



Community College of Aurora

Monitoring Report

on the

Assessment of Student Learning

Submitted to

The Higher Learning Commission

June 30, 2006



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Section One

I. Purpose of the report

This report responds to the request of the 2003 Higher Learning Commission's (HLC) evaluation team that the Community College of Aurora (CCA) submit a monitoring report in 2006 to describe the improvements the college has made in its assessment of student learning. The evaluation team indicated that the report should describe CCA's progress in meeting the following goals:

- All programs must have an assessment plan in place that uses multiple measures, including at least one direct measure of assessment of student learning.
- All programs must have begun gathering data using multiple measures, including at least one direct measure.
- At least 75 percent of the programs must be able to identify specific decisions that were the direct result of data obtained from the multiple measures.
- At least 60 percent of the programs must be able to demonstrate at least two years of data gathering and decision-making.
- There must be a clear link between assessment of student learning and the overall planning process.
- There must be evidence that students have become active participants in the assessment process as demonstrated by committee minutes.
- There must be evidence of continued professional development to involve adjunct faculty in the assessment process.

The evaluation team also made written observations about CCA's assessment efforts and responded to the college's questions about assessment. Among the team's observations was that the college had relied heavily on indirect measures of student learning (course evaluations, for example) and needed to use more direct measures. In response to a question about documenting student achievement, the team said that the college should consider assessing student learning in units larger than individual courses, but smaller than formal degree

programs. The college's assessment of student learning in clusters of courses follows this advice and goes beyond what the evaluation team required.

This report describes how CCA has met the challenge to improve assessment of student learning and has made assessment the college's number one strategic goal, even in a period of declining revenues. The faculty assessment committee developed an assessment plan that addressed the seven areas highlighted by the evaluation team. The plan built on the college's existing lifelong skills, acknowledged the importance of assessing occupational skills, and emphasized that assessment is primarily about student learning.

Programs and clusters then developed their own annual plans based on the college plan and reported their progress to the committee in a format that followed the HLC requirements. In response to these reports, the committee provided feedback to program and cluster leaders about their successes and the areas needing improvement. The committee took a proactive approach, providing training for faculty members and establishing a structured process.

This report also provides a means for the college's faculty, staff, and students to examine systematically their accomplishments with assessment over the past three years, to consider what challenges remain, and to use these insights to plan for the future.

II. Organization of the report

Section one begins with a history and overview of assessment at CCA. It then discusses the two areas upon which the college's assessment program has concentrated: lifelong skills and occupational skills. The first section ends with an overview of the roles faculty members and administrators have played in CCA's assessment efforts and the structure and resources the college has provided to support assessment during the past three years.

Section two responds directly to the evaluation team's request for a report and the areas in which the team indicated CCA should show improvement over three years. The section also describes how the college has accomplished what the evaluation team required of it, evaluated its assessment process, and used evaluation findings to improve assessment of student learning.

The final section explores the challenges CCA has faced and met over the past three years, the strengths the college can use to improve its assessment of student learning, and the continued development of assessment at CCA. The

report concludes with a number of appendices, including key documents and examples of program and course cluster assessment projects.

CCA's assessment efforts reflect the culture and characteristics of the college. The college has a decentralized management structure with a culture of participation by faculty, staff, and students. Community residents founded CCA as a "college without walls," and those origins have produced an institution with many adjunct faculty members and a lean administrative and support staff. The college also has a tradition of working across disciplines, with academic and occupational faculty members demonstrating a high degree of collaboration.

III. History and Overview

A. Prior to 2003 – Embarking on the accreditation journey

CCA developed a comprehensive assessment plan as part of the self-study report that it submitted to the North Central Association in February 1993. Following the plan's approval, the faculty identified six lifelong skills as the foundation of the college's curriculum and the focus of its assessment efforts (see appendix 1 for CCA lifelong skills). The process of identifying and adopting the lifelong skills included extensive conversations with community employers, visits to Alverno College, meetings with industry focus groups, and discussion at faculty forums.

During the 1990s, the college made considerable progress in integrating the lifelong skills into the curriculum. The faculty defined student learning expectations pertaining to the lifelong skills, developed a teaching paradigm that identified good practices, and implemented an outcome-based syllabus format that reflected lifelong skill competencies. CCA also established a syllabus audit to ascertain progress toward integration of the lifelong skills, conducted related professional development activities, and piloted a capstone course integrating the lifelong skills as a graduation requirement for the AA degree.

