

**MONITORING REPORT ON ASSESSMENT OF STUDENT
LEARNING**

To

The Higher Learning Commission
A Commission of the North Central Association of Colleges and Schools

From

COCONINO COMMUNITY COLLEGE
Flagstaff, Arizona
August 2005

For

**Continued Accreditation and Affiliation
with the
Higher Learning Commission
of the
North Central Association**

Table of Contents

Executive Summary

a. Introduction	4
b. Overview of Coconino Community College	4
c. Student Learning and the Assessment Process	4
d. Summary of Findings	5
I. Introduction and Accreditation History	5
a. Organization of the Report.....	5
b. College Profile	6
c. Accreditation History	7
d. Acknowledgement of Assessment Challenges	7
e. Responses to Assessment Challenges.....	7
II. Developmental Education Assessment	10
a. English and Math Placement Score/Student Course Grade Correlation Study.....	10
b. Page Developmental Education Assessment Pilot Study	11
III. General Education	21
a. Academic Profile	21
b. Page General Education Pilot Study.....	22
c. Graduate Exit Survey.....	26
d. IDEA General Education Results	32
IV. Transfer Education.....	33
a. Northern Arizona University/Coconino Community College Transfer Student Survey	33
b. Alumni Survey.....	33
c. Arizona State System for Information on Student Transfer (ASSIST)	35
V. Arts and Sciences	37
a. Fine Arts	37
b. Math.....	40
c. Science	43
d. English and Languages	48
e. Liberal Studies	55
f. Graduate Exit Survey.....	58
g. Alumni Survey.....	60
VI. Career and Technical Education (Occupational Education)	62
a. Computer and Office Information Systems	62
b. Nursing	69
c. Public Safety, Law and Allied Health	72

- d. Graduate Exit Survey 76
- e. Alumni Survey..... 79

- VII. Distance Education 81**
 - a. Elementary Education..... 81
 - b. Computer Information Systems program study..... 84
 - c. Public Safety, Law, and Allied Health 87

- VIII. Summary..... 88**

- Appendix**
 - a. CCC Annual Assessment Plan 89

Executive Summary

Introduction

This executive summary provides highlights from the Coconino Community College (CCC) Monitoring Report 2005 which was submitted August 2005 as formal response to the request given by the Higher Learning Commission's evaluating team April 2002 for the purpose of providing a comprehensive evaluation pursuant to a request for continued general accreditation of the institution through the Higher Learning Commission of the North Central Association of Colleges and Schools.

The primary purpose of this monitoring report is to illustrate Coconino Community College's comprehensive approach to assessing student learning. Specifically, this report will present CCC's student learning outcomes assessment program which effects curricular and instructional improvement. This report will describe CCC's initiatives in the areas of: Developmental Education assessment, General Education assessment, Transfer Education assessment, Arts and Sciences Program assessment, Career and Technical Education Program assessment and Distance Education Program assessment.

Overview of Coconino Community College

Coconino Community College is a public, comprehensive two-year community college with three (3) campuses, two (2) sites and two (2) course locations located throughout the service area, Coconino County, the second largest county in the United States, covering 18,617 miles. A portion of the Navajo Reservation, the nation's largest Native American reservation lies in Coconino County and is served by the college.

In 2003-2004, the institution served 2,268 unduplicated students in credit programs. Distance education course enrollments have increased from a beginning enrollment of 89 students in the spring of 2001, to 1,007 in the spring of 2005.

Student Learning and the Assessment Process

Coconino Community College's Annual Academic Assessment Plan consists of the following institutionalized processes:

- Academic Department Chair Assessment Activity Reports
- English and Math Placement Test Scores/Student Course Grade Correlation Study
- Page Campus Developmental Education Assessment Study
- Graduate Exit Survey
- Alumni Survey
- IDEA Evaluations/Survey Report and Longitudinal Study
- Academic Profile (ETS) Test of General Education Knowledge (Social Sciences, Natural Sciences and Humanities)
- ASSIST Report (Arizona State tracking system of transfer students)
- Northern Arizona University/Coconino Community College Transfer Student Survey

Summary of Findings

The efficacy and quality of teaching and learning at Coconino Community College are highly esteemed amid members of the college community. It is vital that students who receive their education at CCC, regardless of background, ethnicity, and knowledge, are successful learners and have access to quality learning environments, curricula and programs, and a variety of opportunities to achieve their educational goals. Student learning outcomes are articulated and frequently assessed, and the results of assessment data and feedback are used to improve teaching and learning.

Exceedingly experienced and competent faculty members are responsible for the curriculum which is developed through methodical procedures. Students are exposed to an array of learning experiences, as well as many ways and delivery modes of instruction. Strategic planning, academic assessment and instructional improvement are significantly rooted in the culture and function of the college.

I. Introduction and Accreditation History

This monitoring report is submitted by Coconino Community College (CCC) as formal response to the Higher Learning Commission's team of five Consultant-Evaluators who visited Coconino Community College in Flagstaff and Coconino County, Arizona, April 15-17, 2002, for the purpose of conducting a comprehensive evaluation pursuant to a request for continued general accreditation of the institution through the Higher Learning Commission of the North Central Association of Colleges and Schools. The primary purpose of this report is to give the evaluator background information needed about the college's academic student learning assessment practices in order to conduct a comprehensive evaluation.

A. Organization of the Report

Chapter 1 of the report provides an **introduction** to the report, a current profile of Coconino Community College, and a brief accreditation history of the college. This chapter also describes significant changes since the 2002-evaluation team visit and explains how the college responded to the challenges noted in the team's report.

Chapter 2 discusses assessment of **Developmental Education** and student achievement of learning outcomes as they progress in their program of study.

Chapter 3 focuses on student achievement of **General Education** learning outcomes and the variety of methodologies employed to collect valid and reliable feedback.

Chapter 4 covers **Transfer Education Assessment** data which is collected both locally and state-wide.

Chapters 5 and 6, respectively, address the mixed methods approach to gathering data pertaining to program and course-level assessment through a

representative sampling of **Arts and Sciences and Career and Technical Education degree and certificate learning outcomes assessment.**

Chapter 7 describes how CCC assesses the achievement of student learning outcomes in **Distance Education** formats in a consistent and comparable approach to on-campus learning.

This monitoring report concludes with a summary of academic assessment activities and the related findings.

Evidence is cited throughout this report to support stated claims or assumptions about how a particular College program, course or learning activity relates to student learning. As the monitoring report was being prepared, guidelines were established for what constitutes evidence and these were used by the faculty, department chairs, institutional research and assessment director, and the principles of institutional effectiveness committee as they conducted their evidence gathering. The guidelines include the following:

- Evidence is relevant - clear and directly related to the question of interest.
- Evidence is verifiable - can be documented and replicated.
- Evidence is representative - typical of the College and not an isolated case or incident.
- Evidence is cumulative - substantiated or reinforced by an array of sources.

Consequently, a solitary data point, opinion or perspective was not considered evidence. Rather, evidence was established through the triangulation method. The most commonly cited methods include surveys, written works, tests, academic reports and observation.

B. College Profile

Coconino Community College serves citizens in the city of Flagstaff, Arizona, and in the surrounding rural and semi-rural areas of Coconino County. CCC has invested in outreach campuses and systems for distance delivery in an attempt to serve its diverse and widely scattered constituents. A portion of the Navajo Reservation, the nation's largest Native American reservation, lies in Coconino County and is served by the College.

In CCC's fourteen-year history, Coconino Community College has experienced rapid growth. CCC is operating under strong leadership and a board dedicated to the College's and community's interests.

C. Accreditation History

CCC received its first comprehensive accreditation in 1996. The College was recommended for its next comprehensive visit in 2001-2002, with a monitoring report required by August 31, 2005. The College requested a focus visit for Delivery of Distance Education programs in May of 2004. CCC's next comprehensive visit is scheduled for 2011-2012.

D. Acknowledgement of Assessment Challenges

As outlined by the team of Consultant-Evaluators who visited Coconino Community College April 2002, for the purpose of conducting a comprehensive evaluation pursuant to a request for continued general accreditation of the institution through the Higher Learning Commission of the North Central Association of Colleges and Schools, there were evident challenges observed in the domain of assessing student learning. The challenges observed include:

- adequate breadth and depth in the Assessment Program
- focus on outcomes assessment
- assessment of developmental education outcomes by ascertaining the level of success students attain in the next course of sequence
- successful program of assessing general education outcomes on a course-by-course basis through widespread and regular participation
- transfer education assessment
- career and technical education assessment including employment data, and results of certification and licensure exams
- participation of instructional administrators and faculty to conferences on assessment
- demonstration that the College regularly and systematically uses assessment data from across all instructional programs to improve instruction
- assessment information is broadly disseminated, especially to teaching faculty
- assessment data are used to formulate strategies for improving instruction

E. Responses to Assessment Challenges

Adequate breadth and depth in the Assessment Program and focus on outcomes assessment.

Since CCC's focus visit in 2002, there have been numerous changes to the Academic Assessment Plan. Some of the significant changes include: a concentrated focus by faculty and academic department chairs on creating and implementing assessment methodologies measuring program-level learning outcomes (in addition to the course-level assessment measurements), the adoption and administration of the ETS Academic Profile Test measuring general education learning outcomes of students taking intensive writing/critical thinking courses, creation and administration of new

Alumni and Graduate Exit Surveys, the use of assessment data to influence institutional strategic planning, and the review and realignment of program and course learning outcomes to curriculum.

Assessment of developmental education outcomes by ascertaining the level of success students attain in the next course of sequence.

CCC has implemented a study to analyze subsequent course grades of developmental students. Data are discussed in chapter 2.

Successful program of assessing general education outcomes on a course-by-course basis through widespread and regular participation.

As mentioned earlier, CCC has instituted the administration of the ETS Academic Profile Test measuring general education learning outcomes of students taking intensive writing/critical thinking courses. Results are illustrated in chapter 3.

Transfer education assessment.

CCC participates in the Arizona State program, ASSIST, which captures and tracks community college students and their transfer to universities. In addition, CCC has access to review and analyze results from Northern Arizona University's NAU/Coconino Community College Transfer Student Survey. ASSIST data and the Transfer Student Survey results are presented in chapter 4.

Career and technical education assessment including employment data, and results of certification and licensure exams.

As part of CCC's Career and Technical Education (CTE) program assessment, the department chairs and faculty track and report program-level measurements of student learning including results of certification and licensure exams. In addition, the new Alumni and Graduate Exit surveys capture extensive employment data that is reported by major. CTE assessment Data are described in chapter 6.

Participation of instructional administrators and faculty to conferences on assessment.

The College's President and Vice President of Academic Affairs are strong advocates of participation in assessment conferences and regional workshops. In April 2005, CCC sent all Academic Department Chairs, Academic Deans, Vice President of Academic Affairs, and the Director of Institutional Research and Assessment to a three day workshop, "Making a Difference in Student Learning: Assessment as a Core Strategy", conducted by the American Association of Higher Education and the Higher Learning Commission. As a result, CCC academic leaders possess an enhanced and

common understanding and champion methodologies measuring student learning and implement strategic decisions based on assessment data.

In addition to sponsoring conference participation, CCC has engaged the services of an NCA recommended consultant, Dr. Gail Mee, who has been working with the Vice President of Academic Affairs, faculty, academic department chairs, academic deans, and the director of institutional research and assessment. Dr. Mee has provided a current global perspective of measuring student learning and validated many current methodologies at CCC.

Demonstration that the College regularly and systematically uses assessment data from across all instructional programs to improve instruction.

As illustrated in the annual Academic Department Chair Assessment Reports discussed in chapters 5, 6 & 7, assessment data are comprehensively and continuously used to determine curricular and instructional changes to programs. The reports are available on CCC's Institutional Research and Assessment Web site.

Assessment information is broadly disseminated, especially to teaching faculty and that assessment data are used to formulate strategies for improving instruction.

Assessment data are shared not only with teaching faculty but to the College community at large. Faculty are involved in discussions at the departmental and institutional level regarding assessment feedback and recommended changes. All assessment reports and survey results are available to the College community on CCC's Web site and some documents also are shared in hardcopy and made available on campus.

II. Developmental Education Assessment

English and Math Placement Test Scores/Student Course Grade Correlation Study

CCC has been conducting a study of placement scores for math and English in correlation with final grades of the courses students were placed. Below are results.

Purposes To assess success rates of students who placed into math and English based on placement test scores.
To compare data to previous, run spring and fall of 2001.

Data fall 2001, spring and fall 2002, and spring 03
Placement scores in Banner for ERC, ESS, MAR, MCO, Course number, Final Grade in course

Summarized findings

Number of Records	Course	C or better	Scored C or better 2001	Percent fail D or F	Scored D, F, or U, 2001	Withdrew	Withdrew 2001
1	Eng 025	100%		0%		0%	
27	Eng 029	55%	56%	22%	22%	23%	1%
29	Eng 030	63%	65%	22%	23%	15%	2%
15	Eng 031	34%		30%		38%	
48	Eng 060	77%	74%	10%	17%	13%	14%
34	Eng 100	79%	75%	9%	16%	11%	1%
118	Eng 101	72%	77%	10%	<1%	14%	19%

Note on students who concurrently enrolled

Number of Records	Course	C or better	Scored C or better 2001	D or F	Scored D, F, or U 2001	Withdrew	Withdrew 2001
68	Mat055	52%	65%	25%	14%	24%	20%
46	Mat087	74%	74%	15%	13%	11%	13%
88	Mat121	52%	69%	26%	16%	23%	14%
4	Mat142	75%		25%		0%	
16	Mat151	70%	74%	19%	12%	19%	14%
8	Mat 187	63%		13%		25%	

Total percentages may not equal 100 due to rounding and elimination of invalid scores
For courses not listed in 2001, there were less than 25 grades

Conclusions:

- ❖ Students are being placed into English classes where they have a wide range of success rates, with the lowest in developmental courses. Courses have since been revised.
- ❖ Eng060 - Eng 101 have success rates from 72% - 79%. These results compare favorably with success rates from 2001.

- ❖ There is also a wide range of success rates from students Math students, with MAT055 and MAT121 being the lowest at 52% success.
- ❖ Overall, success in math courses has decreased since 2001; no changes have been made to placement test or cut scores.
- ❖ There are limitations as to what assumptions can be made based on the data. No factors other than placement were considered (e.g. motivation, length of course, instructor, and textbook) and data set is limited.

Recommendations:

- ❖ Assess whether combining 030 and 031 positively impacted success.
- ❖ Conduct this assessment annually.
- ❖ Share with Dept Chairs to see what factors may have influenced success rates during this time period.
- ❖ Compare to pre-post assessment on developmental English exams
- ❖ Review math data by semesters and share results.
- ❖ Take out Fall 01 data in second set and rerun comparisons

CCC's Page Campus Developmental Education Pilot Study

Below is a comprehensive overview of a pilot study conducted at CCC's Page Campus. As a result of the feedback, CCC's Arts and Sciences Division is going to implement this study at the Flagstaff campuses 2005-2006 Academic Year.

Developmental Education Assessment Summary

Course: Developmental Education courses: MAT 055, MAT 087, MAT 121, ENG 089, ENG 090, ENG 099, ENG 100

Description of assessment activity:

Engaged in a variety of assessment activities listed below:

- Course grades
- Course retention rates
- TABE test results
- ENG 101 and MAT 151 common assessments
- Analysis of placement scores and course grades
- Student satisfaction surveys
- Teacher satisfaction surveys
- Lab attendance and course grades
- Lab attendance and TABE results
- Advising and course grades
- Advising and TABE results
- Advising and lab attendance
- Advising and retention
- LEC usage and retention
- LEC usage and course grades
- LEC usage and TABE results

(See Developmental Education Assessment Plan)

Outcomes Measured:

1. Implement the reading skills necessary to succeed in ENG 101 and college level courses
 - a. 72% or more of developmental reading students will earn a C or better
 - b. ENG 099 completers will read at a 10th grade level or higher and ENG 089 completers will read at the 9th grade level
 - c. 88% or more of developmental reading students will earn a C or better in ENG 101 and a specified general education course
 - d. Program completers will pass a common assessment in ENG 101 with a 75% or better
2. Use the writing skills necessary to succeed in ENG 101 and college level courses
 - a. 79% or more of developmental writing students will earn a C or better
 - b. ENG 100 completers will perform at a 10th grade level or higher and ENG 090 completers will perform at the 9th grade level
 - c. 88% or more of developmental writing students will earn a C or better in ENG 101
 - d. Program completers will pass a common assessment in ENG 101 with a 75% or better
3. Apply the math skills necessary to succeed in MAT 151 or MAT 142
 - a. 74% or more of developmental math students will earn a C or better
 - b. MAT 055 completers will perform at 7th grade or higher, MAT 087 students will perform at 9th grade or higher, MAT 121 students will perform at 10th grade or higher
 - c. 65% or more of developmental math students will earn a C or better in MAT 142 or MAT 151
 - d. Program completers will pass a common assessment in MAT 151 with a 75% or better
4. Program and its components will foster student learning success
 - a. The placement test will place students in the appropriate courses where students will have the greatest likelihood of success
 - b. Students with regular lab attendance will have higher grades and higher performance on course assessments
 - c. Students who regularly utilize college advising services will have higher grades and higher performance on course assessments than those who do not utilize these services
 - d. Students who regularly utilize college learning assistance services will have higher grades and higher performance on course assessments than those who do not utilize these services
 - e. Students who regularly utilize college LEC services will have higher grades and higher performance on course assessments than those who do not utilize these services
 - f. Students enrolled in the new developmental education program will have higher grades than previous students enrolled in developmental courses
5. Program will retain students
 - a. Over 65% of the students enrolled in a developmental course will complete the course

- b. Develop a baseline figure to determine the percentage of students that previously enrolled in a dual enrollment course actually completed the sequence of developmental coursework and enrolled in ENG 101 or MAT 151.
 - c. Students enrolled in the new developmental education program will have a higher retention rate than previous students enrolled in developmental courses
 - d. Students who regularly utilize college advising services will have a higher retention rate than those who do not utilize these services
 - e. Students who regularly utilize college learning assistance services will have a higher retention rate than those who do not utilize these services
 - f. Students who regularly utilize college LEC services will have a higher retention rate than those who do not utilize these services
6. Students and faculty will express satisfaction with the program and its components
- a. Students will express on a classroom survey that they are satisfied with their class, lab, LEC services, and advising.
 - b. Students will express satisfaction on the IDEA survey for "Excellence of Teacher," "Excellence of Course," and "Improved Student Attitude" at or above the campus norm
 - c. Faculty will express satisfaction with courses and program components
 - d. Faculty will indicate on the IDEA survey that "Changes in teaching approach," "Student background," and "Student enthusiasm and effort to learn" all had a positive impact on the class. Responses will be at or above the campus norm

