatory student participation;
6. Determining the amount of control required for testing;
7. Deciding who would administer the tests and conduct the training;
8. Identifying how results would be disseminated (by whom and to whom);
9. Determining the techniques and designs that would be established for mid-point and exit testing; and
10. Deciding how results would be used.

A series of entry-level assessment approaches were considered and evaluated based on factors such as length of student testing time, cost, instructional time loss, impact on sample validity and whether or not a transition from the present entry-level
assessment instrument would be required. The options considered and associated problems are indicated in the table below:

### ENTRY-LEVEL ASSESSMENT APPROACHES

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<td>Current Assessment + ASSET + CAAP</td>
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<td>Current Assessment Pre-Enrollment; ASSET &amp; CAAP Post-Enrollment</td>
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<td>O Instructional Time Loss</td>
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<td>ASSET-CAAP Pre-Enrollment</td>
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<td>O Entry Test Transition</td>
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<td>ASSET Pre-Enrollment; CAAP Post-Enrollment (out-of-class)</td>
<td>O Entry Test Transition</td>
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<td>O Sample Validity</td>
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<tr>
<td>ASSET Pre-Enrollment; CAAP Post-Enrollment (in-class)</td>
<td>O Entry Test Transition</td>
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<td>O Instructional Time Loss</td>
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Because the college’s Student Assessment Committee had already recommended a change in the entry-level assessment instrument, with ASSET as a probable replacement, the decision was made to initiate this change in July 1989, with cut-off scores on ASSET identified from score conversion and validation studies. The entry-level assessment model implemented at Midlands Technical College is illustrated in the chart below:

### MIDLANDS TECHNICAL COLLEGE
ENTRY ASSESSMENT IMPLEMENTATION

- ASSET Administered as Placement Test Prior to Enrollment
- CAAP Administered in Entry Level Math and English classes
  - Math (Reading & Math)
  - English (Writing & Critical Thinking)
This design had the advantages of broad-based entry level assessment, a high level of partnerships, good student participation and the integration of assessment into the instructional program, all of which outweighed the disadvantages of limited instructional time loss, administrative time loss, limited control of testing conditions and cost for less than complete data sets.

Overall, this design was found to be quite effective, resulting in CAAP testing of over 2,000 students and ASSET testing of more than 1,300 students, for a broad-based entry-level assessment population. The larger number of students involved in entry-level CAAP assessment was desired since the primary interest of the college is CAAP to CAAP assessment to evaluate value-added cognitive growth. A project group of 576 took ASSET, at least two parts of the CAAP, and enrolled fall term 1989.

FACULTY/STAFF INVOLVEMENT

The single most critical ingredient for the success of Project Cooperation at Midlands Technical College has been the involvement of faculty and staff in all phases of the project plan. The planning team itself is comprised of representatives from several major college divisions, with these same representatives serving on the Institutional Effectiveness Committee, so as to yield continuity between institutional assessment needs and project research. Involvement activities have included the following:

1. College administration participated in the initial planning and updates. Divisional and departmental meetings with college faculty were held at the outset of the project to determine priorities for research needs and to allow faculty to assume “ownership” of the process so that outcomes assessment would be viewed as non-threatening. Focus was directed to informational needs required to allow faculty to make informed decisions regarding program improvements. This same process is now being implemented with Student Development staff on issues regarding services evaluation and related effectiveness criteria.
Prior to approval of the project by the college’s Executive Staff, endorsements were obtained from the Educational Affairs Council, the Student Development Management Council, the Faculty Council, and the Student Assessment Committee.

Arts and Sciences faculty have been integrally involved in the assessment process, since Project Cooperation focuses to a large extent on the evaluation of the general education core curriculum. This involvement has included input on research topics, design for entry-level CAAP testing, design for CAAP exit testing, administration of CAAP entry testing in math and English classes, and review of ASSET results with recommendations for adjustments in cut-off scores and entry course placement.

To assess faculty sentiment regarding changes in the entry testing program and CAAP pilot testing, a survey was distributed in January 1990 to determine faculty awareness of assessment changes and understanding as to why these activities were being implemented. Eighty-five percent (85%) of the faculty responding indicated that they were aware of the changes and understood why these changes were being initiated; thirteen percent (13%) were aware of the changes but did not fully understand them; and only two percent (2%) were unaware of the changes taking place in student assessment.

When faculty were asked if they perceived these changes as positive or negative, or if they required more information and data before they could express an opinion, an overwhelming majority (65%) indicated that they felt the student assessment process was moving in a positive direction. The remainder, with the exception of two faculty members, felt they needed more information and a review of student data before making a decision. The two persons who felt the college was moving in a negative direction voiced concern that changes in placement testing and entry-exit testing had been implemented too rapidly.
One of the most significant benefits of Project Cooperation has been the development of partnerships among major college units in support of student outcomes assessment for institutional effectiveness. A close working relationship has developed between Educational Affairs and Student Development on student assessment issues, supported by computer programming and operations, research and analysis, the institutional effectiveness unit, and the college marketing department.

STUDENT MOTIVATION EFFORTS

A second critical element to successful project implementation has been the motivation and understanding of students. During initial project planning, a number of incentive options were explored but discounted because it was felt that the sample would be skewed if entry assessment was voluntary. Midlands Technical College adopted the stance that student assessment is part of the instructional program, and this has been the message conveyed to students. A series of steps have been taken to assure student motivation and involvement:

1. During entry CAAP assessment, modules were implemented in entry-level math and English courses based on the relationship of the module to the course content. Writing Skills and Critical Thinking modules were administered in English classes, while Math and Reading were given in math classes.