In the spring of 2002, CCA evaluated its assessment efforts in relation to the levels of implementation described in the *Addendum to the Handbook of Accreditation, Second Edition*. The self-evaluation indicated that six areas had progressed to level two, although two areas were still at level one (efficacy of assessment and shared responsibility – students). A year later, the evaluation team acknowledged CCA's own ratings and placed the college at a low level two.

In its 2003 self-study report, the college evaluated its assessment strengths as including the following:

- Integration of the lifelong skills across the curriculum,
- Alignment of learning outcomes, teaching methods, and assessment strategies, and
- Alignment of student evaluation of instruction with the lifelong skills.

Among the challenges the self study described were the following:

- Strengthening CCA's data collection, analysis, and storage infrastructure,
- Collecting data on student achievement of the lifelong skills,
- Developing pilot projects that use assessment results to improve teaching and learning, and
- Utilizing assessment outcomes in the college's annual budgeting and planning processes.

B. 2003-04 – Assessing our efforts and ourselves

CCA responded immediately to the evaluation team's report. The college strengthened its faculty assessment committee in May 2003 and asked the committee to prepare a course of action that addressed the team's concerns. Reflecting the college's tradition of widespread faculty involvement in institutional decision-making, each of the college's instructional divisions named two faculty representatives to the committee. One or more of the instructional deans and the vice president for instruction began to attend each meeting (see appendix 2 for committee membership).

The college also named new committee co-chairs. Dr. Kathleen Cramm, a member of the psychology faculty and coordinator of Behavioral Sciences, and Dr. Christopher Ward, Director of Grants and Planning and an adjunct instructor in anthropology, have served since 2003.

The committee began meeting weekly in the summer of 2003 and has met regularly since that time, generally every two weeks from September through April and approximately once a month during the summer. Early in 2004, the

committee engaged a consultant, Lynn Watson, to work directly with program and cluster leadership on technical issues such as data collection and storage. In the fall of 2005, the new director of institutional research, Dr. David Bailey, joined the committee.

During the summer of 2003, the assessment committee developed a revised assessment plan that responded to the evaluation team's concerns and suggestions. A condensed version served as the college's annual assessment plan for 2003-04. In each subsequent year, the committee issued a revised annual plan (see appendix 3 for annual plans). One change in the second year plan, for example, was to ensure that each program and cluster was actually collecting and analyzing data. Another change from the first year to the second was to focus plans on specific lifelong skills. The plans for 2004-05 and 2005-06 also emphasized the importance of producing short program/cluster level reports as part of the committee's effort to limit the length of assessment documents while enhancing their content.

Among the committee's first tasks was to define the list of programs and clusters that were to assess students' mastery of the lifelong skills and, where appropriate, occupational skills (see appendix 4 for programs and clusters assessing student learning). The committee based its decision to include clusters of courses on the advice of the evaluation team and on a desire to include as many CCA departments and faculty members as possible in assessment.

One outcome of this decision-making process, for example, was to include developmental math and developmental English in the math and English assessment programs. The committee also decided that the English as a Second Language faculty should prepare an assessment plan, as should the college's Center for Workforce Development for its Essential Skills certificate.

The committee determined that occupational programs were to assess occupational skills in addition to the lifelong skills and recommended that the capstone course for the AA degree continue. A separate assessment process would be developed for the AS degree that involved pre- and post-testing of written communication, quantitative reasoning, and critical inquiry skills.

As the committee developed its plans, the instructional deans identified faculty members responsible for the assessment effort for each program or cluster and charged them with developing assessment plans, implementing pilot assessment projects, and submitting progress reports to the faculty assessment committee. The faculty leaders began to work together at a meeting August 21, and many developed plans with their teams at a half-day training workshop

September 19 (see appendix 5 for workshop presentation). The assessment committee began reviewing plans in mid-October and provided feedback through face-to-face meetings with faculty leaders or via a committee representative (see appendix 6 for sample assessment plan).

Faculty leaders submitted progress reports May 1 with follow-up reports, if needed, by June 15 (see appendix 7 for sample 2004 report with rubric). The committee reviewed all reports and responded with suggestions and comments. These reports provided accountability and assurance that assessment was on track throughout the college. The committee's suggestions and comments supported program and cluster leadership. The progress reports and comments also served as the basis for the committee's report to CCA's president at the beginning of July 2004 (see appendix 8 for assessment committee report).