Data:

1. Implement the reading skills necessary to succeed in ENG 101 and college level courses
 - a. 73% of developmental reading students earned a C or better. The percentage from Fall 2001- Spring 2004 semesters was 46%
 - b. 67% of ENG 099 completers took the TABE test and the average reading level for these students was the 8.0 grade level. 61% of ENG 089 completers took the TABE test and their average reading level was the 8.1 grade level. Students at grade equivalent had a 2.6 GPA and those below grade equivalent had a 2.7 GPA. Reading students that scored at the grade level deemed appropriate for their course on the TABE test had an average GPA in their developmental reading class of 2.8 while those who scored below the appropriate reading level had a 2.8 GPA in their developmental class.
 - c. We have grades for four ENG 099 completers that took ENG 101 between the fall 2003 - spring 2005. 50% earned a C or better in ENG 101. Reading students that enrolled in another English course had an average GPA in their developmental English class of 2.4. Their average GPA in the successive course was 2.5.
 - d. One ENG 099 completer took an ENG 101 common assessment and earned score of 62%. The average score for all students was 81%. (See ENG 101 course assessment results.) Developmental English students that enrolled in ENG 101 had an average GPA in their developmental English class of 2.9. Their average GPA in ENG 101 was 1.9.
2. Use the writing skills necessary to succeed in ENG 101 and college level courses

- a. 79% of developmental writing students earned a C or better. The percentage from Fall 2001- Spring 2004 semesters was 86%.
 - b. 90% of ENG 100 completers took the TABE test and the average writing level for these students was the 10.5 grade level. 53% of ENG 090 completers took the TABE test and their average writing level was the 11 grade level. Writing students that scored at the grade level deemed appropriate for their course on the TABE test had an average GPA in their developmental reading class of 3.2 while those who scored below the appropriate reading level had a 2.4 GPA in their developmental class.
 - c. We have grades for 12 ENG 100 completers that took ENG 101 between the fall 2003 - spring 2005 semesters. 50% earned a C or better in ENG 101. Writing students that enrolled in another English course had an average GPA in their developmental English class of 2.9. Their average GPA in the successive course was 1.9.
 - d. Three ENG 100 completers took an ENG 101 common assessment. The percentage score was 50%. The average score for all students was 81%. (See ENG 101 course assessment results.) Developmental English students that enrolled in ENG 101 had an average GPA in their developmental English class of 2.9. Their average GPA in ENG 101 was 1.9.
3. Apply the math skills necessary to succeed in MAT 151 or MAT 142
- a. 46% of developmental math students earned a C or better. The average from the fall 2001 - spring 2004 semesters was 51%.
 - b. 100% of MAT 055 completers took the TABE test and the average grade level for these students was 9.8. 38% of MAT 087 completers took the TABE test and their average grade level was 11.8. 68% of MAT 121 completers took the TABE test and the average grade level for these students was 11.8. Math students that scored at the grade level deemed appropriate for their course on the TABE test had an average GPA in their developmental reading class of 2.1 while those who scored below the appropriate reading level had a 2.3 GPA in their developmental class.
 - c. There were two MAT 055 and eight MAT 087 students that took MAT 151 between the spring 2000 - fall 2003 semesters. 50% earned a C or better in MAT 151. Students that initially enrolled in MAT 055 that enrolled in another math course had an average GPA of 2.8 in their developmental math class. Their average GPA in MAT 087, 121, and 151 was 1.1, .9, and 1 respectively. Students that initially enrolled in MAT 087 that enrolled in another math course had an average GPA of 2.7 in their developmental math class. Their average GPA in MAT 121 and 151 was 1.6 and 1.8 respectively.
 - d. Two MAT 121 completers took a MAT 151 common assessment. The average score was 79%. The average score for all MAT 151 students was also 79%. (See MAT 151 course assessment results.)
4. Program and its components will foster student learning success
- a. Placement scores for MAT 055 were analyzed. There were 62 students for whom we had placement scores between the spring 2000 - fall 2003 semesters. If a minimum score of 12% on the arithmetic portion of the exam were implemented, 33% of the students that earned a grade below a C would not have been eligible to enroll and 21% of the students that earned a C or better would not have been eligible to enroll. If a minimum score of 6% on the algebra portion of the exam were implemented, 50% of the students that

- earned a grade below a C would not have been eligible to enroll and 26% of the students that earned a C or better would not have been eligible to enroll.
- b. Students that earned a grade of A had 84% attendance in labs. Students with Bs had 83% average lab attendance. Students with Cs had 74% lab attendance. Students with Ds had 79% lab attendance. Students with Fs had 50% lab attendance and students with Ws had 29% lab attendance. Students that scored at or above the grade equivalent for their class on the TABE test had an average of 82% lab attendance. Students that scored below the grade equivalent for their class on the TABE also had an average of 82% lab attendance.
 - c. Students who came in for advising had an average GPA of 2 in their developmental classes, scored at the 10th grade level on the TABE test, and had 70% lab attendance. Students that did not come in for advising had an average GPA of 2 in their developmental classes, scored at the 9.8 grade level on the TABE test, and had 66% lab attendance.
 - d. Data on students utilizing tutoring services was only gathered in the spring semester. Students who utilized tutoring services had an average GPA of 2.6 in their developmental classes, scored at the 8th grade level on the TABE test, and had 78% lab attendance. Students that did not utilize tutoring services had an average GPA of 1.6 in their developmental classes, scored at the 9th grade level on the TABE test, and had 57% lab attendance.
 - e. Data on students utilizing LEC services was only gathered in the spring semester. Students who utilized LEC services had an average GPA of 2.5 in their developmental classes and visited the LEC on average 20 times. The students that utilized the LEC services and also took the TABE test scored at the 8th grade level and visited the LEC an average of 30 times. The students that did not utilize LEC services had an average GPA of 2.6 in their developmental classes. The ones who did not utilize the LEC but did take the TABE test scored at the 9th grade level.
 - f. From Fall 2001- Spring 2004 semesters the percentage of students earning an A, B, C, D, F, W, or I was 22%, 19%, 15%, 8%, 12%, 22%, and 3% respectively. The percentage of students earning a C or better was 56%. In the 2004-2005 academic year the percentage of students earning those grades was 15%, 29%, 17%, 10%, 12%, 15%, and 2%. The percentage of students earning a C or better was 54%.
5. Program will retain students
- a. 64% of the students enrolled in a developmental course at the FTSE date completed the course.
 - b. By the summer of 2004 1.6% of students that initially enrolled in MAT 055 and 9.5% of students that initially enrolled in MAT 087 between the spring of 2000 - Fall 2003 semesters, ended up enrolling in MAT 151. By the end of fall 2004 15% of students that enrolled in a developmental reading class and 47.4% of students that enrolled in a developmental writing class during the fall 2003-Spring 2004 semesters, ended up enrolling in ENG 101.
 - c. The percentage from the Fall 2001- Spring 2004 semesters was 63%. The percentages for reading, writing and math were 84%, 86%, and 58% respectively for the 2004-2005 academic year. The percentages from 2001-2004 were 53%, 89%, and 60%.

- d. 50% of all students in developmental courses came in for advising. Of those students that came in for advising, 77% completed their developmental course. In contrast, 70% of the students that did not come in for advising completed their course.
 - e. Data on students utilizing tutoring services was only gathered in the spring semester. 18% of all students in developmental courses utilized tutoring services. Of those students that utilized tutoring services, 100% completed their developmental course. In contrast, 59% of the students that did not utilize tutoring services completed their course.
 - f. Data on students utilizing LEC services was only gathered in the spring semester. 35% of all students in developmental courses utilized LEC services. Of those students that utilized LEC services, 90% completed their developmental course. In contrast, 54% of the students that did not utilize LEC services completed their course.
6. Students and faculty will express satisfaction with the program and its components
- a. Student satisfaction with their class, lab, LEC services, and advising were 4.1, 3.5, 4.2 and 4.2 respectively on a 5 point scale.
 - b. IDEA survey results are only available at the time for the fall 2004 semester. The campus average score for the item "Excellence of Teacher" was 4.3 Campus. The average score by students in developmental classes was 4.1. The campus average score for the item "Excellence of Course" was 4.2 Campus. The average score by students in developmental classes was 3.9. The campus average score for the item "Improved Student Attitude" was 4.0 Campus. The average score by students in developmental classes was 3.9.
 - c. A survey was given to all faculty members teaching developmental classes at the end of the fall 2004 semester. The average response indicating overall satisfaction with the developmental education program was 3.4 on a five point scale.
 - d. IDEA survey results are only available at the time for the fall 2004 semester. Three faculty members indicated that "Changes in teaching approach" had a positive impact on the class and two faculty members indicated that it had no impact. No faculty indicated that "Student background" had a positive impact on the class; two indicated that it had no impact, and four indicated that it had a negative impact on the class. Two faculty members indicated that "Student enthusiasm and effort to learn" had a positive impact on the class while two indicated that it had no impact and one indicated that it had a negative impact.

Conclusions:

1. Implement the reading skills necessary to succeed in ENG 101 and college level courses
 - a. The percentage of students passing reading classes with a C or better was slightly above the national norm of 72% and much higher than the previous average of 46%. We assume that some of this is due to the fact that we stopped offering the courses over ITV during the 2004-2005 academic year. Previously all developmental reading courses were either offered as PLATO based courses or ITV courses. This change of medium may have had a bigger impact on student success than the other efforts we made in the developmental education area this past year.

- b. Completers did not read at the level we hoped they would as measured by the TABE test. Furthermore, there does not appear to be any correlation between course grades and TABE results. Anecdotal evidence suggests that students may not be taking the exam seriously since it does not impact their grade.
 - c. The number of developmental reading students in ENG 101 during the 2004-2005 academic year is very small so any conclusions need to be tentative and more data collected. It appears that students completing developmental reading are not meeting the national average of 88% earning a C or better in ENG 101. However, the courses do seem to be preparing students adequately for their successive English course.
 - e. The number of developmental reading students in ENG 101 during the 2004-2005 academic year is very small so any conclusions need to be tentative and more data collected. However, the one student for whom we did collect data did not perform at the same level as other students in ENG 101 that did not go through the developmental program. The program does not seem to be doing a good enough job of preparing students to succeed in ENG 101.
 2. Use the writing skills necessary to succeed in ENG 101 and college level courses
 - a. The percentage of students passing reading classes with a C or better was in line with the national norm of 79%. However, it was below the previous campus average of 86%. While the cause for this is unclear, anecdotal evidence suggests that it may be due to increased rigor in developmental writing classes.
 - b. The results were confusing since students completing the second developmental writing class did perform at the level deemed appropriate for that class but students in the lower level class performed even higher. As mentioned previously, there does not seem to be a correlation between TABE test results and course grades. These results may also support the assumption that students may not be taking the exam seriously. Another possibility is that the exam is not well aligned with the course curriculum.
 - c. It appears that students completing developmental reading are not meeting the national average of 88% earning a C or better in ENG 101. It also appears that the developmental writing courses may not be adequately preparing students to succeed in successive English courses.
 - d. The number of developmental writing students in ENG 101 during the 2004-2005 academic year is very small so any conclusions need to be tentative and more data collected. However, the students for whom we did collect data did not perform at the same level as other students in ENG 101 that did not go through the developmental program. The program does not seem to be doing a good enough job of preparing students to succeed in ENG 101.
 3. Apply the math skills necessary to succeed in MAT 151 or MAT 142
 - a. The percentage of developmental math students earning a C or better is well below the national norm of 46% and below the previous campus average of 51%. The cause is unclear.
 - b. While students in all the math classes performed at or above the grade level deemed appropriate for their class, the percentage of math students taking the TABE test was quite low in MAT 087. Furthermore, there did not appear to be improvement in student performance between MAT 087 and MAT 121. Again, there does not seem to be a correlation between TABE test results and course grades. This seems to support the concerns mentioned previously.

- c. It appears that students completing developmental math courses are not meeting the national average of 65% earning a C or better in college algebra courses. It also appears that MAT 055 and MAT 087 courses are not preparing students adequately to succeed in successive math courses.
 - d. The number of developmental writing students in MAT 151 during the 2004-2005 academic year is very small so any conclusions need to be tentative and more data collected. However, the students for whom we did collect data performed just as well as students that did not go through the developmental program. This information may indicate that if students make it through MAT 121 successfully, they are adequately prepared for MAT 151. However, these results may contradict the success rate data of students that initially enroll in MAT 055 and MAT 087 courses.
4. Program and its components will foster student learning success
- a. English cut-off scores were adjusted during the 2004-2005 academic year. Further analysis of these scores should take place next year. The low success rate of students that initially place into MAT 055 and MAT 087 indicates a possible need for an adjustment to placement scores or curricular changes in the lower level math course sequence.
 - b. There seems to be a positive correlation between lab attendance and student grades. However, there is an anomaly with students that earned a grade of D. It may be that lab attendance helped some students pass the course with a D rather than failing it with an F. There does not seem to be any correlation between lab attendance and performance on the TABE test.
 - c. There does not seem to be a correlation between students coming in for advising and student grades or TABE test scores. There may be a positive correlation between students coming in for advising and increased lab attendance. Any conclusions concerning advising are very preliminary because we were not able to fully implement our mandatory advising system during the spring semester.
 - d. There seems to be a positive correlation between the use of tutoring services and higher GPA and increased lab attendance. There does not seem to be a correlation with the use of tutoring services and TABE test scores.
 - e. There does not seem to be any correlation between the use of LEC services and student grades or TABE test scores.
 - f. The percentage of students earning a C or better was two percentage points lower than the previous campus average. There was a decrease in the percentage of students earning grades of A and B and an increase in students earning a D and C. However, the difference was so slight that it is hard to draw any solid conclusions. The total number of students involved was small and full implementation of our efforts was difficult due to the fact that this was the first time we were trying a variety of new initiatives and other barriers arose that were outside our control. Data should be collected for another year before drawing any firm conclusions.
5. Program will retain students
- a. The retention rate for the program seems to be in line with the national norm of 65%.
 - b. The percentage of students that initially take MAT 055 or MAT 087 and actually complete the sequence of developmental math courses and college algebra is terribly low. Curricular changes, support services, methodology

- changes, and changed cut scores all need to be looked at to address this. The completion rate for students in developmental English courses is based on a small number of students, especially in the area of reading so conclusions are difficult to make.
- c. There was little change overall in the percentage of students that completed their courses. The percentage actually dropped slightly in the area of writing and math but increased significantly in reading. This may be due to the fact that these courses are no longer offered via ITV. The low completion rate in math classes is a great concern.
 - d. There seems to be a slight correlation between students participating in advising and course completion.
 - e. There appears to be a very strong correlation between utilizing tutoring services and course completion. However, because there was such a small number of students that actually used tutoring services, this is still a preliminary conclusion.
 - f. There seems to be a positive correlation between utilizing LEC services and course completion.
6. Students and faculty will express satisfaction with the program and its components
- a. Students were most happy with their class, LEC services, and advising. They were slightly satisfied with the lab.
 - b. These results are very preliminary since they do not include spring 2005 data. However, student scores were near the campus average but slightly lower in each area. This may indicate a need for a more proactive approach in meeting their needs.
 - c. These results are also very preliminary since the survey was not administered in the spring 2005 semester and a more complete implementation of our efforts still needs to take place. However, initial faculty responses seem to be slightly favorable.
 - d. These results are very preliminary since they do not include spring 2005 data. Faculty members seem to have a slightly positive view of the developmental education efforts and student effort but are unhappy with student preparation for their courses.

Changes:

1. Continue with current efforts for another year to give the campus a chance to fully implement the program and evaluate the results
2. Investigate the TABE test to see how it aligns with CCC curriculum
3. Have instructors implement the TABE test in class rather than have lab assistants do it in the lab
4. Investigate using the computerized version of the TABE if the decision is made to continue with the exam
5. Investigate setting a low cut-off score for MAT 055
6. Investigate making curricular changes in the math curriculum. This could include a pre-algebra class, a pre-MAT 055 class, or some other change.
7. Keep all developmental courses off the ITV system
8. Promote the use of tutoring and the LEC as proven means for successfully completing classes.
9. Investigate the success rates of students in MAT 121 and compare the information with success rates for MAT 055 and MAT 087.

10. Increase academic rigor in developmental writing classes
11. Conduct student focus groups to try and determine what key factors may facilitate student success and retention in developmental math classes.
12. Research best practices in math and implement
13. Implement collaborative learning in all classes, especially math classes
14. Analyze English placement cut-off scores and student grades to see if there is a correlation between the new cut-off scores and student success
15. Fully implement the early warning system and mandatory advising component
16. Increase tutoring services
17. Increase, broaden, and strengthen LEC services
18. Fully involve faculty in designing and implementing new changes to secure their enthusiastic support for program changes

Budget Implications:

Funds need to be allocated to pay faculty to continue with the research and activities needed to implement the program. Funds also need to be allocated to purchase materials on best practices, tests, pay tutors and pay lab assistants.

Program Assessment Responses

1. What program strengths in relationship to student learning did you identify from your review?

Student support services such as advising, tutoring and usage of LEC services seem to positively impact student learning.

2. What, if any, concerns in relationship to student learning did you identify from your review?

Developmental English students do not seem to be adequately prepared for ENG 101. Developmental math students that begin the math sequence with MAT 055 and MAT 087 have a low likelihood of succeeding in the math sequence or in college algebra. Retention of developmental math students is a tremendous concern.

3. What specific steps will you take to address identified concerns or improve strengths?

See recommendations listed above

4. What overall improvement in your program has resulted from assessment efforts?

We now have a better idea of what students are learning and where our strengths and weaknesses are. Anecdotal evidence suggests that faculty members are increasing their expectations for students. There is much more consistent collaboration with student services personnel.

5. Based on this year's report, are you making changes or revisions in your program assessment plan for next year?

We may add a few components and change some assessment instruments.

6. Did your assessment information require a change in financial resources? If so, please attach.

Funds need to be allocated to pay faculty to continue with the research and activities needed to implement the program. Funds also need to be allocated to purchase materials on best practices, tests, pay tutors and pay lab assistants.

III. General Education Assessment

Academic Profile Test (ETS)

Jointly sponsored by the College Board and Educational Testing Service, the Academic Profile assesses academic skills acquired through undergraduate general education course. The Academic Profile measures not only college-level reading, writing, and critical thinking in the context of the humanities, social sciences and natural sciences but also mathematics.

CCC administered the Academic Profile Spring 2005. The CCC faculty decided to administer this test to all students taking writing intensive/critical thinking courses included in the Arizona General Education Curriculum (AGEC). This was the first year of administration. The results will be used as a baseline for annual comparison studies.