2. A prepared statement on the purposes of the assessment, its uses, and planned feedback to students, was provided to each instructor administering the test to assure consistency of information to students. Special care was taken to let students know that they may find the test difficult because it was designed to assess what they should know at the end of their program of study—that they should do their best and not feel frustrated.

3. To assess student reaction, the Director of Student Assessment and Dean for Student Entry and Enrollment Services administered several day and evening entry-level CAAP tests and talked with students in a focus-group format regarding their perceptions and con-
cerns. Students viewed the use of assessment for college improvement as positive and desired feedback on results so they could assess their own progress.

(4) To provide continued student involvement, students were sent letters regarding availability of their results, with a letter of thanks and information on the project. Students would then meet individually with a counselor to obtain feedback on their results. The focus of feedback was on the use of results as a baseline against which future progress could be assessed rather than on comparison with norming data.

(5) Prior to the initial implementation of CAAP post-testing in Fall 1990, focus groups will be held with student government leaders; articles will be placed in the student newsletter and student newspaper; and letters will be sent to students congratulating them on their progress to date and informing them of their readiness to participate in CAAP post-assessment. The letter will include a prepaid post card to use in scheduling a test appointment, along with a schedule of test dates. Follow-up will be provided to non-responders. Because CAAP post-testing will be conducted out of class, applicable academic-related incentive options are being explored.

(6) The literature provided to students on testing has been revised to include the purpose of student assessment and role the student plays in this process. Following is a summary of the statement now included in the student assessment brochure:

It is the mission of Midlands Technical College to enable students to achieve their potential. For this reason, student assessment is part of the college's educational program.
From the time you apply to the college until the time you leave, you will participate in a series of tests and surveys designed to:

(1) assess your background and academic skills for accurate advisement and course placement at entry;

(2) obtain information on your satisfaction with college programs and services; and

(3) measure gains you have made academically and personally while a student at the college.

These tests and surveys will be used to help you achieve your individual goals and to improve college programs and services for all students.

We encourage you to become a partner in the assessment and learning process. Your earnest and sincere participation on tests, learning tasks, exit exams and surveys will provide the college with accurate information that will be used in planning effective programs and services. It will also help us to help you reach your goals.

OTHER FACTORS OF IMPORTANCE

The implementation of Project Cooperation entry-phase assessment at Midlands Technical College has been quite successful, particularly considering the short time frame between the decision to participate (June 1989) and project implementation (July 1990), combined with the fact that this implementation included a complete transition in the college's entry assessment and placement program. Factors which contributed heavily to project success at the initial stage included:
(1) A team approach among major divisions of the college, resulting in on-going student assessment partnerships;

(2) Heavy involvement of college faculty in exploration of research options, test administration, and project design;

(3) Consensus support of the college administration;

(4) Prior groundwork on college mission goals and effectiveness indicators through the college’s Institutional Effectiveness Program;

(5) Previous exploration of alternative placement testing options, with ASSET identified as one of the prime options;

(6) Integration of student assessment into the instructional program, with the student identified as a partner in the assessment process;

(7) The sharing of student assessment strategies with other two-year colleges, especially those within Project Cooperation; and

(8) Careful project planning, with development of a project planning guide.

Several concerns have become evident as the project has progressed:

(1) Project Cooperation requires extensive communication with all constituencies, with considerable follow-up, organization and administrative detail. Care must be taken not to underestimate cost in terms of faculty/staff time.

(2) Because of the large amount of administrative detail and documentation required for entry CAAP assessment, turnaround of CAAP results to students and faculty did not occur as quickly as desired, thereby preventing in-class instructor-to-student feedback, as had been desired. More efficient turnaround time is required in the future so that this information is more meaningful to students and faculty.
(3) The appropriateness of the CAAP Math test for the total college population may be questionable. Initial indicators are that it may be most applicable to the sub-population of students planning to transfer to a four-year college.

PLANNED USES OF RESULTS

Results of student outcomes assessment are not yet available; however, the use of project research findings will support previously identified effectiveness indicators for the college’s critical success factors. Externally, results will be used to provide data to meet effectiveness criteria for state boards and commissions, accreditation agencies, and legislative delegations. Internally, the information will be used to enhance programs and student learning. The ultimate use of student assessment outcomes information is to improve student success and the overall effectiveness of the institution.

Specific uses of assessment results include:

* feedback to students and faculty;
* evaluation of the general education core for program improvement;
* prediction of success for transfer students, with identification of improvements needed;
* validation of Developmental Studies Program effectiveness for underprepared students;
* usefulness of ASSET and CAAP as approved instruments for Midlands Technical College students;
* identification of high risk students for intervention;
* utilization and satisfaction with programs and services linked to student needs; and
* demonstration of institutional effectiveness to accreditation agencies, state boards, college commission and legislative delegations.
BENEFITS FROM PROJECT COOPERATION TO DATE

Participation in Project Cooperation has provided Midlands Technical College with the opportunity to integrate a standardized outcomes assessment measure as one of the multiple measures of assessing student and program performance. The primary benefit is the availability of local and nationally normed research data that can provide information for use in the improvement of college programs and services that enhance student learning and development. Spin-off benefits have included:

(1) development of collegewide partnerships in student assessment, with inclusion of the student as a partner in the assessment and learning process; and

(2) development of collaborative efforts with other two-year colleges nationwide on issues such as student assessment, institutional effectiveness, and student success.