The first year ended on a positive note with a celebration and barbecue in mid-July at the president's home, highlighting the important role the faculty committee played in encouraging colleagues in their assessment efforts.

C. 2004-05 – Gaining momentum and permeating the culture

The committee began 2004-05 by hosting a training session and a meeting on August 25 to discuss goals for faculty assessment leadership (see appendix 9 for agenda). Throughout the year, faculty leaders in the programs and clusters continued to collect data each semester and to increase their understanding of how to use data to improve teaching and learning. During the year, the committee became more involved in receiving and reviewing plans and reports and providing programs and clusters with comments. In the fall of 2004, the committee began to use standardized review sheets to review plans and reports (see appendix 10 for review sheet).

Faculty leaders submitted progress reports to the committee in February and June of 2005. The committee reviewed all reports and provided feedback to each program or cluster via a committee member. The committee continued to hone its requests of the programs and clusters. For example, in response to programs and clusters that included limited data collection in their February reports, the committee required that programs and cluster leaders attach one-page summaries of their data from direct and indirect measures to their June reports.

The committee asked individual members to communicate directly with assessment leaders about committee recommendations. These steps were part of a

broader effort by the committee to emphasize the central role faculty members play in CCA's assessment effort.

The committee informed the college community about assessment and the lifelong skills through presentations at general faculty meetings, emails, an upgraded webpage, and presentations at meetings of the academic planning council and the president's cabinet. A new version of the faculty handbook (*Faculty frequently asked questions*), developed in 2005, contains information on the lifelong skills, assessment, and expectations for faculty members about participation in their program or cluster assessment efforts (see appendix 11 for handbook table of contents). Several faculty members developed an online workshop to introduce CCA faculty and staff to assessment, "Making Assessment a Reality: An Online Workshop." The college's job description for adjunct faculty members now includes participation in assessment, and all regular faculty members include assessment in their annual work plans.

During 2004-05, the committee faced the challenge of turnover and the need to acquaint new members – added throughout the year – with both the written assessment documents and the history of the committee's work. The committee recognized that as people retire or move on, all institutions must develop processes for ensuring that work continues and builds. At the same time, the committee strengthened some of its own procedures and processes. For example, the committee scheduled its bi-weekly meetings to follow those of the academic planning council to allow more faculty members to attend.

In the fall of 2004, the assessment committee began to discuss the need for outside evaluation of CCA's assessment efforts. With the help of the vice president for instruction, the college secured the advice of Dr. Phyllis Abt and a team of her colleagues from Front Range Community College. In early March 2005, they reviewed documents related to CCA's assessment of student learning, met for a day with CCA faculty members, and made recommendations for CCA's assessment efforts (see appendix 12 for team's presentation to CCA faculty). The faculty assessment committee considered these recommendations at its spring training and included some in its 2005-06 annual plan.

D. 2005-06 – Celebrating successes and building for the future

During the past year, the committee has continued to review and comment on revised plans and new reports. The committee has encouraged programs and clusters to focus on benchmarks and to identify specific decisions that are a direct result of their assessment efforts in 2004-05. The emphasis on benchmarks was

an outcome from the March 2005 visit by the Front Range Community College team.

The committee also focused on increasing student involvement, on bringing information about one of the least understood lifelong skills (aesthetic perception) to the faculty, and on working with the deans and program/cluster leadership to improve specific program or cluster reports and overall assessment efforts. A major thrust during the second semester was to collect a brief summary report from each program or cluster to document data collection and changes in instruction.

IV. Focus on lifelong skills and occupational skills

A. Lifelong skills

The Community College of Aurora has multiple missions and serves a broad range of students. Some students seek preparation for transfer, with or without a degree, to four-year institutions. Others complete an occupational program and earn a degree or certificate. Still others need developmental education instruction in mathematics, English, ESL, or reading. The college also serves employers in its service area and beyond through attention to their workforce needs and their employees' skills. Given these multiple missions, the college, with faculty leadership, has focused on the six lifelong skills as the foundation of instruction for all students, and, by extension, as the foundation of assessment of student learning. The lifelong skills include the following:

- **Communication** – abilities to effectively express, impart, or exchange feelings, thoughts, opinions, and information both orally and in writing.
- **Critical Inquiry** – abilities to examine and utilize reasoning strategies in order to select, apply, and evaluate evidence in multiple disciplines.
- **Personal Responsibility** – abilities to work independently or cooperatively in a group setting on situations and issues that affect the common welfare and one's own welfare in relationship to others.
- **Aesthetic Perception** – abilities to identify characteristics of, and to judge qualitatively, a creative work.