A complete listing of the writing intensive/critical thinking courses is as follows:

BIO	105	Environmental Biology	4.0
ECN	204	Macroeconomic Principles	3.0
ENG	272	Creative Writing: Nonfiction	3.0
HUM	241	Humanities I	3.0
HUM	242	Humanities II	3.0
POS	220	Arizona & National Constitution	3.0
PSY	250	Social Psychology	3.0
SOC	210	Sociology of Gender	3.0

Note: ENG 102 is a pre- or co-requisite for these courses.

There were a total of 108 CCC participants taking the Academic Profile Test in March 2005. The complete results of the Academic Profile Test are included in the report's appendix. The results were derived in the following categories (highlights are illustrated below):

- ❖ Skills Sub scores - Possible range of 100 to 130
 - Critical Thinking , (Mean score = 110.41)
 - Reading, (Mean score = 118.56)
 - Writing, (Mean score = 114.06)
 - Mathematics, (Mean score = 112.72)

- ❖ Context-Based Sub scores - Possible range of 100 to 130
 - Humanities, (Mean score = 114.33)
 - Social Sciences, (Mean score = 113.44)
 - Natural Sciences, (Mean score = 114.96)

The Total Score Possible Range is 400 to 500. CCC students had a mean of 442.78.

In addition, test scores were analyzed by the following categories:

- ❖ Age
The 40-49 cohort carried the highest total mean score of 459.25. However, had an insignificant sample size = 4.
- ❖ Core Requirements Completed
There was a score increase between those completing about 25%, 443.58, and those completing 100%, 446.27.
- ❖ Hours Worked
There was a significant increase between the unemployed students, 438.71, and those working more than 30 hours a week, 448.28.
- ❖ Enrollment Status
Part-time students scored higher, 445.59, than full-time students, 441.49.
- ❖ Ethnicity
Of the 2 significant sample sizes, whites scored higher, 445.68, than Native Americans, 436.91.
- ❖ Gender
Males, 447.18 outscored the females, 439.09.
- ❖ Grade Point Average
Those possessing a GPA 3.5-4 scored highest, 451.08, second highest score went to those with a 2-2.49, 443.73 (cohorts of significant size).
- ❖ Credit Hours Completed
Highest score, 444.64, was of those with 30-60 semester hours.
- ❖ Language
Highest scored cohort belonged to participants who are better in English, 443.16.
- ❖ Program
Transfer students scored the highest, 443.03.
- ❖ Hours Transferred
Students not transferring in credits scored highest, 445.86.
- ❖ Major
There were only 3 categories with significant sample size, Business Administration, Undecided, and Other Major, not listed. Undecided scored highest, 453.36.

CCC's Page Campus General Education Pilot Study

General Education Assessment Summary

Course: Selected courses that met the "Communication Skills" and "Diversity and Global Perspective" general education outcomes

Description of assessment activity:

Instructors assigned their students a project that met course outcomes and general education outcomes. The college collected the assignments and then selected a sample of the projects for evaluation. Faculty teams evaluated the projects using common rubrics and then the faculty scores were averaged to give a score for each project. The college compared student scores based on a) the number of total credit hours the students had earned and b) the number of general education credit hours the students had earned. (See General Education Assessment Plan)

Outcomes Measured:

COMMUNICATION SKILLS

1. Present ideas developed from diverse sources and points of view with consideration of target audience.
2. Demonstrate communication process through idea generation, organization, drafting, revision, editing, and presentation.
4. Construct logical, coherent, well-supported arguments.
5. Employ syntax, usage, grammar, punctuation, terminology, and spelling appropriate to academic discipline and the professional world.

DIVERSITY AND GLOBAL PERSPECTIVE

1. Recognize the diversity of humanity at the local, regional and global levels
2. Synthesize information about needs, concerns and contributions of different cultures within society
3. Identify the influence of cultural and ethnic backgrounds on individual and group attitudes and values.
4. Link cultural perspectives, practices, and interactions with the societal and physical environment from which they arose.
5. Explain the importance of cross-cultural influences on physical, cultural and spiritual heritage.
6. Relate and explain the connections between past and present events and/or issues.

Data:**Communication Skills**

- Work by students with 1-16 and 17-32 credit hours tended to meet or exceed the expected average rubric scores.
- Work by students with 33+ credit hours did not meet the expected average rubric score.
- Work by students with 17-32 credit hours tended to score higher on the rubric than work by students with 1-16 credit hours.
- Work by students with 33+ credit hours tended to score lower than work by students with 17-32 credit hours and often lower than work by students with 1-16 credit hours.
- The outcomes where students performed the worst were “2. Demonstrate communication process through idea generation, organization, drafting, revision, editing, and presentation.” and “5. Employ syntax, usage, grammar, punctuation, terminology, and spelling appropriate to academic discipline and the professional world.”

Diversity & Global Perspective

- Work by students with 1-16 credit hours tended to meet expected average rubric score for all outcomes except #5.
- Work by students with 17-32 and 33+ credit hours did not meet the expected average rubric scores.
- Work by students with 17-32 credit hours tended to score higher on the rubric than work by students with 1-16 credit hours.

- For some outcomes (67%) work by students with 33+ credit hours scored higher on the rubric than work by students with 17-32 credit hours but for other outcomes (33%) it scored lower.
- The outcome for which students performed the best was "6. Relate and explain the connections between past and present events and/or issues."

Conclusions:**Communication Skills**

- Students with 1-16 and 17-32 credit hours as a group seem to be performing as we would expect but the 33+ credit hours performed poorly.
- Students tended to score higher in the Communication Skills area than the Diversity and Global Perspective area
- Student learning seems to be occurring in this area up to a point.

Diversity & Global Perspective

- Only students in the 1-16 credit hour group performed as expected. Both of the other groups performed poorly
- There was very little progress made on any outcomes in this area except for one dealing with historical events. This leads to the conclusion that, while students are developing some sense of a historical perspective, there is little student learning is taking place in this area. It also raises the question of whether or not these topics are even addressed in many of our general education courses.

Changes:

- We need to identify reasons for the decline in performance in the group of students with 33+ credit hours. For example, do the students in that category represent a different demographic group than that represented in the other groups? If so could this help explain the disparity? Is there language, part vs. full-time status, or other issues affecting this?
- We need to re-evaluate the rubrics and hold with instructors using the rubrics.
- Rubrics should be disseminated to all instructors, learning assistants, and the LEC personnel working with students that are doing related work.
- Instructors need to place increased emphasis on the writing process and the appropriate usage of grammar, punctuation, etc. The campus should continue its efforts to increase writing assignments in classes and increase the usage of English learning assistants.
- The outcomes for Communication Skills and Diversity and Global perspective should be evaluated and the wording refined. The number of outcomes in each category should also be reduced to better articulate what it is that we want our students to learn in each area. Furthermore, the courses that are supposed to be meeting each set of outcomes should be reviewed. Some may be inappropriately identified.
- More attention needs to be given to addressing these outcomes in the appropriate general education classes.

Budget Implications:

- Hourly funds need to be allocated to pay associate faculty to participate in further general education activities.

Program Assessment Responses:

What program strengths in relationship to student learning did you identify from your review?

Progress in the area of Communication Skills seems to occur for students up to a point as shown by student scores in the 1-16 and 17-32 credit hour groupings.

Students seem to be gaining a historical perspective.

What, if any, concerns in relationship to student learning did you identify from your review?

Students that are completing their time with us do not seem to have learned either the Communication Skills or Diversity and Global Perspective Skills that we claim they should have mastered. Furthermore, attainment in the area of Diversity and Global Perspective is mediocre. This leads one to conclude that student learning in this area is very limited.

What specific steps will you take to address identified concerns or improve strengths?

Review our general education outcomes to refine and improve them.

Try to identify differences in the student groups in order to get an idea of causality for the limited learning.

Increase the attention paid to these outcomes in the appropriate general education courses.

What overall improvement in your program has resulted from assessment efforts?

Increase in academic rigor in the form of writing and research assignments.

Based on this year's report, are you making changes or revisions in your program assessment plan for next year?

We are participating in district wide efforts to review and revise the general education outcomes. We will also participate in any district wide general education assessment activities. Furthermore, we will follow-up with additional activities specific to the Page Campus.

Did your assessment information require a change in financial resources? If so, please attach.

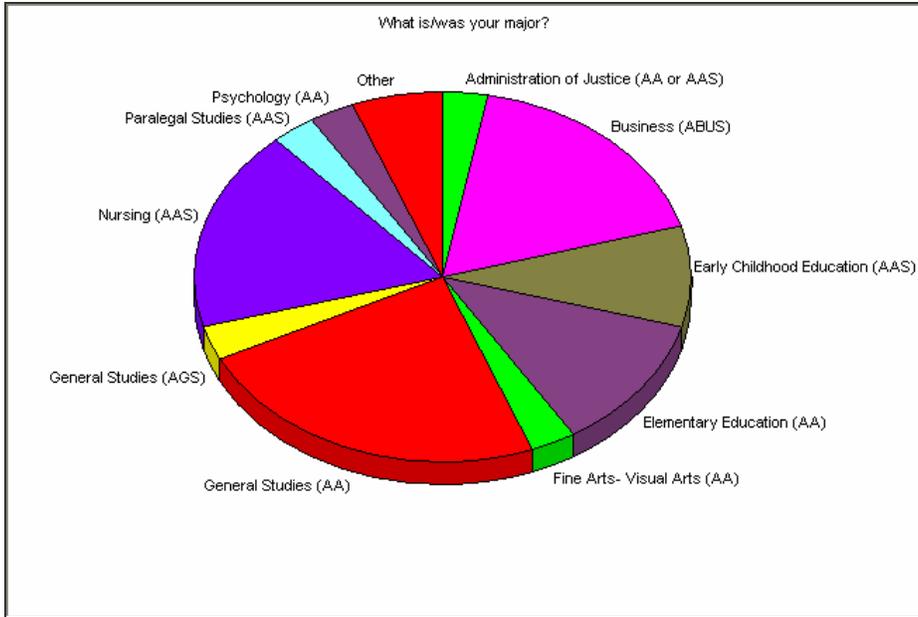
Hourly funds need to be allocated to pay associate faculty to participate in further general education activities.

Graduate Exit Survey

2004-2005 Graduates (107) were asked to complete the survey. 34 Students participated (34%). The following are questions and corresponding responses regarding General Education:

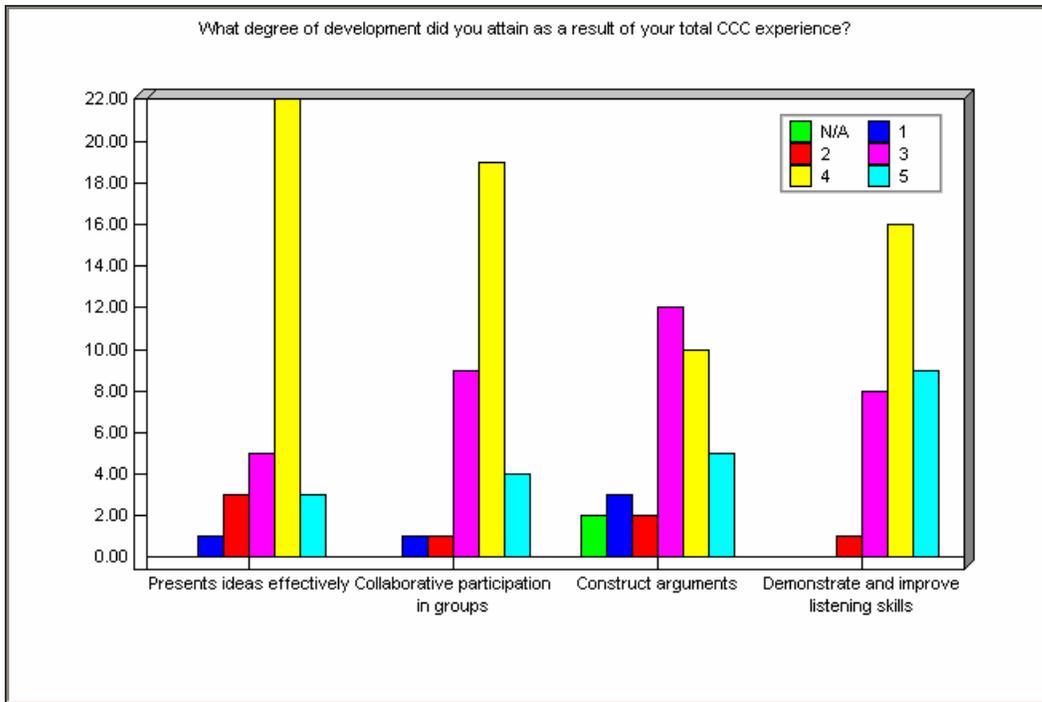
Q.1 What is/was your major?

Choice	Count	Percent Answering
Administration of Justice (AA or AAS)	1	2.9%
Alternative Energy Technology (AAS)	0	0.0%
Architectural Design Technology (AAS)	0	0.0%
Business (ABUS)	6	17.6%
Business Technologies (AAS)	0	0.0%
Carpentry Apprenticeship (AAS)	0	0.0%
Colorado Plateau Studies - Arts & Culture (AA)	0	0.0%
Colorado Plateau Studies - Business Emphasis (AA)	0	0.0%
Colorado Plateau Studies - Science Emphasis (AA)	0	0.0%
Computer Software Technology (AAS)	0	0.0%
Construction Management (AA)	0	0.0%
Construction Technology (AAS)	0	0.0%
Early Childhood Education (AAS)	3	8.8%
Elementary Education (AA)	4	11.8%
Environmental Science (AS)	0	0.0%
Fine Arts- Visual Arts (AA)	1	2.9%
Fire Science (AAS)	0	0.0%
General Studies (AA)	8	23.5%
General Studies (AS)	0	0.0%
General Studies (AGS)	1	2.9%
Hospitality Management (AAS)	0	0.0%
Hotel and Restaurant Management (AA)	0	0.0%
Medical Office Assistant (AAS)	0	0.0%
Network Engineering (AAS)	0	0.0%
Nursing (AAS)	6	17.6%
Office Information Systems (AAS)	0	0.0%
Paralegal Studies (AAS)	1	2.9%
Pre-Social Work (AA)	0	0.0%
Psychology (AA)	1	2.9%
Sheet Metal Apprenticeship (AAS)	0	0.0%
Sociology (AA)	0	0.0%
Vocational Technology Education (AA)	0	0.0%
Other	2	5.9%



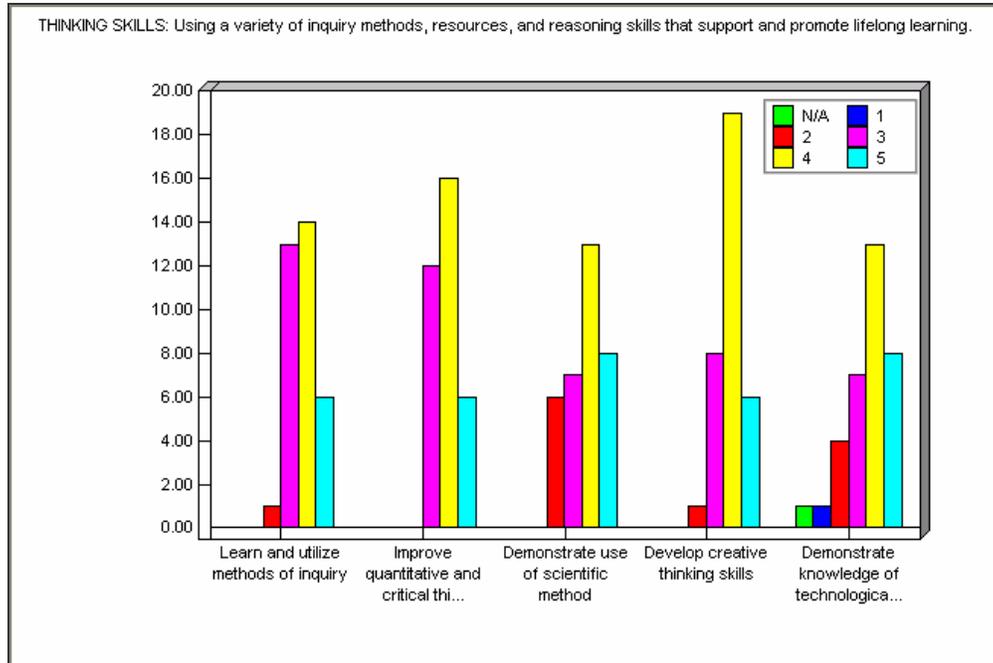
Q.5 The following is a list of various skills and abilities that you may have developed in your program. What degree of development did you attain as a result of your total Coconino Community College experience (classes, activities, contact with other students, faculty, etc.)? Please assign a rating on a scale from 1 to 5, where 1 represents “not developed at CCC” and 5 represents “developed to a large degree at CCC.”

Topic	N/A	1	2	3	4	5
Presents ideas effectively	0	1	3	5	22	3
Collaborative participation in groups	0	1	1	9	19	4
Construct arguments	2	3	2	12	10	5
Demonstrate and improve listening skills	0	0	1	8	16	9



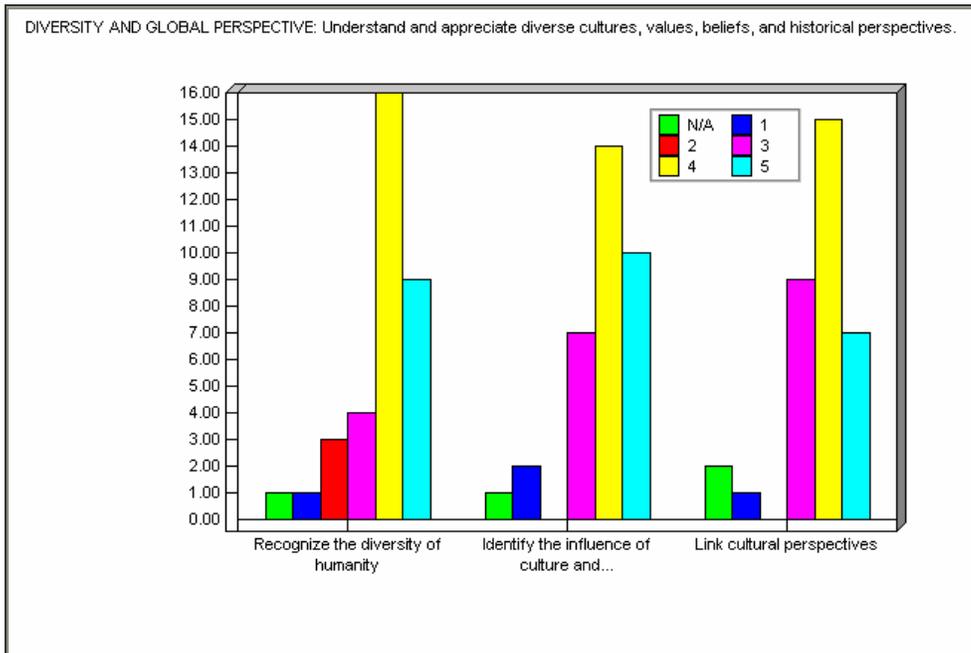
Q.5b THINKING SKILLS: Using a variety of inquiry methods, resources, and reasoning skills that support and promote lifelong learning.