- Quantitative Reasoning – abilities to perform mathematical operations and to reason and draw conclusions from numerical information.
- Technology – abilities to make use of various technology-based applications.

B. Occupational skills

The faculty assessment committee, in choosing to endorse the college's emphasis on the lifelong skills, also acknowledged that occupational programs have somewhat different instructional missions than do general education programs. Occupational programs expect to teach, and their students expect to learn, a more defined set of skills. Moreover, organizations or institutions that license or certify occupational program graduates often define the teaching and learning of these skills. .

V. Assessing student learning at CCA

A. Role of the faculty

Faculty members, both regular and adjunct, have been the most important element in the college's assessment efforts. On an institutional level, the faculty assessment committee determines the structure, direction, and timeline of CCA's assessment efforts. Most committee members also serve as assessment leaders in their programs or clusters. During each of the past three years, the college has had 30 or fewer regular faculty members. This means that a high percentage of these faculty members have served, or are serving, on the assessment committee or as assessment leaders.

As programs and clusters began to submit plans and reports, committee members took on added responsibility as reviewers. Members also took on increasing responsibility to report back to, and work with, their colleagues on the revision of plans and responses to reports. In practice, this has meant that faculty members, rather than administrators, have provided guidance on assessment issues to others in their divisions.

At the program or cluster level, faculty members have set the benchmarks and learning outcomes for their program or cluster, selected the tools to measure student learning related to these benchmarks or outcomes, collected and analyzed

the data, and determined what changes to make in instruction. Faculty members have also been responsible for the program/cluster plan, for updating that plan, and for reporting their progress to the faculty assessment committee.

Reflecting the college's culture of inclusion for adjuncts, the faculty assessment committee has emphasized involvement of adjunct faculty members in the assessment process. Several current committee members are adjuncts and, in some programs and clusters, adjuncts are responsible for running the assessment process. In other programs or clusters, a regular faculty member leads the effort and recruits adjuncts to assist. All programs and clusters are expected to share assessment data with adjuncts.

The model's great strength has been that faculty members have made all major decisions about assessment during the past three years. The challenges include the wide variation in aptitude for assessment, particularly the design of measurement tools and the analysis of data, the large numbers of adjuncts who have had to learn about the lifelong skills and assessment program, and the turnover in program and cluster leadership due to retirement and other factors beyond the committee's control.

B. Role of the administration

College administrators have strongly supported the assessment committee and its activities throughout the past three years. The instructional deans have attended committee meetings, worked with faculty members in their divisions to implement assessment, and invited faculty leaders to deans' meetings to give assessment updates (see appendix 13 for memo to administrators). The vice president for instruction has attended meetings and supported the committee's work with advice and resources. The president attended key meetings and events, emphasized the importance of assessment publicly, and hosted the assessment leadership for a year-end barbecue at her home. In 2006, she initiated a president's assessment update where all program and clusters reported their progress on assessment and improvement in instruction directly to her (see appendix 14 for update agenda).

C. Institutional support: Structures

Several college structures have contributed to the success of the assessment efforts over the past three years. Overall, the administrative and academic structure of the college is collaborative, decentralized, and non-

hierarchical. All levels of the college talk regularly with each other so that assessment, the lifelong skills, and related topics get regular discussion across the institution (see appendix 15 for minutes from division meeting discussion assessment).

One faculty assessment committee co-chair reports, as a standing agenda item, to the academic planning council. The academic planning council consists of all department chairs, deans, directors, and program coordinators, and is open to all faculty and staff who wish to attend. This regular reporting provides a flow of information about assessment to all departmental chairs and other faculty members who attend the council's meetings. It also provides feedback from these chairs and instructors to the assessment committee. Similarly, the other committee co-chair reports to the president and is a member of the president's cabinet, providing direct information exchange with this group.

For most of the three-year period, instruction and student services reported to the same vice president, and the student services staff met regularly with the faculty. In this structure, the committee and other faculty working on assessment projects were able to work closely with the student life office and other student services groups on events such as the student assessment fair.

D. Institutional support: Resources

The college has provided a variety of resources to support assessment of student learning and the work of the faculty assessment committee. For each of the past three years, through the annual budgeting process, the college has provided the assessment committee with a budget allocation sufficient to cover operating expenses, events, and similar costs.

The college, through its instructional divisions, has provided support through pay for adjunct faculty who participate in program or institution-level work or activities. The instructional deans administer the payment process, which is standard across campus.

The college has also provided release time for one faculty assessment committee co-chair (Cramm) and built in time for participation in the committee to the work assignment for the other co-chair (Ward). Regular faculty members participate in the assessment process, whether serving on the committee or providing program/cluster leadership or both, as part of their institutional service, another institutional contribution to assessment of student learning.


The institution has contributed to the assessment efforts through the contributions of many college staff whom the assessment committee or individual programs and clusters have called upon for help. For example, the regular updating of the committee's webpage and the organization of the student assessment fair have both required significant staff time.

Finally, in response to a need voiced by the assessment committee, the college expanded the position of director of institutional research from part-time to full-time in the summer of 2005 and wrote service to the assessment effort into the new job description for the director.

Summary

Over the past three years, CCA has successfully met the requirements of the HLC's 2003 evaluation team. The assessment program has concentrated on the college's lifelong and occupational skills while gathering data and making improvements in instruction in 21 programs and course clusters. Faculty members, both regular and adjunct, have planned the assessment effort and continue to guide its implementation and direction. Over the past three years, the college's administration, structure, and resources have supported the improvement of assessment.

The next section responds in detail to the evaluation team's request for a report, describes how CCA has met the team's requirements, and explains how the college has evaluated its own assessment process and used the findings for continued improvement.



The Community College of Aurora has met the goals set for the 2006 monitoring report and improved its assessment of student learning in each of the areas requested by the evaluation team.

Section Two

Introduction

The Community College of Aurora has met the goals set for the 2006 monitoring report and improved its assessment of student learning in each of the areas requested by the evaluation team. This section describes these improvements in the order found in the team's report. The section also describes how the college has evaluated its assessment process and is using the evaluation findings to improve how it assesses student learning.

I. Multiple measures

All CCA programs and clusters selected for assessment have a plan in place that uses multiple measures including at least one direct measure of assessment of student learning.

In the late summer of 2003, the faculty assessment committee requested plans from degree programs (Examples: Associate of Arts and Associate of Science), occupational programs, and course clusters. Over the course of that first year, all of the selected programs and all but one of the clusters submitted plans to the committee. Each program or cluster based its plan on the committee's institution-wide assessment plan and included at least one direct measure of student learning.

The programs and clusters submitted progress reports in May of 2004 and, using comments from the committee, revised their plans for the fall of 2004. Since then, the committee has requested semi-annual progress reports, and, where needed, asked the programs and clusters for additional information or revisions. Currently, all programs and clusters have assessment plans in place. All are using at least one direct and one indirect measure of assessment of student learning.

The appendices attached to this report include several sample plans, including one from an occupational program and one from a general education cluster, to illustrate how the faculty assessment committee has guided the development of assessment at CCA.

II. Methods of assessment

All CCA programs and clusters selected for assessment have begun gathering data using multiple measures including at least one direct measure.

A. Data gathering

Several programs and clusters collected data in the fall of 2003 and more began to collect it in the spring of 2004. The committee encouraged leaders to start with a pilot project, even if small, in order to prepare for full data collection in 2004-05 (see appendix 16 for chart of data collection history).

In their reports to the assessment committee, program and cluster leadership have described lessons learned about data collection. For example, the English as a Second Language cluster has determined that because many students are unfamiliar with multiple-choice tests, the cluster's faculty members need to give students practice with these kinds of tests if assessment measures are to be effective. Other programs and clusters have learned the challenges of getting students to take seriously the completing of assessment instruments. To encourage completion of such instruments, the science cluster has provided gift certificates to the college bookstore, while the accounting program has given students extra credit in the course.