Topic	N/A	1	2	3	4	5
Learn and utilize methods of inquiry	0	0	1	13	14	6
Improve quantitative and critical thinking	0	0	0	12	16	6
Demonstrate use of scientific method	0	0	6	7	13	8
Develop creative thinking skills	0	0	1	8	19	6
Demonstrate knowledge of technological application	1	1	4	7	13	8



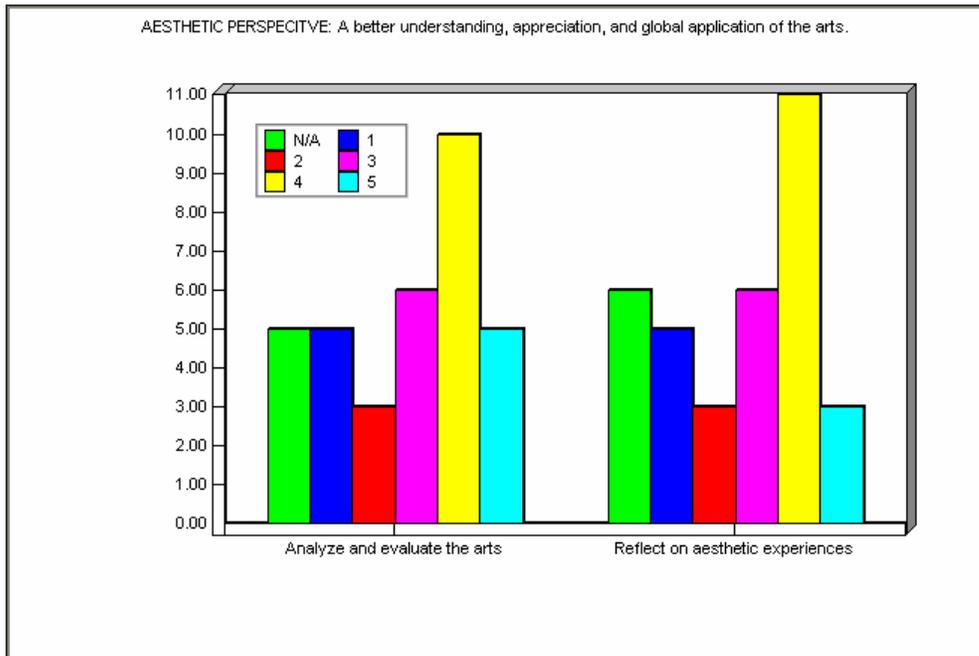
Q.5c DIVERSITY AND GLOBAL PERSPECTIVE: Understand and appreciate diverse cultures, values, beliefs, and historical perspectives.

Topic	N/A	1	2	3	4	5
Recognize the diversity of humanity	1	1	3	4	16	9
Identify the influence of culture and ethnicity	1	2	0	7	14	10
Link cultural perspectives	2	1	0	9	15	7



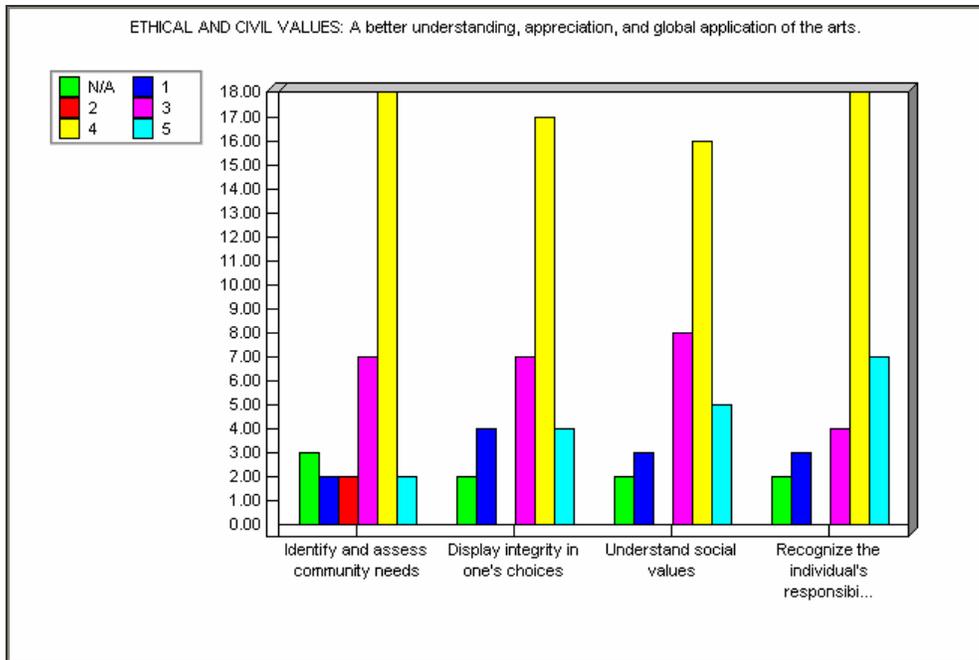
Q.5d AESTHETIC PERSPECTIVE: A better understanding, appreciation, and global application of the arts.

Topic	N/A	1	2	3	4	5
Analyze and evaluate the arts	5	5	3	6	10	5
Reflect on aesthetic experiences	6	5	3	6	11	3



Q.5e ETHICAL AND CIVIL VALUES: A better understanding, appreciation, and global application of the arts.

Topic	N/A	1	2	3	4	5
Identify and assess community needs	3	2	2	7	18	2
Display integrity in one's choices	2	4	0	7	17	4
Understand social values	2	3	0	8	16	5
Recognize the individual's responsibility	2	3	0	4	18	7



Finding:

The vast majority of Graduates believed that CCC had significantly contributed to their attainment of General Education learning outcomes.

IDEA Survey Longitudinal Study

CCC has been utilizing the IDEA Course Evaluation for more than three years. A longitudinal study was created to research whether there is a positive correlation between learning objectives indicated by faculty as essential or important and how students rated their progress in the given objective.

There were 19 General Education courses that were evaluated by IDEA over 3 consecutive spring semesters. The report summarizes student ratings of progress in classes where a given objective was chosen as Essential or Important by the instructor, using a 5 point scale where 1= low and 5=high.

The values given by students remained fairly consistent throughout the 3 years. However, the study highlighted the need to create a higher level of consistency among all faculty in a curricular area to recognize and focus on the same objectives as being essential or important.

IV. Transfer Education Assessment

CCC has two primary approaches for the collection of Transfer Education assessment data, the Arizona ASSIST system and a regional university survey with a secondary source of the newly created Alumni Survey. The regional university survey is a significant instrument which captures assessment data regarding CCC students transferring to Northern Arizona University named the **NAU/Coconino Community College Transfer Student Survey**.

Below is a description of the 2005 Survey:

NAU/Coconino Community College Transfer Student Survey Overview

Description

This survey was sent to students who recently transferred from Coconino Community College to Northern Arizona University. Student Services staff at CCC and NAU are attempting to determine how effective their efforts are to keep students informed and to make the transition process smooth and efficient.

Respondent Metrics

Respondents: 66
 Total Population: 682
 Sampling Error: 11.5 %; 95% confidence level
 First Response: 2/16/2005 08:03 PM
 Last Response: 3/1/2005 07:19 PM

For the purposes of this monitoring report, a representative sample of questions will be presented. Following are sample questions:

4. How did CCC assist you with the transfer process?

5. What could CCC have done to better assist you with the transfer process?

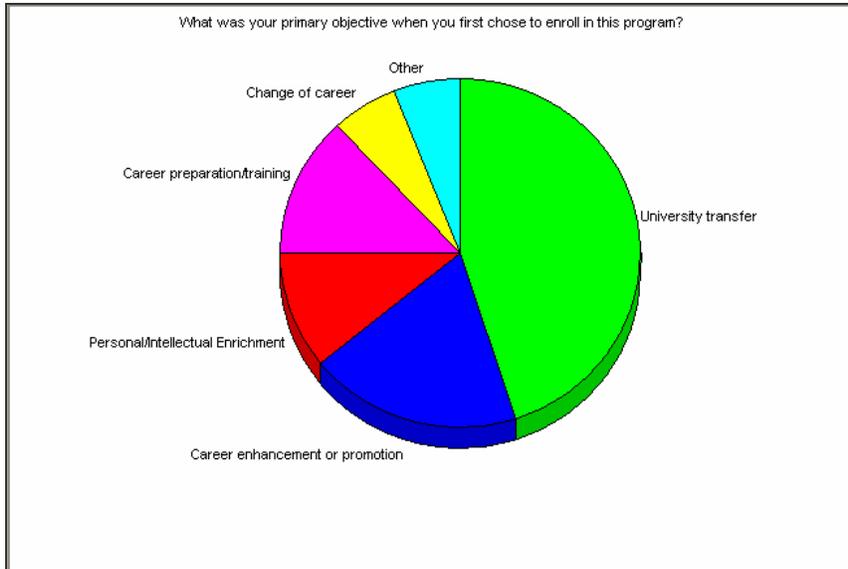
The results of this survey are shared with teaching faculty, academic and student affairs representatives for consideration of current services and possible changes to enhance student learning. As a result of internal and external feedback, CCC has invested in an institutional initiative to create an online degree audit system to assist in the advising and transfer process. The degree audit project is slated to be finished by December 2005.

Alumni Survey

The newly created Alumni Survey was administered winter 2005 to all 2002 and 2003 CCC graduates. For the purposes of this report, a representative sample of questions and results will be presented. The survey included participants from the 2002 (Fall, Spring and Summer) and 2003 (Fall, Spring, and Summer) Graduate Cohort. The report analyzed 53 responses out of 249 surveys for a 21% response rate. The following includes questions pertaining to our graduates who successfully transferred to a university.

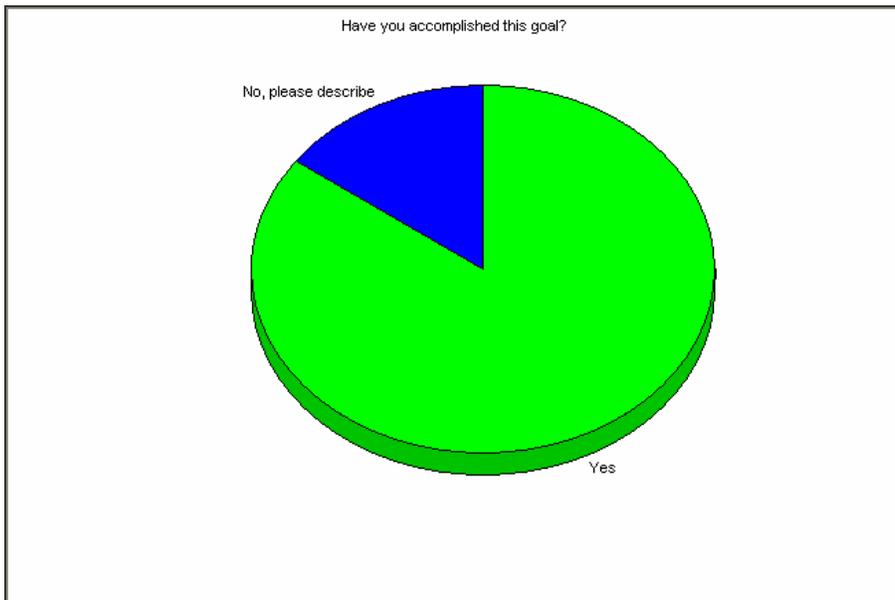
Q.4 What was your primary objective when you first chose to enroll in this program?

Choice	Count	Percent Answering
University transfer	24	45.3%
Career enhancement or promotion	10	18.9%
Personal/Intellectual Enrichment	6	11.3%
Career preparation/training	7	13.2%
Change of career	3	5.7%
Other	3	5.7%



Q.4a Have you accomplished this goal?

Choice	Count	Percent Answering
Yes	45	84.9%
No, please describe	8	15.1%



Arizona State System for Information on Student Transfer (ASSIST)

ASSIST History

The Arizona State System for Information on Student Transfer (ASSIST) was piloted in 1998 as a result of a sub-committee recommendation to the Arizona Community College Board as a means to comply with the many State and Federal reporting requirements pertaining to student transfer. ASSIST was fully implemented in 2000, not only giving the States' Institutions the ability comply with State and Federal reporting in a cost effective way, but also to track their students through the transfer process and assess transfer effectiveness and the effectiveness of the new transfer pathways. The information in the database is non-identifiable so students cannot be tracked individually thus ensuring confidentiality. Access to the database is limited to specific employees at each institution only after signing the proper nondisclosure agreements. Institutions can access only the records of students who once attended their institutions.

How is CCC currently using the Database?

CCC's has taken a multi-phase approach in the ASSIST data load process and in the use of ASSIST for reporting. Upon completion early in 2002, CCC's Phase I data load plan gave us the ability to report totals of students enrolled at one of the three State Universities with CCC transfer credits. Although this was a significant step in meeting some of our State and Federal reporting requirements, it was recognized very early that increasing the data loaded was imperative to further expand our reporting capabilities. In July of 2003 Phase II was completed which brought the ability to get a breakdown of the students by the number of credits that they transferred to the University as well as counts of Baccalaureate Degree Recipients from the University with transfer hours from CCC.

Although the current reporting ability is significant as an overall picture of our students who transfer, Phase III is currently underway to expand the data file to include the ability to track the success rate of specific populations of students once they leave CCC and enroll in either another Arizona community college or one of the three State universities. These populations will include but are not limited too Arizona General Education Core recipients, Carl Perkins and Student Right to Know cohorts, students with specific majors or who were enrolled in specific courses as well as specific ethnic, age or gender populations. We will be able to look at the number of credits these students are transferring in, the average GPA of the population and their success and completion rates. We will be able to see the types of degrees these students are receiving in what areas. This is by far the most significant expansion to the data loaded into ASSIST by CCC and will in turn greatly enhance the Assessment process we are currently embracing.

Enrollment

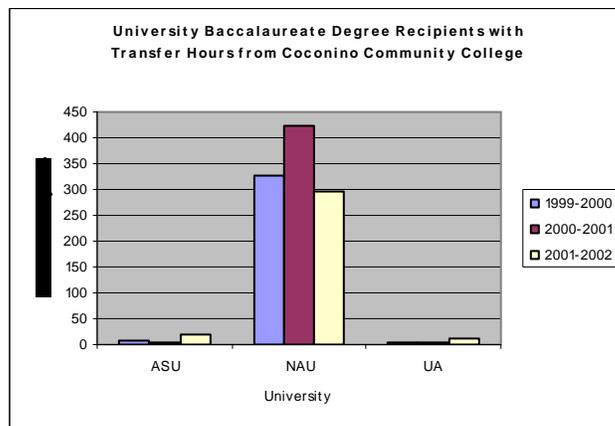
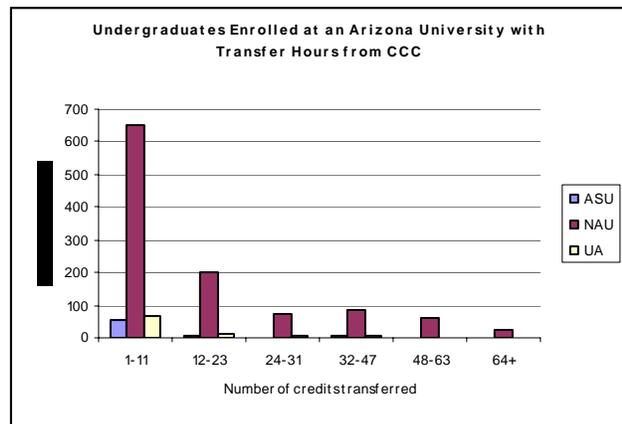
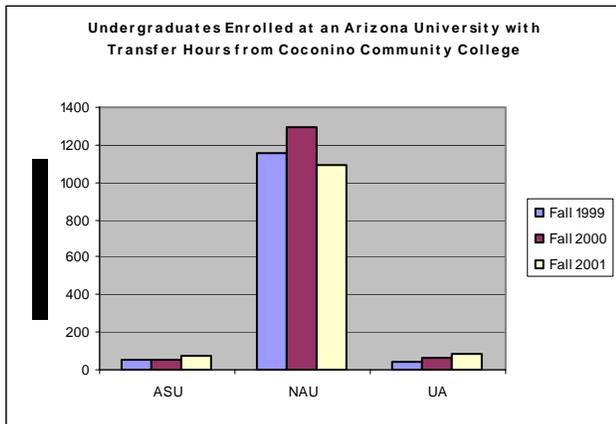
During the fall of 2000 there were 1,406¹ students enrolled at one of the three State Universities with transfer credits from CCC. 92% of those students were enrolled at NAU with 64% of them transferring in less than 12 credit hours. In the fall of 2001 the number of students enrolled at NAU with CCC transfer credits dropped by 15% from the fall 2000 number, but the number of students enrolled at ASU with CCC credits increased by 31% and the number at U of A increased by 23%. We are not finding less students than we did in previous years, we are just finding that they are leaving Northern Arizona and attending

¹ ASSIST Standard Report – CCC Undergraduates Enrolled at an Arizona University with Transfer Hours from CCC Fall 2000

institutions in Arizona’s southern climates. Future plans for tracking enrollment of CCC’s transfer out students include expanding our search to include other community colleges in hopes of locating larger populations. We will be looking at what types of programs those students were pursuing here and what they are completing at the other institution and at what rate.

Graduates

In 2000-2001 NAU granted 425² Baccalaureate degrees to students with transfer credits from CCC. The majority of those degrees 23% were awarded in Business with 19% awarded in Education. The number of degrees awarded to students with transfer credits from CCC dropped at NAU by 31% in 2001-2002; however, it increased at ASU by 83% and at U of A by 64%. Still, the majority of degrees awarded to CCC transfer outs at all three of the States universities were in Business or Education. Future plans for tracking information on graduates include tracking CCC Graduates by major categories and their success rates at the university. We will also be looking at specific cohorts of student such as AGECE completers, SRK cohorts, as well as students enrolled in specific courses or declaring specific majors. Again, we want to know what they were pursuing here at CCC and what they are completing at the other institution and what their success rate is.