B. Direct measures

The faculty assessment leaders have selected a range of direct measures for their assessment programs. The evaluation team's report suggested many of these measures, and the 2003 training sessions provided additional information about them for interested faculty members. CCA's faculty-directed approach to assessment has allowed programs and course clusters to collect data on student learning, using instruments they feel are most appropriate. Three of the most common are described below:

1. Rubrics

Programs and clusters have used rubrics to assess research papers, randomized selections of course papers, specialized papers (analysis of an artwork, for example), oral presentations, and videotaped speeches. The AA capstone's rubric is a model for curriculum-wide rubrics that faculty members are

now developing (see appendix 17 for capstone rubric). The arts and humanities cluster has also been a major proponent of using rubrics in assessment.

2. Faculty-designed content exams

Another common type of direct measure used at CCA is faculty-designed tests that assess knowledge learned in specific courses, primarily in occupational programs such as accounting, computer information systems, and management and marketing. Those using these exams have reported challenges including determining the right content and the correct level of difficulty.

3. Standardized assessments

A third type of direct measure is standardized assessment tests. In some cases, the state agencies or the organizations that oversee occupational programs mandate these instruments. For example, the Colorado Attorney General's office administers the Peace Officers Standards and Training (POST) exam used in CCA's police academy. Likewise, students in the college's EMS program take the National Registry of Emergency Medical Technicians (NREMT) exam.

Other standardized measures include those developed by proprietary groups like the American College Testing Service's Collegiate Assessment of Academic Proficiency Exam (CAAP), used by CCA's science faculty, and the Accuplacer exam, used by the mathematics and English departments.

C. Indirect measures

The indirect measures selected by the various programs and clusters are as diverse as the direct measures. The AA capstone course and the speech cluster have used focus groups with students to address specific questions of interest to faculty. Several programs and clusters have developed their own surveys measuring exposure to the lifelong skills (science, accounting, computer information systems). The mathematics department uses a questionnaire to ask students about items such as students' interest in math, their perception of how well prepared they are for the course, and their study habits.

A number of programs and clusters have also used information from existing instruments, including student satisfaction surveys and course evaluations. Post-graduation surveys, faculty conferences to discuss observations about student writing, and information from an American Bar Association site visit are other indirect measures currently used at the college.

D. Examples of degree program instruments

1. Associate of Science

The science department, in its assessment for the Associate of Science degree, has been among the leaders in assessment at the college. For a direct measure of student learning of the lifelong skills, the science faculty chose a commercially developed instrument, the Collegiate Assessment of Academic Proficiency Exam (CAAP) from ACT. The science faculty chose the CAAP because they were particularly interested in being able to compare the performance of their students to associate degree-seeking students nationally and had learned of the CAAP in conversations with other community colleges in Colorado. For its indirect measure, the program has been using a measure developed at CCA, a lifelong skills exposure survey, to learn the degree to which students are aware of the college's lifelong skills and whether or not they are using the skills in their science classes.

2. Associate of Arts

Those assessing the Associate of Arts degree program have used an approach different from that used to assess the AS degree. Through a capstone course required of all AA degree students, the program has administered a rubric that assesses all six lifelong skills in three assignments: a research paper, a presentation, and an aesthetics paper. For an indirect measure, the program holds focus groups with students that address four questions related to learning. As assessment has diffused throughout the culture of the college, the capstone rubric has served as a model for other programs. For example, in the fall semester of 2005, anthropology faculty began using a modified form of the rubric to assess short written assignments in their courses.

E. Data analysis

Faculty members have generally analyzed their own data with assistance from the assessment committee's consultant and, in the last six months, from the office of institutional research. In most cases, those doing the analysis compare results from tests or other instruments against the benchmarks set by faculty members of the program or cluster. Analysis also includes looking at data over time to see what patterns emerge. The assessment committee has encouraged those doing assessment to analyze their data to determine how students have performed on groups of items or in order to understand where students may need additional assistance (see appendix 18 for EMS data analysis by groups of items).

For many programs and clusters, the analysis of data includes requesting that faculty members review the data to see what changes in instruction they would recommend.

III. Use of results to improve teaching and learning

More than 67 percent of the CCA programs and clusters selected for assessment are able to demonstrate at least two years of data gathering and decision-making. More than 90 percent of the programs and clusters are able to identify specific decisions that were the direct result of data obtained from the multiple measures (see appendix 19 for science department assessment report with decisions based on data).