² ASSIST Standard Report – CCC University Baccalaureate Degree Recipients with Transfer Hours from CCC AY 2000-2001

V. Arts and Sciences Program Assessment of Student Learning

2004-2005 Annual Review of Assessment Activities By Academic Department Chair Reports

Department: Fine Arts Submitted by: Alan Petersen Date: 6/29/2005

STUDENT OUTCOME #1. Title: Demonstration of Essential Skills in the Visual Arts

Data Collected:

97 students exhibited their work in the fall 2004 and spring 2005 Student Art Exhibits

What **conclusions** were reached based on the data collected?

Based on the evaluation of the artwork exhibited students are meeting the following Degree Outcomes established for the AA in Fine Arts. These are also desirable outcomes for any students who have taken a series of courses in the Art Department.

1. Drawing skills that include the ability to render forms in pictorial space using light and shade, describe variations in textures and surface qualities, and incorporate the Elements of Drawing in creating evocative images through the use of a variety of drawing media effectively.
2. Composition skills in two and three-dimensional media that indicate their knowledge of, and ability to use effectively, basic design principles including, balance and tension, rhythm and repetition, contrast, emphasis and subordination, unity and variety.
3. The ability to effectively use basic color schemes as well as the ability to use color as an expressive element. As might be expected the work of some students meets these outcomes more successfully than others.

Changes or revisions being made based on the data collected:

1. Try to get more students to exhibit their work.
2. Continue to emphasize the importance of basic drawing and design skills.

STUDENT OUTCOME #2. Title: Effectiveness of Visual Arts Program Objectives
What **data** were collected?

97 students exhibited their work in the fall 2004 and spring 2005 Student Art Exhibits

Conclusions reached based on the data collected:

Two of the objectives of the Fine Arts Program are:

The Fine Arts Program area provides courses for community members interested in developing their skills and knowledge in the creative arts and who aren't necessarily planning to transfer to another school.

The Fine Arts Program area provides regular opportunities for students to demonstrate their creative endeavors and skills for the public through exhibits and performances of student work.

Of the 97 students exhibiting their artwork perhaps half were degree seeking students. The balance was community members taking art courses for their personal interest. Many community members take art courses at CCC every semester, in some cases repeating courses in ceramics and painting many times. Both degree seeking and non-degree seeking students take advantage of the student art exhibits and the pottery sales held at the end of each semester to display their work. The art exhibits and pottery sales also bring in many other community members to view the work.

Changes or revisions are being made based on the data collected:

We would like to encourage more students to display their artwork and to continue to welcome more life-long learners to our campus and classes.

STUDENT OUTCOME #3. Title: Effectiveness of the CCC Dance Program

What **data** were collected?

Attendance at the fall dance performance was 250 and attendance at the spring performance at the Clifford E. White Theater on May 6 and 7 was 300. CCC dance students continue to develop their skills and their participation in extra-curricular learning opportunities and performances.

Conclusions were reached based on the data collected:

CCC Dance student Gina Shorten will be studying with the Alvin Ailey Company during their summer intensive workshop series in New York City. She auditioned for the spot following master classes given by the Ailey company while they were in Flagstaff in January. Gina plans to continue her study of dance at CCC in the fall.

CCC Dance student Rayni Lanford was offered a scholarship to the Summer Wind Dance Intensive at the University of Oklahoma following master classes by Director Mary Margaret Holt and Professor of Ballet, Steve Brule at CCC during May 2005. Rayni plans to continue her study of dance at CCC for the next two years, and then hopes to pursue a degree in dance at the University of Oklahoma.

In November 2004, 10 CCC students traveled to the University of Oklahoma for classes in ballet and modern dance, and also were treated to a performance by the Oklahoma Festival Ballet company, in residence at the University of Oklahoma. Students wrote research papers on "The Popular Balanchine," for credit. OFB was one of only a few ballet companies in the United States licensed to perform ballets by George Balanchine last year. CCC students attended a performance of "Concerto Barrocco" which is a classic staple from the Balanchine repertoire.

Changes or revisions are being made based on the data collected:

1. Continue to develop the CCC dance program
2. Complete the AS degree in Dance
3. Continue marketing the program.

STUDENT OUTCOME #4. Title: MUP 117 - Demonstrate the individual's role in preparation and performance of popular orchestral music

Data collected:

Observations of the CCC Orchestra in performance on December 16th and May 12th

Conclusions reached based on the data collected:

Members of the orchestra were well rehearsed and prepared for the performances and performed with a great deal of enthusiasm. The performance on May 12th was truly outstanding. The fall performance attracted 80 audience members and 170 attended the spring performance.

Changes or revisions are being made based on the data collected:

Try to develop the audience for the orchestra. It is woefully under-appreciated in the community as well as by the College.

Budget implications that affect curriculum, professional development, equipment, etc.:

Perhaps some money for advertising.

STUDENT OUTCOME #5. Title: MUP113 - Demonstrate the individual's role in preparation and performance of jazz ensemble music

Data collected:

Observations of the CCC Jazz Band in performance on December 7th, April 14th and 29th.

Conclusions reached based on the data collected:

Members of the band were definitely well prepared for the performances and performed with a great deal of energy and enthusiasm. Approximately 350 people attended the three performances.

Changes or revisions are being made based on the data collected:

We are going to try to have the band perform more often, perhaps around town.

Looking at the program assessment plan as a whole, please answer the following questions:

What program **strengths** in relationship to student learning did you identify from your review?

Because of relatively small class sizes (compared to Arizona state universities) and effective teaching methods and curriculum the work of our graduating students is of a high caliber based on criteria set by departmental faculty.

In our dance and music programs students are involved in a variety of performances that, in the case of dance, draw large audiences. This is excellent training for the students and demonstrates their mastery of course outcomes. It is also one of the most effective marketing vehicles the College has.

What **specific steps** will you take to address identified concerns or improve strengths?

We will continue to use our portfolio review system and to help students prepare for and meet the requirements for the portfolio. We will continue to offer students opportunities for extra-curricular learning and performances.

What **overall improvement** in your program has resulted from assessment efforts?

We can identify a more unified approach to the curriculum and a set of shared goals by faculty members.

Department: **Math** Submitted by: **Maxie Inigo** Date:
5/25/2005

MATH STUDENT OUTCOME #7 (Gain appreciation of mathematics and its uses):

What data were collected?

Surveys to assess student understanding of the appreciation of mathematics and its uses were administered in a subset of math classes representative of the larger set of 100- and 200-level courses offered at CCC. Survey questions investigated student math epistemology, attitude toward math, and student perspective toward the role of math in society. Surveys were administered in the Fall 04 and Spring 05 semesters. Pre-test data on 470 students and post-test data on 275 students in 20 classes were collected and analyzed. Analysis variables included course and section, student gender, age, ethnicity, enrollment status, academic goal, and obligation load.

What conclusions were reached based on the data collected?

High variability exists in our success at helping students develop their epistemological skills in math. Of the 20 math classes surveyed, 3 demonstrated appreciable (+5% or more) gains, 14 classes demonstrated no appreciable gain or loss, and 3 classes demonstrated an appreciable (-5% or more) loss. At the extremes of the distribution, one class achieved at 11% gain in; another class achieved a 10% loss. Possible sources of variability in this category include student characteristics such as academic background and intellectual maturity, instructor characteristics such as emphasis and pedagogical technique, and course characteristics such as curricular goals, materials, and activities.

Among all courses, the 20-25 year old age group saw the most appreciable (5%) gains in math epistemology. Students who identified themselves as Hispanics gained over 8%, whereas students who identified themselves as African Americans lost over 5%. Students who described their academic goal as the pursuit of a technical certification gained a surprising 32% in math epistemology, but these data should be interpreted cautiously, because the size of this group was too small (n=9) to make meaningful conclusions. Students who described their obligation loads as "part time student, part time non-academic activity" and as "other" regressed in their understanding of math epistemology an average of 7%.

Variability among student attitudes toward math and its relevance was relatively low. Of the 20 math classes surveyed, 4 demonstrated appreciable (+5% or more) gains, 15 classes demonstrated no appreciable gain or loss, and only 1 class demonstrated an appreciable (-%5 or more) loss. At the extremes of the distribution, one class achieved at 13% gain; another class achieved an 11% loss.

Among all courses, few demographic groups stood out as achieving exceptional gains or losses in attitude toward math. Two notable exceptions exist. First, students who described their academic goal as the pursuit of a technical certification gained 20%. As above, these data need to be interpreted cautiously, because the size of this group was prohibitively small. The second instance where groups deviated significantly from the mean in math appreciation was with students who described their obligation loads as "part time student, part time non-academic activity" and as "other." Both groups gained in their math appreciation by about 6%.

What changes or revisions are being made based on the data collected?

We had a math symposium where all faculty were asked to participate to share ideas regarding increasing students appreciation for the subject. It is planned that these will occur twice per year.

Are there budget implications that affect curriculum, professional development, equipment, etc.?

Yes, I would like to pay associate faculty for their participation in assessment discussions and symposiums. This will cost approximately \$3000 per year.

STUDENT OUTCOME #8: Interpret and communicate mathematics.

What data were collected?

In the fall 2003, a pre and post test were given to all sections of MAT 151; College Algebra. Data was collected on each math program outcome and several general education outcomes. Two questions on the pre and post test correlated to outcome number 8.

What conclusions were reached based on the data collected?

The pretest indicated that approximately 71% of the students achieved this outcome whereas the post test showed 58% of students achieved this outcome.

What changes or revisions are being made based on the data collected?

In the spring of 2005, a symposium was held for math instructors to address these results. The minutes are attached.

Are there budget implications that affect curriculum, professional development, equipment, etc.?

I would like to pay associate faculty to participate in four assessment meetings at a cost of \$3000.

1. What program strengths in relationship to student learning did you identify from your review?

Considerable variability exists among courses and, to a lesser extent, demographic groups relative to student achievement in the appreciation of mathematics and its uses. Within this variability is evidence that student participation in mathematics courses at CCC has a positive effect on students. Some courses are particularly effective at improving students' math epistemologies. A number of courses are positively changing students' attitudes toward the subject and appreciation of its relevance. In math, females also show slight but consistently higher gains than males. And the data seem to suggest that students who identify themselves as African Americans are being particularly well served in both science and math courses at CCC. In summary, the data that are currently available have identified numerous cases where student outcomes are consistent with our programmatic goals.

2. What, if any, concerns in relationship to student learning did you identify from your review?

Within the findings described above, several examples of student change in unexpected and undesirable directions are evident. Despite strong gains in some courses, evidence suggests a slight overall regression in math epistemology. Students who describe themselves as white/Caucasian and students who lead active lives regarding both academic and non-academic activities seem to succeed, but some non-traditional groups in some instances do not seem to fare as well. While the data reveal numerous cases of success, they also reveal some cases where improvement is desired.

Two other possible points of interest have become evident from our current research. One is that enrollment of some groups such as African Americans is disturbingly low in both science and math. Second, the number of students who participate in our data collection efforts at the end of the semester is significantly lower than the number of students who participate at the beginning of the semester. This might suggest that attrition is high. This matter deserves further investigation.

3. What specific steps will you take to address identified concerns or improve strengths?

Data from the last two years is currently being analyzed to identify trends in successes and failures. Hypotheses that explain ongoing successes and failures that are revealed will be identified and evaluated. Data collection will continue for the next year. Current findings will be disseminated among the science and math faculty for their consideration and advice. Dissemination will occur in the summer of 2005. Comments from faculty will be solicited; both immediate and long-term intervention strategies will be discussed and implemented. Immediate strategies could include idea sharing among faculty for the purpose of spreading successful curricular and pedagogical ideas. An idea sharing meeting will be held in August 2005, just before the commencement of the fall semester.

Long-term strategies include a professional development “intervention,” during which innovative pedagogical strategies will be discussed and practiced, and curricula will be revised. The intervention will be a collaborative experience. Faculty from other departments at CCC, as well as faculty from other colleges, universities, and high schools in central and northern Arizona will be invited. Faculty from CCC, Arizona State University and Mesa Community College have already expressed interest in participating and helping facilitate the event. Outside funding for the event will be obtained via a grant, which is currently being researched and written. Interventions similar to the one envisioned have yielded positive results at other institutions, and are strongly encouraged by the U.S. Department of Education, as well as national science and math education advocacy organizations.

4. What overall improvement in your program has resulted from assessment efforts?

Introspection and self-assessment have encouraged the science and math department to re-evaluate and pursue more seriously its goals. The monitoring of our progress has helped us identify both strengths and weaknesses that we would like to amplify or work to eliminate. Research results provide a framework that will allow us to map and measure progress toward our objectives of serving students and the community more effectively.

5. Based on this year’s report, are you making changes or revisions in your program assessment plan for next year?

We will continue to administer the pre and post test for one more year. As mentioned above, the plan is to identify trends and disseminate assessment findings. This will enable us to determine if changes will be necessary for next year. Additionally, In FY 2006, we will administer the modified pre and post test for MAT 151 to be scored via scantron.

6. Did your assessment information require a change in financial resources? If so, please attach.

Yes our assessment activities required transferring funds between accounts. Russ Benford was hired to analyze this year’s data and train faculty to do the data analysis. This was accomplished.

Department: Science Submitted by: Maxie Inigo
Date: 5/25/2005

**After you have completed your program assessment plan, please list the student outcomes, the data collected, the conclusion reached and changes or revisions made as a result:
SCIENCE STUDENT OUTCOME #2 (Understand and utilize the scientific method):**

What data were collected?

Surveys to assess student understanding of the scientific method were administered in all science classes in the Fall 04 and Spring 05 semesters. Pre-test data on 526 students and post-test data on 347 students in 25 classes were collected and analyzed.

Analysis variables included course and section, student gender, age, ethnicity, enrollment status (i.e. if the course required or optional), academic goal, and obligation load. (i.e. if the student is full or part time, and if the student has concurrent non-academic obligations such as parenting or employment that are full or part time).

What conclusions were reached based on the data collected?

Significant variability exists in our success at helping students understand science epistemology and understanding the scientific method. Of the 25 science classes surveyed, 5 demonstrated appreciable (+5% or more) gains, 14 classes demonstrated no appreciable gain or loss, and 6 classes demonstrated an appreciable (-%5 or more) loss. At the extremes of the distribution, one class achieved at 17% gain in epistemology, and another class achieved a 36% loss. Possible sources of this variability include student characteristics such as academic background and intellectual maturity, instructor characteristics such as emphasis and pedagogical technique, and course characteristics such as curricular goals, materials, and activities.

More consistency in epistemological gains exists among other variables investigated. Comparable success was demonstrated among groups that designate gender, age, ethnicity, course status, academic goal, and obligation load. There were two exceptions to this homogeneity of results. First, students who identified themselves as African American achieved a 19% gain in this category. These results must be interpreted cautiously, however, since the number of students in this group (n=5) is too small to provide meaningful results. The second exception is among students who identified with the "other" obligation load group. These students achieved a 16% gain in this category. These results must also be interpreted cautiously, because the number of students in this group is also too small (n=3) to provide meaningful results.

What changes or revisions are being made based on the data collected?

Next year, regular meeting will take place among faculty to determine our next course of action.

Are there budget implications that affect curriculum, professional development, equipment, etc.?

I would like to pay associate faculty to participate in four assessment meetings at a cost of \$2000.

SCIENCE STUDENT OUTCOME #6 (Utilize logical thinking processes in solving problems):

What data were collected?

Surveys to assess student logical thinking skills were administered in all science classes in the Fall 04 and Spring 05 semesters. Pre-test data on 526 students and post-test data on 347 students in 25 classes were collected and analyzed. Analysis variables included course and section, student gender, age, ethnicity, enrollment status, academic goal, and obligation load.

What conclusions were reached based on the data collected?

Wide variability also exists in our success at helping students develop logico-mathematical skills important in science. Of the 25 science classes surveyed, 10 demonstrated appreciable (+5% or more) gains, 12 classes demonstrated no appreciable gain or loss, and 3 classes demonstrated an appreciable (-%5 or more) loss. At the extremes of the distribution, one class achieved at 17% gain in generalizable reasoning skills, and another class achieved a 12% loss. Possible sources of variability in this category include student characteristics such as preparedness and study skills, instructor characteristics such as emphasis and pedagogical technique, and course characteristics such as curricular goals, materials, and activities.

Appreciable gains in reasoning skills occurred among our youngest and oldest students. Students who described themselves as 18 or younger achieved an 8% gain, and students who described themselves as 41 or older achieved a 6% gain. African American students achieved an astounding 42% gain, but, as before, the small size of this group should be considered. Students who were taking science classes for personal enrichment gained 15% in this category, while students who were taking science courses in pursuit of a technical certification lost 6% in this category. Students who identified with the "other" obligation load group lost 33% in this category, but sample size considerations apply.

What changes or revisions are being made based on the data collected?

Next year, regular meeting will take place among faculty to determine our next course of action.

Are there budget implications that affect curriculum, professional development, equipment, etc.?

I would like to pay associate faculty to participate in four assessment meetings at a cost of \$2000.

SCIENCE STUDENT OUTCOME #8 (Recognize the relationship between science, technology, and society):

What data were collected?

Surveys to assess student understanding of the relationship between science, technology, and society were administered in all science classes in the Fall 04 and Spring 05 semesters. Pre-test data on 526 students and post-test data on 347 students in 25 classes were collected and analyzed. Analysis variables included course and section, student gender, age, ethnicity, enrollment status, academic goal, and obligation load.

What conclusions were reached based on the data collected?

Moderate variability exists in our success at helping students develop recognize the relationships among science, technology, and society. Of the 25 science classes surveyed, 4 demonstrated appreciable (+5% or more) gains, 17 classes demonstrated no appreciable gain or loss, and 4 classes demonstrated an appreciable (-%5 or more) loss. The distribution of gains in student perception was almost perfectly normal around a mean barely greater than zero. At the extremes of the distribution, one class achieved at 11% gain in recognizing relationships among science, technology, and society, and another class achieved an 11% loss. Possible sources of variability in this category include student characteristics such as culture and world-view, instructor characteristics such as emphasis and pedagogical technique, and course characteristics such as curricular goals, materials, and activities.

African-American students seem to have gained most in recognizing the relationships among science, technology, and society. This group gained 38% in this outcome, but the sample size considerations discussed above apply. Students who placed themselves in the "other" ethnic group gained 12% in this measure; students who identified themselves as Hispanic lost 7%. Students who were science courses in pursuit of a technical certification lost 11% in this category, and students who identified with the "other" obligation load group lost 9% in this category. Again, sample size considerations apply to the "other" obligation load group.

What changes or revisions are being made based on the data collected?

Next year, regular meeting will take place among faculty to determine our next course of action.

Are there budget implications that affect curriculum, professional development, equipment, etc.?