This is an area of major progress and success. During the first year following the evaluation team visit, the committee found that a few programs and clusters were beginning to use assessment data to improve teaching and learning. For example, based on its 2003-04 assessment efforts, the English composition cluster decided to rewrite its composition I and II manuals for new faculty members. Moreover, the use of results to improve teaching and learning has increased dramatically in the last two years. Virtually all programs and clusters have made changes or will be making changes for the coming year. One priority for the assessment committee has been to ensure that program and cluster leadership overtly link changes they make to what they have learned from their assessment data.

A. Changes made in degree programs based on assessment results

CCA faculty members have used assessment results to make changes in the AS and the AA degree programs, as described below:

1. Associate of Science

Comparisons of the scores of CCA students with those of students nationally on the Collegiate Assessment of Academic Proficiency (CAAP) have shown CCA students to be a few percentage points above the national average. The science faculty has interpreted those scores to mean that it needs to do more work to improve student learning in the lifelong skills and integrate the skills throughout the curriculum (see appendix 20 for AS degree assessment report with CAAP scores).

The science faculty has considered the CAAP scores in conjunction with the science assessment scores when changing the science laboratory curriculum. The science department is also providing the CAAP scores to all other departments where AS students enroll in courses and is recommending that they use the scores in evaluations of their programs and clusters. This effort is being done through a committee of five general education department chairs organized in the fall of 2005 to disseminate and analyze CAAP data.

2. Associate of Arts

Semester-to-semester comparisons of student scores on the six lifelong skills in the capstone course have shown improvement over the last four semesters. However, faculty members are not yet satisfied with the skills level that the students are demonstrating and realize that essential skills are not being sufficiently developed in courses leading up to the capstone. As a result, the faculty is developing a common rubric for use across the curriculum for teaching and evaluating each of the skills in the summer and fall of 2006 (see appendix 21 for AA degree 2006 progress report).

The capstone faculty has made changes in teaching the capstone and has made recommendations for faculty members teaching courses leading to the capstone:

- a). Assessment-based changes in the AA capstone course
 - Ongoing and more rigorous expectations for the capstone research project.
 - Addition of faculty advisors to coach students through the research process and development of the presentation and paper.
 - Development of a cadre of faculty to serve as advisors, readers for papers, and evaluators of presentations.
- b). Assessment-based changes in the courses leading to the AA capstone course
 - Feedback to all faculty to increase training and monitoring for plagiarism.
 - Increased expectations for more speaking assignments in classes.
 - Increased focus on lifelong skills in all classes.
 - Increased training on methods for citation of sources in course papers.

B. Changes made in programs and clusters based on assessment results

1. General steps faculty have taken to improve teaching and learning

CCA faculty members, using the results of data gathered in their program and cluster assessment efforts, have taken a variety of steps to improve teaching and learning. Among them are improvements that span more than one course:

- Technology added to classrooms used for reading classes to improve instruction
- Increased professional development for program and cluster faculty members
- Biology and chemistry laboratory curricula revised and lab manuals written
- Additional components added to the requirements for a certificate
- Conversion of two discrete courses into a sequence of two courses

In other cases, the improvements have focused on a single course:

- Distribution of a short writing handbook with a course syllabus
- Case studies or other supplemental materials added to a course
- A new textbook or a different instructor selected for a course
- Administration of a first-day diagnostic test to be sure students are at the right level
- The addition of an exit exam to a developmental course
- Specialized facilities requested for a course

2. Examples of changes to programs and clusters

The following are examples, taken from spring 2006 progress reports, of the changes individual programs and clusters have made to improve teaching and learning:

a). Accounting

Accounting assessment results have shown that students need to improve their critical thinking and quantitative reasoning. As a result, the accounting faculty is increasing the emphasis on case studies in the principles of accounting course and is adding more computational problems in the auditing course (see appendix 22 for accounting spring 2006 report).

b). Computer Information Science

CIS assessment results have shown that student mastery of course content has improved, but not to the extent that faculty had hoped. In response, the faculty leadership has ordered new textbooks that provide additional tutorials, more hands-on application exercises, and more detailed content. The faculty is also soliciting ideas from its advisory committee about how to incorporate more real-world activities into the courses. Based on results from a student self-evaluation of the lifelong skills, the CIS leadership will work with faculty to emphasize the lifelong skills in the classroom.

c). Emergency Medical Services

The EMS program measures student achievement with the results of the National Registry of Emergency Medical Technicians (NREMT) exam. While the program's students have had a 100 percent pass rate on the exam, the students have scored the lowest on the airway and cardiology sections. Based on these results, the EMS faculty has integrated specialized airway training, taught by the program's physician advisor, into the curriculum and has increased emphasis on instruction in cardiology. The EMS program has also undertaken additional assessment studies to understand how well students learn when they use the program's sophisticated simulation devices. A State of Colorado grant is funding these efforts and researchers from the University of Denver are providing technical assistance.

d). Arts and Humanities

Faculty determined that assignments needed to help students develop more confidence in the adequacy of their own subjective aesthetic perceptions. Furthermore, assignments will help students identify these subjective perceptions, and encourage them to integrate those with more objective, external standards for aesthetic perception. This integration will lead to a more complex and sophisticated aesthetic perception, which is closer to that expected of college students (see appendix 23 for arts and humanities spring 2006 report).

e). English Composition

Among the results demonstrated in the faculty's assessment of randomly selected argumentative essays from English 121 was weakness in claims and addressing the opposition. Therefore, the faculty is asking all instructors to place greater emphasis on teaching students to remember their audience and purpose, particularly when they write an argumentative essay.

f). Mathematics

From the results on its direct measure, the mathematics faculty has learned that student retention and understanding in Math 106 correlates to students' starting point in the math sequence. From its indirect measure, the faculty has learned that students tend to rate themselves as more successful than would their instructors in areas such as preparedness and understanding. Based on these results, the faculty has decided to inform all instructors where each of their students started in the developmental sequence so the instructors can provide needed assistance. The mathematics program will also offer faculty workshops, pilot courses using additional technology, and develop policies for setting and maintaining high standards in the classroom.

g). Science/Biotechnology

Faculty members have observed little improvement in scores for students taking a sequence of anatomy and physiology courses. To improve this situation, faculty have decided to switch the anatomy and physiology classes from a laboratory book that was predominately observation to a lab book that asks the students to discuss and analyze their results.

IV. Faculty and student involvement

CCA provides continuing professional development that involves regular and adjunct faculty members in the assessment process. The college has also involved students as active participants in the assessment process.

A. Faculty involvement

Over the past three years, CCA has emphasized a variety of means, including professional development, to inform regular and adjunct faculty

members about assessment and to involve them in the assessment process. The college, with its modest number of regular faculty members, is heavily dependent on adjunct instructors. In the fall semester of 2005, for example, CCA had 27 full-time and 320 adjunct faculty members, as reported in the college's IPEDS human resource report. In that semester, adjuncts taught 83 percent of CCA classes. An important milestone for involvement of adjunct faculty in assessment was the creation in 2005 of a college-wide adjunct job description that requires participation in assessment of student learning.

The faculty assessment committee, with representation of both regular and adjunct faculty, has taken the involvement of all faculty members as an important challenge. To this end, the committee has promoted the following strategies:

1. Informative presentations at scheduled faculty events

Since 2003, a presentation on assessment has been a standard feature on the agenda at the general faculty meeting at the beginning of each semester – the one time each semester when the entire faculty assembles. Additional information about assessment has also been part of the division and/or departmental meetings that follow the general faculty meeting.

At the fall 2005 meeting, for example, several assessment committee members prepared a joint presentation, “Get on Board with Assessment: Knowledge is Power.” It reviewed CCA’s assessment requirements and efforts, discussed what faculty had accomplished in 2004-05, and laid out the challenges for 2005-06 (see appendix 24 for “Get on Board with Assessment” presentation).

In the fall of 2005, the faculty assessment committee assumed responsibility for the college’s faculty in-service day. This is one day each academic year when the college does not hold classes, and all regular faculty are expected to attend joint professional development training. Adjunct faculty are strongly encouraged (and paid) to attend (see appendix 25 for in-service flyer and agenda).

The assessment committee chose to focus attention for the 2005 in-service on a lifelong skill that members believed their colleagues assessed less frequently than they assess other skills: Aesthetic perception. To start the day, Dr. P. Bruce Urmacher, Director of Curriculum and Instruction, School of Education, University of Denver, presented “Transforming Teaching and Learning: An Aesthetics of Education” to more than 100 faculty members. The in-service also included a session “Conversations with Students on Assessment” and a wide range of faculty-conceived and produced presentations related to aesthetics. For