I would like to pay associate faculty to participate in four assessment meetings at a cost of \$2000.

What program strengths in relationship to student learning did you identify from your review?

Considerable variability exists among courses and, to a lesser extent, demographic groups relative to student achievement in understanding the scientific method; use of logic to solve problems; and recognition of the relationship among science, technology, and society. Within this variability is evidence that student participation in science courses at CCC has a positive effect on students. Participation in science courses is, on average, improving students' logical thinking skills. Some courses are particularly effective at improving students' science epistemologies. A number of courses are positively changing students' attitudes toward the subject and appreciation of its relevance. And the data seem to suggest that students who identify themselves as African Americans are being particularly well served in science courses at CCC. In summary, the data that are currently available have identified numerous cases where student outcomes are consistent with our programmatic goals.

What, if any, concerns in relationship to student learning did you identify from your review?

Within the findings described above, several examples of student change in unexpected and undesirable directions are evident. Despite strong gains in some courses, evidence suggests a slight overall regression in both science epistemology and appreciation. Students who describe themselves as white/Caucasian and students who lead active lives regarding both academic and non-academic activities seem to succeed, but some non-traditional groups in some instances do not seem to fare as well. While the data reveal numerous cases of success, they also reveal some cases where improvement is desired.

Two other possible points of interest have become evident from our current research. One is that enrollment of some groups such as African Americans is disturbingly low in both science and math. Second, the number of students who participate in our data collection efforts at the end of the semester is significantly lower than the number of students who participate at the beginning of the semester. This might suggest that attrition is high. This matter deserves further investigation.

What specific steps will you take to address identified concerns or improve strengths?

Data from the last two years is currently being analyzed to identify trends in successes and failures. Hypotheses that explain ongoing successes and failures that are revealed will be identified and evaluated. Data collection will continue for the next year. Current findings will be disseminated among the science and math faculty for their consideration and advice. Dissemination will occur in the summer of 2005. Comments from faculty will be solicited; both immediate and long-term intervention strategies will be discussed and implemented. Immediate strategies could include idea sharing among faculty for the purpose of spreading successful curricular and pedagogical ideas. An idea sharing meeting will be held in August 2005, just before the commencement of the fall semester. Long-term strategies include a professional development "intervention," during which innovative pedagogical strategies will be discussed and practiced, and curricula will be revised. The intervention will be a collaborative experience. Faculty from other departments at CCC, as well as faculty from other colleges, universities, and high schools in central and northern Arizona will be invited. Faculty from CCC, Arizona State University and Mesa Community College have already expressed interest in participating and helping facilitate the event. Outside funding for the event will be obtained via a grant, which is currently being researched and written. Interventions similar to the one envisioned have yielded positive results at other institutions, and are strongly encouraged by the U.S. Department of Education, as well as national science and math education advocacy organizations.

What overall improvement in your program has resulted from assessment efforts?

Introspection and self-assessment have encouraged the science and math department to re-evaluate and pursue more seriously its goals. The monitoring of our progress has helped us identify both strengths and weaknesses that we would like to amplify or work to eliminate. Research results provide a framework that will allow us to map and

measure progress toward our objectives of serving students and the community more effectively.

Based on this year's report, are you making changes or revisions in your program assessment plan for next year?

We will continue to administer the pre and post test for one more year. Additionally, as mentioned above, the plan is to identify trends and disseminate assessment findings. This will enable us to determine if changes will be necessary for next year.

Did your assessment information require a change in financial resources? If so, please attach.

Yes our assessment activities required transferring funds between accounts. Russ Benford was hired to analyze this year's data and train faculty to do the data analysis. This was accomplished.

Department: Languages Date: May 18, 2005
Submitted by: Barbara Eickmeyer and Charles Brown

This report provides assessment results on the following program outcomes for foreign language courses at Coconino Community College during the 2004-05 academic year.

Languages Department Assessment Outcomes 2004-05

STUDENT OUTCOME #1: Learn and Retain Information essential to a broad knowledge of the discipline.

STUDENT OUTCOME #2: Meet or exceed the learning outcomes as identified by the Languages ATF for each level (101, 102, 201, and 202).

STUDENT OUTCOME #3: Appreciate the usefulness of knowing another language.

STUDENT OUTCOME #4: Acquire specific skills in the target language for the purpose of improving job performance.

STUDENT OUTCOME #1: Learn and Retain Information essential to a broad knowledge of the discipline.

WHAT DATA WERE COLLECTED?

Minnesota Language Proficiency Assessment (MLPA) Results of student assessments using the Reading components of the Spanish computerized exam, conducted in fall '04 and spring '05. Also this year we piloted the MLPA Listening levels 1 and 2. The following **target scores** for minimum competency were:

- Reading Level 1 - 24
- Reading Level 2 - 22
- Listening Level 1 - 22
- Listening Level 2 - 20

Student Evaluations of teachers: five IDEA course evaluations were randomly selected. We looked at items 24, 28, and 40

Item 24 Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course

Item 28 Developing skill in expressing myself orally or in writing

Item 40 As a result of taking this course I have more positive feelings about...

WHAT CONCLUSIONS WERE REACHED BASED ON THE DATA COLLECTED?

MLPA RESULTS: on average, students scored above the target scores, with an overall, five class median scores

Reading Level 1 - 27.7

Reading Level 2 - 23.5

Listening Level 1 - 23.8

Listening Level 2 - 23

Limitations: Overall, the Listening exam was more difficult for students; they reported that the language was too fast or they couldn't distinguish the voices of speakers (example two male voices but not sure of the speaker's name). Some of the students who scored higher on both Listening exams had experience using or hearing Spanish spoken in the home OR had studied abroad. Students who took the Listening exam level 2 reported difficulty in using the computer / headset volume control and this caused anxiety which may have skewed their results.

EVALUATIONS:

On a scale of 1-5 (highest) average, students reported

Item 24 - 4

Item 28 - 3.88

Item 40 - 4.1

WHAT CHANGES OR REVISIONS ARE BEING MADE BASED ON THE DATA COLLECTED?

The MLPA exam is a good tool; however more teacher training is needed on how to conduct the exam.

Students need to be prepared for a computerized assessment prior to this activity.

We will use the MLPA as a PRE/POST exam in at least one section of Spanish next year.

The EVALUATION information demonstrates that our students are satisfied overall with the instruction and content of the classroom. We will continue to improve opportunities for oral and written expression by training instructors or changing curriculum as needed.

ARE THERE BUDGET IMPLICATIONS THAT AFFECT CURRICULUM, PROFESSIONAL DEVELOPMENT, EQUIPMENT, ETC.?

Possibly professional development for teachers.

STUDENT OUTCOME #2: Meet or exceed the learning outcomes as identified by the Languages ATF for each level (101, 102, 201, and 202).

WHAT DATA WERE COLLECTED?

Student examination results from the Minnesota Language Proficiency Assessment (MLPA) computerized exam modules for READING and LISTENING Spanish, Level 1 (102 cohort) and Level 2 (202 cohort), end of semester, fall '04, and spring '05.

READING LEVEL 1 Students who complete the exam with a score of 27 or better will have met national (ACTFL), as well as state (LATF) standards for language proficiency, as demonstrated on a normed exam.

READING LEVEL 2 Students who complete the exam with a score of 24 or better will have met national (ACTFL), as well as state (LATF) standards for language proficiency, as demonstrated on a normed exam.

LISTENING LEVEL 1 Students who complete the exam with a score of 22 or better will have met national (ACTFL), as well as state (LATF) standards for language proficiency, as demonstrated on a normed exam.

LISTENING LEVEL 2 Students who complete the exam with a score of 20 or better will have met national (ACTFL), as well as state (LATF) standards for language proficiency, as demonstrated on a normed exam.

WHAT CONCLUSIONS WERE REACHED BASED ON THE DATA COLLECTED?

MLPA - Overall, 65% of our students performed above the national and state standards for language proficiency.

WHAT CHANGES OR REVISIONS ARE BEING MADE BASED ON THE DATA COLLECTED?

The MLPA exam is a good tool; however more teacher training is needed on how to conduct the exam.

Students need to be prepared for a computerized assessment prior to this activity.

We will use the MLPA as a PRE/POST exam in at least one section of Spanish next year.

ARE THERE BUDGET IMPLICATIONS THAT AFFECT CURRICULUM, PROFESSIONAL DEVELOPMENT, EQUIPMENT, ETC.?

At this time, there are no budget implications outside of the department's current budgetary expectations.

STUDENT OUTCOME #3: Appreciate the usefulness of knowing another language.

WHAT DATA WERE COLLECTED?

Student Evaluations of teachers: five IDEA course evaluations were randomly selected. We looked at items 24, 28, and 40

Item 24 Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course

Item 28 Developing skill in expressing myself orally or in writing

Item 40 As a result of taking this course I have more positive feelings about...

WHAT CONCLUSIONS WERE REACHED BASED ON THE DATA COLLECTED?

On a scale of 1-5 (highest) average, students reported
Item 24 - 4
Item 28 - 3.88
Item 40 - 4.1

WHAT CHANGES OR REVISIONS ARE BEING MADE BASED ON THE DATA COLLECTED?

We feel it is important to change the focus of our assessment plan to more concrete evaluation of student achievement. We like that students appreciate the usefulness of knowing another language; however it is not necessary to measure this outcome further.

STUDENT OUTCOME #4: Acquire specific skills in the target language for the purpose of improving job performance.

WHAT DATA WERE COLLECTED?

Student Evaluations of teachers: five IDEA course evaluations were randomly selected. For this question we looked at item 21) Gaining factual knowledge (terminology, classifications)

SPA 212 Intro to Translation & Interpretation - A medical interpreting course (result of a contract training arrangement between CCC and Flagstaff Medical Center) / class survey (7 surveys) reporting on course curriculum and instruction.

WHAT CONCLUSIONS WERE REACHED BASED ON THE DATA COLLECTED?

IDEA survey - Item 21 average response was 4.16 (on a scale of 5).

SPA 212 class - Overall it was a highly successful class. Seven respondents reported that curriculum and instruction exceeded their expectations.

Comments included:

Needs to be either whole semester or half a semester (contact time needs to be longer).

Great references and resources.

Excellent course materials

WHAT CHANGES OR REVISIONS ARE BEING MADE BASED ON THE DATA COLLECTED?

The office of Continuing Education worked in collaboration with the Languages dept. to set up this course. As a result, CCC will be creating a Medical Interpreter certificate.

ARE THERE BUDGET IMPLICATIONS THAT AFFECT CURRICULUM, PROFESSIONAL DEVELOPMENT, EQUIPMENT, ETC.?

Department and /or professional development funding may be required for personnel training as needed.

Looking at the program assessment plan as a whole, please answer the following questions:

What program strengths in relationship to student learning did you identify from your review?

Overall, the Languages program has improved as a result of assessment and college commitment to program growth. This year another Spanish position was added to the department and this DIRECTLY impacted student assessment activities and results. The MLPA continues to be a good way to find out how our students are progressing.

What, if any, concerns in relationship to student learning did you identify from your review?

We found that our students need more practice in reading and listening [to] the language. Again, we found that our students must have more exposure to technology and use the language in an environment that promotes technological aptitude. We need to make language learning more “modern” and help students to acquire the language through different modalities (i.e., television, telephone, internet, computerized activities) that reflect how the language is used today.

What specific steps will you take to address identified concerns or improve strengths?

We will:

- Encourage instructors to promote the Learning Center and assistance available.
- Create computerized learning modules for use in the lab or online.
- Use authentic assessments in the classroom, using as much technology as possible.

What overall improvement in your program has resulted from assessment efforts?

Retention increased as a result of more full time faculty in the classroom, with consistency of instruction geared towards the curriculum and [in the case of Spanish] year-end assessment. Students knew how and why they were being tested and their performance demonstrated a positive result on the MLPA reading and listening exams.

Based on this year’s report, are you making changes or revisions in your program assessment plan for next year?

Yes. We will implement the MLPA as a pre/post test in at least ONE class. Goal #3 will be eliminated because we have collected enough data on this matter, therefore we will focus our efforts towards other goals, such as dual-enrollment for Navajo at Flagstaff High School. We will also work on developing computerized learning modules and assessments that can be used on campus or online so as to offer opportunities for our students to improve their language skills using technology.

Department: **English and Languages (English Portion)**
Submitted by: Colleen Carscallen Date: 06/07/05

STUDENT OUTCOME #1. Title:

Composition outcome “Read and Write Critically and Analytically. **Linked Gen Ed outcomes:** Thinking Skills: “Use appropriate methods of inquiry to identify, formulate, and analyze a current or historical problem/question” and “Understand the uses of theories and models in an area of study.” Aesthetic Perspective: “Analyze and evaluate literary, visual, or performing arts using discipline-specific approaches and criteria.”

What **data** were collected?

1. An indirect assessment of student learning was compiled for ENG 101 and ENG 102 (multiple sections) from the IDEA survey administered in F04/S05. Results from the learning objective as stated in IDEA: “Learning to analyze and critically evaluate ideas, arguments, and points of view”:

Score on 5 pt. scale: 1= no progress 5 = exceptional progress

ENG 101	average score	% of students rating 1 or 2	% of students rating 4 or 5
Average for 14 sections	3.95	9.2	71.56
Range	3.3 - 4.4	0 - 28.6	45.5 - 92.9

ENG 102	average score	% of students rating 1 or 2	% of students rating 4 or 5
Average for 17 sections	4.25	4.42	81.97
Range	3.5 - 4.7	0 - 16.7	50 - 100

2. As a continuation of direct assessment practices from last year, portfolios from ENG 102 (2 sections F04 and 2 sections S04) were assessed. The depth of analysis within the portfolios were rated in 4 categories: Outstanding, Adequate, Needs Work, and Little or No Evidence.

Portfolio (ENG 102)	Outstanding	Adequate	Needs Work	Little or no Evidence
% scoring in each range	56.7	36.7	6.6	0
% scoring in passing range (Outstanding or Adequate)	93.4			

Conclusions reached based on the data collected:

Indirect assessment: With the average response nearing or exceeding a “4” (substantial progress) and the high percentage (ranging from approximately 50% of the class to 100% of the class) of students reporting substantial or exceptional progress, we can conclude that students are being challenged to analyze and evaluate and that they feel they’ve improved. The higher average score for ENG 102 sections could be due to the increased emphasis on analysis in that course. We are pleased with these results, and will continue to measure this objective in the next academic year.

The direct assessment appears to corroborate students’ perceptions of their analytical skills, with 93.4% of students performing adequately or better. This sample size is really too small to make any definitive judgments, however.

Changes or revisions being made based on the data collected:

No curricular changes are planned at this time. We’d like to ensure that all sections participate in the indirect assessment of student learning in the next academic year. In addition, common rubrics are being developed to score learning objectives so that results can be obtained and are comparable across all sections.

Budget implications that affect curriculum, professional development, equipment, etc.:

In order to create a valid rating system for common rubrics, training sessions for raters need to be held. Participation will increase if instructors are compensated for time spent in training and rating - especially if the rating occurs outside of regular grading practices.

Looking at the program assessment plan as a whole, please answer the following questions:

1. What program **strengths** in relationship to student learning did you identify from your review?
Our college-level composition courses are constructed to enable students to practice and improve their analytical skills.
2. What **overall improvement** in your program has resulted from assessment efforts?
This academic year, we have learned that CCC’s current student evaluation tool (IDEA) can effectively be used as an indirect assessment of some of our composition program learning outcomes, and that common rubrics can be a viable method for obtaining comparable data. These realizations have helped alleviate concerns stemming from frustrations regarding previous assessment methods, and have resulted in more positive attitudes towards the assessment process.
3. Based on this year’s report, are you making **changes** or revisions in your program assessment plan for next year?
As noted above, we plan to utilize the IDEA tool more extensively and pilot the use of common rubrics to assess student learning. In addition, we plan to review the composition learning objectives to ensure that they are easily measurable as stated.

Please list any additional information regarding your department’s assessment activities.

Although the English department does not have a degree program at this time, our college-level composition courses are an essential part of CCC’s General Education

program. Our developmental reading and writing courses form an important foundation for success in those courses. Because of this, and after considerable debate over what constitutes a program within our department, we plan to focus the English portion of our assessment efforts on college-level composition and developmental English.

Data from the assessment efforts within developmental English was lost or rendered invalid this academic year due to miscommunication regarding specific data groups. Although this occurrence is unfortunate, this and other factors caused us to review our practices in order to simplify the process and obtain results in a form that is more readily analyzed. We plan to refine our developmental assessment methods in the fall (2005).

Department: Liberal Arts Submitted by: Martin Lara Date: 05/25/2005

STUDENT OUTCOME #1. Title: PHI 105: Demonstrate critical thinking skills together with the measured use of evidence. Gen. Ed. Outcomes: Thinking Skills: Use reasoning skills that support and promote critical and creative thinking and lifelong learning.

What **data** were collected? Group discussion assignment in which students were required to present both sides of an ethical argument to group members. Eighty-two percent of the students successfully articulated ethically opposing viewpoints. In a follow-up writing assignment one week later, 59% of the students, all of whom participated in the previous group discussion, were able to translate their verbal grasp of the issue into successful essays.

What **conclusions** were reached based on the data collected? Generally, students seem more able to articulate ethical principles in conversation / discussion, than to clearly explain these concepts systematically in writing. In this connection, it should be noted that neither introductory speech nor college composition are prerequisites for PHI 105.

What **changes** or revisions are being made based on the data collected? Incorporate dialogue / discussion to further student success and improve instruction. In a subsequent measure, students were able to articulate multi-faceted ethical arguments both verbally and in writing when the two activities were completed in the same week, rather than weeks apart. Accordingly, it seems that memory, together with the verbal and written articulation of ethical arguments are enhanced if the writing assignment follows very soon after class discussion.

STUDENT OUTCOME #2. Title: PHI 101: Gather, interpret, and evaluate evidence. Gen. Ed. Outcomes: Communication and Thinking Skills: Presentation of ideas, participation in collaborative groups, construction of arguments, demonstration of listening, and use of critical and creative thinking skills.

What **data** were collected? In oral examinations, written essays, and non-graded group activities, 92% of students successfully demonstrated an introductory analytical comprehension of philosophical ideas and theories.

What **conclusions** were reached based on the data collected? When students are encouraged and invited to participate in round-table discussions regarding philosophers

and their theories, they more effectively learn to articulate and support their respective views. Round-table discussions generated positive feedback from students, and many expressed that this teaching process enhanced their critical thinking skills while learning about various philosophical ideas.

What **changes** or revisions are being made based on the data collected? None. With respect to this methodological approach, student learning is enhanced.

Are there **budget implications** that affect curriculum, professional development, equipment, etc.?

No.

STUDENT OUTCOME #3. Title: HUM 242. Recognize the role that intellectual curiosity and lifelong learning play in developing and understanding balanced world views. Gen. Ed. Outcomes: Diversity and Global Perspective: Understand and appreciate diverse cultures, values, beliefs, and historical perspectives.

What **data** were collected? In a written essay assignment, 71% of the students met expectations when responding to an issue pertaining to diversity and global perspectives. Group discussion the following week based on the previous written assignment revealed only 64% of the students successfully articulated their previous grasp of the issues.

What **conclusions** were reached based on the data collected? Students did not perform as well in a verbal exercise the week following a written assignment pertaining to the same course content.

What **changes** or revisions are being made based on the data collected? Discuss issues prior to assigning essays pertaining to the same topic and have students include a paragraph in their written assignment in which they state whether or not the discussion helped clarify the issues.

STUDENT OUTCOME #4. Title: REL 201. Identify, interpret, evaluate, and/or synthesize significant religious, philosophical, or humanistic cultural frameworks from the traditions studied. Gen. Ed. Outcomes. Diversity and Global Perspectives: Recognize the diversity of humanity; identify the influence of culture; link cultural perspectives.

What **data** were collected? Prior to being assigned the study of Islam in an introductory comparative religions class, students in group discussions were asked to share their knowledge and attitudes toward this tradition. In a written essay after studying Islam, they were asked if their previous opinions were largely based upon print and various media, and if so, had their respective opinions changed.

What **conclusions** were reached based on the data collected? In the group discussions, opinions were negative. In the written essay, 89% of the students had developed a more informed, positive, and tolerant view of Islam as practiced by the great majority of its adherents.

What **changes** or revisions are being made based on the data collected? None; in connection with Islam. Continue to develop points of contact and the appreciation of

differences with respect to world religious traditions through further group discussion and subsequent written discussion.

Looking at the program assessment plan as a whole, please answer the following questions:

What program **strengths** in relationship to student learning did you identify from your review?

Instructional methodology incorporates active verbal participation reinforced by written expression. Instructors currently are engaged in fine-tuning this process.

What, if any, **concerns** in relationship to student learning did you identify from your review?

When working with various learning styles and cultures, group discussions followed by written modes of expression should not be considered as a methodological panacea. Instructors should be open to other means by which students articulate course content. Navajos, for example, a significant minority population at our campus, often are reluctant to stand out and share verbally in groups or to make direct eye contact. Some bilingual students have great difficulty when writing sentences that use proper grammatical constructions in English. In this sense, the mode that demonstrates student success with respect to mastery of course content could be discussed between instructor and student, rather than to place reliance solely upon group interaction and subsequent written instruction.

What **specific steps** will you take to address identified concerns or improve strengths?

Attempt to obtain College funds to support assessment development and norming projects with Liberal Arts associate faculty.

What **overall improvement** in your program has resulted from assessment efforts?

As assessment moves from quantitative compliance to a synthesis that includes a component for qualitative student success and learning skills that students will be able to use even years after leaving our College, instructors have and will become increasingly more motivated to work within a developing assessment culture.

Based on this year's report, are you making **changes** or revisions in your program assessment plan for next year? Yes. See immediately below:

A Collaborative Focus of Liberal Studies Faculty:

- Obtain Angelo & Cross's (1993) Teaching Goals Inventory. See Emily. Have all PHI, REL, & HUM faculty take the Inventory in Angelo & Cross's *Classroom Assessment Techniques* (1993) where they rate the importance of a variety of goals.
- Check mission, vision, & purpose statements for possible goals.
- Identify common ground—is there an implicit sense of what faculty want their students to learn? Collaboratively:
- Examine course syllabi
- Discuss what faculty aim to accomplish in each course they teach.
- Determine which outcomes students should be able to use 5-10 years after leaving CCC.

- Individually, write three important goals. Collaboratively identify three goals that everyone agrees are important for implementation.

Other questions to consider:

- What do we value about our discipline(s)?
- What do our disciplinary associations (ATFs) think is important for students to learn?

Did your assessment information require a change in **financial resources**?

Our current direction is set forth briefly above. Funding is a challenge. Associate faculty should be awarded a stipend for attending meetings designed to develop our approach to learning, student success, and assessment. Our group is small and can easily be experienced by the greater College Administration as a tiny ripple in a much greater pond. For five or perhaps six associate faculty, we request an initial \$750.00 in addition to the current hourly budget of B2160 for two meetings, each approximately two hours in length, one in fall of 2005 and one in spring of 2006 for assessment plan development and consensus.

Please list any additional information regarding your department’s assessment activities.

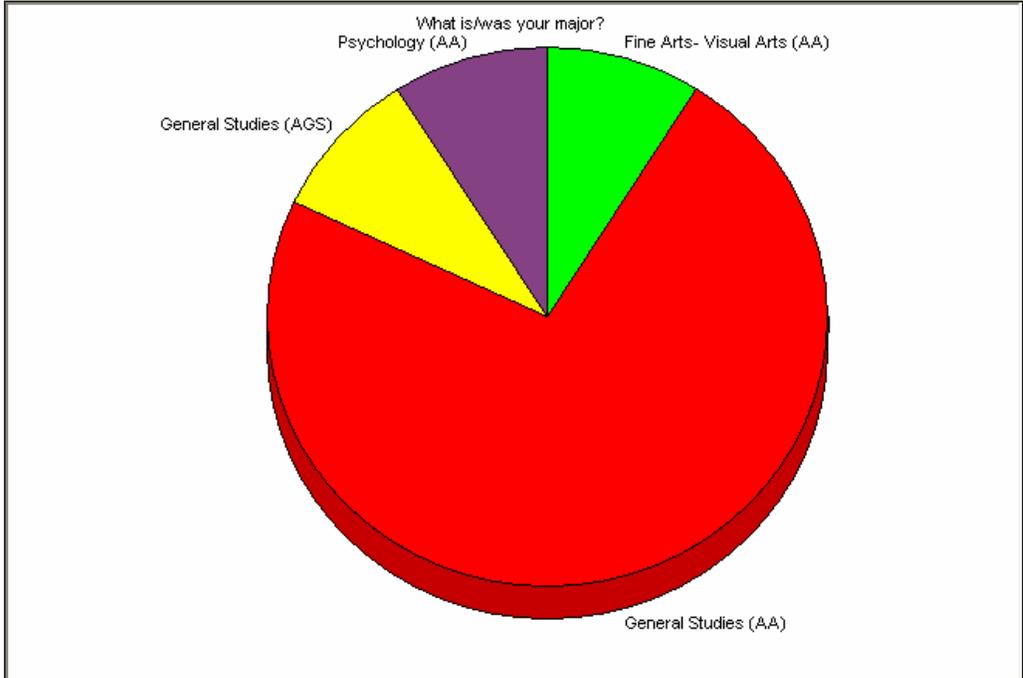
Our continuing plan is contingent upon further funding. We could use specific guidance as to how to petition various College funding sources so as to acquire the necessary monetary support to work with Liberal Arts associate faculty and develop a united approach to student learning and instructional improvement.

Graduate Exit Survey

The Graduate Exit Survey was mailed to 107 CCC 2004 fall and 2005 Spring Graduates. Eleven (ten percent) of the participants self identified as graduates within the Arts and Sciences Division. The following are the Arts and Science participant responses to several questions on the survey:

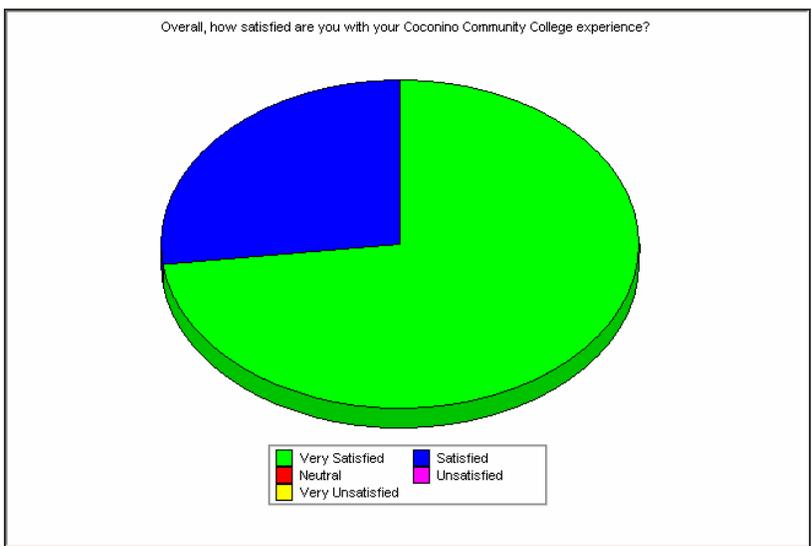
Q.1 What is/was your major?

Choice	Count	Percent Answering
Colorado Plateau Studies - Arts & Culture (AA)	0	0.0%
Colorado Plateau Studies- Business Emphasis (AA)	0	0.0%
Colorado Plateau Studies - Science Emphasis (AA)	0	0.0%
Environmental Science (AS)	0	0.0%
Fine Arts- Visual Arts (AA)	1	9.1%
General Studies (AA)	8	72.7%
General Studies (AS)	0	0.0%
General Studies (AGS)	1	9.1%
Pre-Social Work (AA)	0	0.0%
Psychology (AA)	1	9.1%
Sociology (AA)	0	0.0%
Other	0	0.0%



Q.9 Overall, how satisfied are you with your Coconino Community College experience?

Choice	Count	Percent Answering
Very Satisfied	8	72.7%
Satisfied	3	27.3%
Neutral	0	0.0%
Unsatisfied	0	0.0%
Very Unsatisfied	0	0.0%



Findings:

All Arts and Sciences graduates were either very satisfied or satisfied with their educational experience at CCC..

Alumni Survey

During the winter of 2005, 249 Alumni surveys were mailed to CCC 2002 (fall, spring and summer) and 2003 (Fall, spring and summer) Graduates. Twenty-one (8%) of the participants self-identified as graduating within the Arts and Sciences Division. A selection of questions and corresponding responses follows:

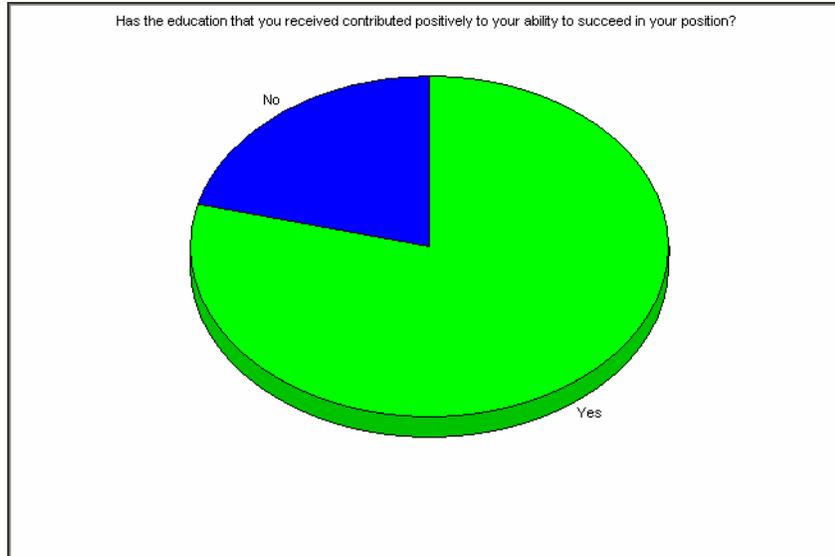
Q.1 What was your major?

Choice	Count	Percent Answering
Colorado Plateau Studies - Arts & Culture (AA)	0	0.0%
Colorado Plateau Studies - Business Emphasis (AA)	0	0.0%
Colorado Plateau Studies - Science Emphasis (AA)	0	0.0%
Environmental Science (AS)	0	0.0%
Fine Arts - Visual Arts (AA)	4	19.1%
Fire Science (AAS)	0	0.0%
General Studies (AA)	10	47.6%
General Studies (AS)	1	4.8%
General Studies (AGS)	2	9.5%
Pre-Social Work (AA)	1	4.8%
Psychology (AA)	4	19.1%
Sociology (AA)	0	0.0%
Other	0	0.0%

*Please note that there are three double majors, all of whom have a major in each division

Q.15 Has the education that you received contributed positively to your ability to succeed in your position?

Choice	Count	Percent Answering
Yes	15	78.9%
No	4	21.1%



Q.16 Has your educational experience: (choose all that apply)

Choice	Count	Percent Asked
Stimulated your curiosity	14	70.0%
Opened new doors, please describe	6	31.6%
Influenced you to be more active in the community	7	36.8%
Influenced you to engage in membership in a professional organization	7	36.8%
Influenced you to continue your education	19	95.0%
Influenced you to engage your contributions to your profession/career, please describe	3	15.8%
Other	1	5.6%

Q.16 Has your educational experience: (choose all that apply) - Opened new doors, please describe

- Career in fine arts
- Undergraduate degree
- Will graduate from NAU in 2006
- Graduate School
- NAU
- Career opportunities

Q.16 Has your educational experience: (choose all that apply) - Influenced you to engage your contributions to your profession/career, please describe

- Research
- Hospice work
- Volunteer

Findings:

Three fourths of the Arts and Sciences alumni stated that their educational experience at CCC positively contributed to their ability to succeed in their employment position. In addition, 95% stated their CCC educational experience influenced them to continue their education.

VI. Career and Technical Education Program Assessment of Student Learning

2004-2005 Annual Review of Assessment Activities By Academic Department Chair Reports

Department: Computer Information Systems

Submitted by: Alane Matthews/Dave Bowman Date: June 1, 2005

PROGRAM OUTCOME #1: Demonstrate effective use of computer related terminology.

What data were collected?

A pre/post test was administered to CIS 120 students via WebCT. One hundred seventy-three students and one hundred forty-five students completed the pre and post tests respectively. The assessment was based on a pre/post test provided with the instructional materials for the CIS 120 course and was reviewed and approved by the CIS department. Questions were selected to assess objectives specified in the CIS 120 course outline. Students must possess a general knowledge of computer related terminology as applied to various technology concepts to complete the assessment.

Additionally, all CIS courses in the Computer Software Technology Certificate assessed this outcome via a range of objective and subjective measures (Exams, asynchronous discussions, class discussions, hands-on lab modules, capstone projects, emails, quizzes, Instructor observation, research projects and presentations). These measures were reported by means of an instructor completed matrix. This information was compiled for the Fall 04 and Spring 05 semesters. The results are as follows:

Course	Number of Sections Taught	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 120	22	318	85.2%
CIS 122	6	79	94.9%
CIS 123	4	38	94.7%
CIS 110	3	27	96.4%

What conclusions were reached based on the data collected?

Statistical analyses of the test data identify the difference between the means as significant. The results are robust due to the large sample size and can be interpreted to conclude the difference between the means reflects an overall increase in student knowledge of computer related terminology. These results are supported by the data obtained from the CIS Instructors which indicates that 85.2% of the CIS 120 students obtained this objective.

What changes or revisions are being made based on the data collected?

No changes are required at this time as the results of both objective and subjective measures strongly suggest that students met this outcome.

Are there budget implications that affect curriculum, professional development, equipment, etc.?

There are no budget implications at this time.

PROGRAM OUTCOME #2: Demonstrate knowledge of electronic communications concepts. Demonstrate efficient and effective use of telecommunications to access remote information. Demonstrate proficiency with electronic communications.

What data were collected?

Seven questions on the pre/post test assessed knowledge of electronic communications concepts (Hardware, software, browsers, protocols, server/client technology, networks etc.) Four questions showed significant difference in pre/post test results. One question was determined not to discriminate between pre/post test results. Two questions did not show a significant increase between pre/post test results.

Additionally, this outcome was assessed in all CIS 120 courses by Instructor reports.

Course	Number of Sections Taught	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 120	22	318	85.2%
CIS 110	3	27	96.4%
CIS 122	2		
CIS 123	2		

What conclusions were reached based on the data collected?

The nondiscriminatory questions have been replaced on this iteration of the pre/post test assessment. The two questions that showed no improvement have been examined to determine if the wording may have been unclear and have been clarified. These questions covered concepts that students should have knowledge of after completing an introductory CIS course. Despite significant improvement on 4 of the questions, percentages of students with knowledge of the telecommunications concepts covered on three of the posttest questions have improved for last years lows of (30%, 50%, 45%) to (45%, 58%, 48%); indicating that students are obtaining a better understanding of telecommunications concepts. The instructor reports are somewhat inconsistent with the pre/post test results. These results may still be a better measure of performance on this outcome as instructors can observe actual proficiency in the use of telecommunications. The results seem to still indicate some disparity between performance and knowledge of underlying telecommunications concepts.

What changes or revisions are being made based on the data collected?

Instructors were advised of student performance on the telecommunications questions from last year’s assessment and have worked hard on increasing instructional emphasis on introductory telecommunications concepts to improve student knowledge.

Are there budget implications that affect curriculum, professional development, equipment, etc.?

There are no budget implications at this time.

PROGRAM OUTCOME #3: Demonstrate competence with contemporary system and application software related to the student’s chosen degree.

What data were collected?

The following CIS courses in the Computer Software Technology Certificate assessed this outcome via a range of objective and subjective measures (Exams, asynchronous discussions, class discussions, hands-on lab modules, capstone projects, emails, quizzes, Instructor observation, research projects and presentations). These measures were reported by means of an instructor completed matrix. This information was compiled for the Fall 04 and Spring 05 semesters. The results are as follows:

Course	Number of Sections Taught	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 120	22	318	85.2%
CIS 110	3	27	96.4%
CIS 122	6	79	94.9%
CIS 123	4	38	94.7%

Nine questions on the pre/post test were designed to assess student knowledge of application software. Seven of the nine questions showed significant improvement from the pretest to the post-test.

What conclusions were reached based on the data collected?

Students appeared to obtain this outcome in all of the assessed courses as indicated by Instructor report. However, this year's pre/post test results are much more consistent between performance and content knowledge. In other words, a CIS 120 student may know how to use a formula in Excel but now most likely does understand that the formula requires relative cell references to work correctly.

What changes or revisions are being made based on the data collected?

The CIS department evaluated standardized testing packages that assess performance on various Microsoft Office Applications to determine their appropriateness for the CCC student population. Standardized testing would provide consistent performance assessment across instruction and provide a more precise measure of outcome attainment. In addition, the testing software may help to further quantify the discrepancy between performance and content knowledge. However, after doing so, we decided we needed more time to test before purchasing any new software assessment tool. We will

again evaluate and determined which software package to use for the majority of our assessment.

The department is continuing to discuss the possibility of creating Portfolio based assessment that includes capstone projects to demonstrate proficiency in the various software applications. We went into greater detail about creating two classes; one (1 credit hour) intro on how to create portfolios and define what a capstone is, and two, discuss the logistics of implementing the program. We would hope that these projects would be accumulated through the course of a student’s tenure at CCC and pressed to CD-ROM. Students would graduate with a product that might be used for future employment or educational purposes.

Are there budget implications that affect curriculum, professional development, equipment, etc.?

Standardized testing software costs can be assumed by the department or passed on to the student as an additional text expense (approximately \$29.00). The cost of portfolio assessment would include developing and submitting curriculum, creation of standardized rubrics for evaluating projects to be included in the portfolio, faculty professional development, and hardware necessary for the creation of electronic portfolios (CD-ROM Read/Rewrite Drive, CD-ROMs, Software).

STUDENT OUTCOME #4: Demonstrate oral business communication skills.

What data were collected? This Outcome is assessed through the Business Department

Course	Number of Sections Taught	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
BUS 111			

STUDENT OUTCOME #5: Demonstrate written business communication skills.

What data were collected?

This outcome was assessed in the CIS 122 courses for the Fall 04 and Spring 05 semesters. Assessment of this outcome included written applications involving letters, memos, table of contents, newspaper columns, insert graphics, styles, formatting, font and font size. Assessment included quizzes, exams, asynchronous discussions, Instructor observation and homework assignments. The results are as follows:

Course	Number of Sections Taught	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 122	4	75	94.9%

What conclusions were reached based on the data collected?

Students appeared to obtain this outcome as indicated by Instructor report.

What changes or revisions are being made based on the data collected?

No changes are required at this time as the results of both objective and subjective measures strongly suggest that students met this outcome.

Are there budget implications that affect curriculum, professional development, equipment, etc.?

There are no budget implications at this time.

STUDENT OUTCOME #6: Demonstrate computational skills to analyze and solve mathematical problems as related to business applications.

What data were collected?

This outcome was assessed in the CIS 123 courses for the Fall 04 and Spring 05 semesters. Assessment of this outcome included mathematical applications involving financial data, formulas and functions, creation and interpretation of graphical data, lists and pivot tables. Assessment included quizzes, exams, asynchronous discussions, Instructor observation and homework assignments. The results are as follows:

Course	Number of Sections Taught	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 123	4	42	85.7%

What conclusions were reached based on the data collected?

Students appeared to obtain this outcome in each of the assessed courses as indicated by Instructor report.

What changes or revisions are being made based on the data collected?

No changes are required at this time as the results of both objective and subjective measures strongly suggest that students met this outcome.

Are there budget implications that affect curriculum, professional development, equipment, etc.?

There are no budget implications at this time.

STUDENT OUTCOME #7: Demonstrate awareness of social and ethical issues related to the use of computers in society and principles for making informed decisions regarding them (e.g. security, privacy, intellectual property, equity etc.).

What data were collected?

All CIS courses in the Computer Software Technology Certificate assessed this outcome via a range of objective and subjective measures (Exams, asynchronous discussions, class discussions, hands-on lab modules, capstone projects, emails, quizzes, Instructor observation, research projects and presentations). These measures were reported by means of an instructor completed matrix. This information was compiled for the Fall 04 and Spring 05 semesters. The results are as follows:

Course	Number of Sections Taught	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 120	22	318	85.2%
CIS 123	4	42	85.7%

What conclusions were reached based on the data collected?

Students appeared to obtain this outcome in each of the assessed courses as indicated by Instructor report.

What changes or revisions are being made based on the data collected?

No changes are required at this time as the results of both objective and subjective measures strongly suggest that students met this outcome.

Are there budget implications that affect curriculum, professional development, equipment, etc.?

There are no budget implications at this time.

Looking at the program assessment plan as a whole, please answer the following questions:

What program strengths in relationship to student learning did you identify from your review?

Since all CIS courses in the Software Technology certificate were assessed on one or more of the above outcomes, we can state with confidence, that students are attaining the skills necessary for successful completion of the certificate.

What, if any, concerns in relationship to student learning did you identify from your review?

- There appears to be a disparity in performance and knowledge of underlying concepts as measured on the CIS 120 pre/post test exams and instructor created assessments. This disparity was evident in 2 areas, telecommunications and software applications. (i.e. students may know how to implement a formula in excel, but can not identify whether they are using relative cell references, students may know how to use the World Wide Web but do not know what language the web is written in nor what a web browser is.)
- The percentages of student knowledge on telecommunications questions on the post-test for CIS 120 were rather low. (See student outcome #2 above)

What specific steps will you take to address identified concerns or improve strengths?

The following steps will be addressed over the course of several years.

- CIS 120 faculty will be advised of student performance on the telecommunications questions and will be asked to increase instructional emphasis on introductory telecommunications concepts to improve student knowledge.

- CIS 120 faculty will be advised of student performance on software application questions and will be asked to increase instructional emphasis on underlying concepts to improve student knowledge.
- CIS faculty have and will continue to review standardized performance software to determine appropriateness for the CCC student population. Standardized testing would provide consistent performance assessment across instruction and provide a more precise measure of outcome attainment. In addition, the testing software may quantify the discrepancy between performance and content knowledge.
- CIS faculty will still discuss the value and appropriateness of Portfolio based assessment and want to implement this next school year but may be held up by creating 2 new classes and then going through the curriculum process.
- Still need to discuss additional modalities for assessment including student computer skills checklists and surveys in more detail and create some models to follow.
- The CIS 120 pre/post test will be revised to delete nondiscriminatory questions and to assess the adequacy of the questions in assessing the outcomes specified in the course outline. We will continue to refine this.
- CIS faculty will continue to revise curriculum to reflect current changes in technology.
- The assessment matrix and instructions will be revised to ensure correct completion.
- We will work with Institutional Research to review the exit interview/survey to assess student satisfaction at program completion. This survey should help to identify student perceptions of program strengths and weaknesses, as well as, to determine if students were adequately prepared to complete their employment or educational goals.
- Wanted to do this, but time ran out. We will make this one of our goals for 2005-2006 school year. Because there are no entry level exams for placement in CIS courses, CIS faculty will discuss the value of working with IR to determine if there is a correlation between program completers and scores on entry level reading and math exams. This data may be useful in placing students in CIS courses and providing remediation to students.
- Continue to work with Student Services to assess learning assistance provided for CIS courses in the computer labs.

What overall improvement in your program has resulted from assessment efforts?

Communication between faculty members teaching CIS courses has improved and faculty can articulate shared goals, as well as, identify a more consistent approach to assessment. An unexpected consequence of the administration of the pre/post tests was increased familiarity with WebCT. All CIS faculty are now able to log into WebCT and administer an exam.

Based on this year's report, are you making changes or revisions in your program assessment plan for next year?

CIS faculty will continue to revise the assessment plan and to begin using AAHE's recommendation of using rubrics, evidence and be committed to assessment to ensure that we adequately assesses student attainment of program objectives. BUS

100 and BUS 111 courses will be assessed next year. At that time all courses within the Software Technology Certificate will be assessed. (See question 3 above.)

Did your assessment information require a change in financial resources? If so, please attach.

The assessment may require a future change in financial resources depending on purchasing software for standardized assessment purposes.

Department: Nursing Submitted by: Donald Johnson Date: June 3, 2004

STUDENT OUTCOME #1 Title: AAS in Nursing - Students admitted to the nursing program are academically qualified.

What **data were collected**?

- Nursing Entrance Test (NET) scores.
- Prerequisite and co-requisite classes completed prior to entry into the nursing program.

What **conclusions were reached based on the data collected**?

Five of the first-year students (now graduated students) took the summer LPN option course and four took the State Board of Nursing NCLEX-PN test. Four passed this exam for a 100% success rate.

The first group of 20 students graduated and will be taking the State Board of Nursing NCLEX-RN exam soon. As of this date one student has taken and passed this exam, now only 19 more to hope and wish to pass.

The department is starting to collect data of the student's NET score, prerequisite and co-requisite class grades and grades during the nursing program to establish predictive data early in the curriculum to identify predictors of concern. Other studies have been done with similar data collection will replicate the study.

The first year group started with 30 students. One dropped for personal reasons. From last year's group, one student had to drop because of a non-academic situation. This student was reaccepted into the program at the second semester, so we still have a group of 30 students that will progress to the second year group.

The NET scores of the first year group averaged 83 with a range of 91 to 73. All 30 students have passed the nursing courses of the first year curriculum with grades of A or B, showing excellent academic success.

The optional LPN summer course was developed to be available to the students as a WEB course. Seven students are currently enrolled.

With the excellent retention rate in the nursing curriculum, the above average scores on the standardized tests, the success with the NCLEX-PN, shows that the students are well prepared academically.

What changes or revisions are being made based on the data collected?

The preadmission test will be changed to another company Health Educations Systems Inc. (HESI). This test will incorporate more sciences. The company also has better standardized tests for each subject area during the curriculum and a summary test to

be taken during the fourth semester which is an excellent predictor of success for students before their taking the NCLEX-RN exam.

The success of the seven students enrolled in the LPN course will be monitored as to their pass rates on the NCLEX-PN exam.

Are there **budget implications that affect curriculum, professional development, equipment, etc?**

Yes. Will need to reassess course fees to increase by \$10 to cover all the testing.

STUDENT OUTCOME #2: Title: AAS in Nursing - The curriculum content prepares students to perform at or above national average as measured by the comprehensive achievement profile by Educational Resources Inc (ERI).

What data were collected?

All of the first semester students took the standardized tests by ERI company each semester. Twenty-six scored above the national average and the other four scored at the national average. Of the second year group, all 20 students scored above the national average on their semester summary tests.

What conclusions were reached based on the data collected?

The semester tests will be changed to another company Health Educations Systems Inc. (HESI). The company has better standardized tests for each subject area during the curriculum and a summary test to be taken during the fourth semester which is an excellent predictor of success for students before their taking the NCLEX-RN exam.

Students performed at or above average indicating the first semester nursing curriculum adequately addresses appropriate first semester skills. Based on the results from this outcome, present content will be modified and enhanced to improve outcomes.

Are there **budget implications that affect curriculum, professional development, equipment, etc?**

Yes. Will need to reassess course fees to increase by \$10 to cover all the testing.

STUDENT OUTCOME #3 Title: Nursing Assistant Program - Students will demonstrate competency in nursing assistant knowledge and skills.

What data were collected?

Written and manual skills test results from the State Board of Nursing Certified Nursing Assistant exam.

What conclusions were reached based on the data collected?

The pass rates for the four classes each semester for a total of 160 students is greater than 97%. No changes will be made to the nursing assistant curriculum due to the successful pass rate.

What changes or revisions are being made based on the data collected?

No changes will be made to the nursing assistant curriculum due to the successful pass rate.

Are there **budget implications that affect curriculum, professional development, equipment, etc?** No

Looking at the program assessment plan as a whole, please answer the following questions:

1. What **program strengths in relationship to student learning** did you identify from your review?

The students who completed the two years of the nursing curriculum succeeded very well in their classes and clinicals. The use of standardized test for each content area assisted with evaluating student learning to national standards. The real assessment will be success rates on the State Board of Nursing NCLEX-RN exam.

2. What, if any, **concerns in relationship to student learning** did you identify from your review?

The department will be changing to a different company for content/semester/summary tests. One faculty is still mastering subject content and command of teaching methods.

3. What **specific steps will you take to address identified concerns or improve strengths?**

Another faculty is being hired to further complement the first year curriculum and instructor which will further enhance student learning. From last year's concern of mastery of subject content, the instructor displayed better mastery this year. This faculty will be working in a clinical setting this summer. Adding the second faculty to the first year's curriculum will make a huge improvement to the overall student learning environment.

4. What **overall improvement in your program has resulted from assessment efforts?**

The nursing department will continue to monitor preadmission test results, prerequisite grades, semester and summary tests to assess student learning as compared to national standards. A research study is being set up for this.

The nursing department will continue to monitor the State Board of Nursing Certified Nursing Assistant pass rates to ensure the quality of this curriculum.

The nursing department has regular meeting and frequent conversations about ways to improve student learning in class and clinical settings. We constantly are concerned that we give the students the best tools and experiences to be successful in this demanding nursing world; therefore, we evaluate ourselves and our methods to fine ways to improve.

5. Based on this year's report, **are you making changes or revisions in your program assessment plan for next year?**

The department is starting to collect data of the student's NET score, prerequisite class grades and grades during the nursing program to establish predictive data early in the curriculum to identify predictors of concern. Other studies have been done with similar data collection and we intend to replicate the studies.

Continued assessment of classroom presentations, test results, clinical experiences, clinical faculty, and student evaluations will be completed to ensure good rigor to the curriculum.

The nursing department will assess and give better guidelines to the clinical faculty to assist in maintaining high expectations in this component of the curriculum.

6. Did your assessment information require a **change in financial resources?** If so, please attach.

No change in financial resources at this point.

Department: Public Safety, Law, & Allied Health Submitted by: John F. Cardani
Date: May 30, 2005

STUDENT OUTCOME #1: Title: **AA in Administration of Justice Studies (Objective #3).**
Identify and expand communication skills to function within the criminal justice system.

What data were collected?

The number of students enrolled in AJS 101 during Fall Semester 2004, the number of students enrolled in AJS 101 Spring Semester 2005, and the number of students in AJS 209 during Spring Semester, who were all required to submit personal portfolios (working texts), which included a reflection paper articulating what they had learned, and how they would utilize these skills in achieving future personal, educational, and professional goals, and the utilization of proper criminal justice terminology. It should be noted that one section of AJS 101 and AJS 209 both include students from remote campuses, as these courses were delivered via interactive television. The reflection papers were evaluated on content and the ability to utilize communication skills, thus giving the student knowledge necessary to the function within the criminal justice system.

What conclusions were reached based on the data collected?

Of 93 students in both AJS 101 and AJS 209 classes required to complete a working text, 98% of the students submitted complete portfolios. Those students, who did not submit a complete portfolio, were lacking small amounts of legal research. 100% of the students submitting a portfolio included the personal reflection component. 100% of the reflection papers received, utilized proper criminal justice terminology, and summarized the learning experience. 100% of the students from remote campuses submitted complete portfolios, containing comparable information as those attending class in Flagstaff, therefore, students participating from remote locations were learning the concepts as well as students in Flagstaff. All of the students showed the ability to understand and apply communication skills necessary to function in a criminal justice environment. A portion of the reflection papers had grammatical errors or minor deficiencies, which were addressed in personal letters to each student. Some excerpts from the portfolios are as follows:

- “I live on the Navajo Reservation, and originally took this class with the intent of having the 3 credit hours just progress to Northern Arizona University to complete a requirement. Little did I know that I would learn so much about our Constitutional Rights, current news items, and how our legal system protects everyone.”
- “It was very interesting to know the difference between misdemeanor and felony crimes.”
- “The most interesting items I learned were those surrounding the laws of our society, the way they are worded and the effects on our communities.”
- “The class has not only fueled my on-going quest to learn about this system, but has helped me to get my foot in the door with the Coconino County Jail Division.”
- “AJS 101 truly was one of my favorite classes. Even though I’ve worked in law enforcement for a while now, I learned several new things. I understand better, why things have to be done a certain way; such as search warrants.”

- “I have learned about community policing, search and seizure, the court systems, due process, and many other things. Once I learned about the criminal justice system and all the different job opportunities, I decided to change my major.”

What changes or revisions are being made based on the data collected?

No changes are anticipated for the curriculum or program requirements based on the data collected. This objective, however, will require future revision to allow for more accurate conclusions, and more emphasis may be placed on future writing communication skills.

STUDENT OUTCOME #2: Title: **AAS in Fire Science (Objective #4)** Provides the basic life support requirement for firefighter I & II state certification.

What data were collected?

For 2004-05 18 students completed the Firefighter I & II program. 100% of the students that completed the program participated in the International Fire Service Association Certification testing battery. 94% of those students completing the test were successful in passing the minimum requirements. During the practical portion of the state/national examination, individuals from the Arizona State Fire Marshall's Office administer the testing. This insures and maintains the quality and academic integrity of Coconino Community College Fire Science curriculum, as the test administrators are not affiliated with CCC.

What conclusions were reached based on the data collected?

Students, who enroll in the fire science program at Coconino Community College, possess the skills and knowledge required for state and national certification.

What changes or revisions are being made based on the data collected?

No changes will be made in the curriculum based on the positive results.

Are there budget implications that affect curriculum, professional development, equipment, etc.?

There are no current budget implications.

STUDENT OUTCOME #3: Title: **Forensic Investigations Certificate (Objective #6)** Learn and practice appropriate workplace skills.

What data were collected?

Between fall semester 2004 and spring semester 2005, 29 students enrolled in AJS 250, Criminal Investigations, and a required core class in the Forensic Science Certificate curriculum, usually taken at the end of the program. During the final examination, students are required to perform a practical exercise, whereby, they utilize learned investigative skills in processing a mock crime scene. As a portion of the practical exercise, students were observed and evaluated by supervisory criminal investigators, currently employed with the Flagstaff Police Department and Coconino County Sheriff's Office. These outside professionals in the law enforcement field then submitted written comments to the instructor. Some excerpts of the comments are as follows:

- “The basic concept of how to initialize, organize, and process a crime scene were covered and organized very well given this being the first step from procedural text to hands on processing.” “Everyone participated and seemed to understand when I would approach them and ask questions on why they were doing what they were doing.”
- “The scene was thoroughly processed by sketches, photographs, and measurements.” “Evidence was identified and collected as per protocol.” “I felt the students had a very good grasp on what they were doing and why.”
- “I felt the students demonstrated a very good understanding of how to investigate a basic crime and how to process a crime scene.”
- “The students demonstrated the ability to recognize and understand the basic concepts of conducting a criminal investigation.”
- “The students did, in my opinion, an outstanding job. As stated above by examples, the students demonstrated the basic concept of criminal investigation, the methodology of conducting an investigation, and the identification of evidence.”

What conclusions were reached based on the data collected?

100 % of those students enrolled in the Criminal Investigations class participated in the practical exercise. 100% of those students completing the practical exercise were successful in utilizing proper, learned, investigative techniques and terminology.

What changes or revisions are being made based on the data collected?

No revisions to current curriculum will be made, as the results were positive.

Are there budget implications that affect curriculum, professional development, equipment, etc.?

Continued fiscal resources, including supplies and consumables will be provided through student fees.

STUDENT OUTCOME #4: Title: Allied Health Phlebotomy Certificate Program (Objective #4 Workplace readiness and interpersonal skills)

What data were collected?

During the Fall 2004 Semester, 13 students enrolled and completed AHS 160 and AHS 160, Phlebotomy procedures and Phlebotomy practicum. During the Spring 2005 Semester, 11 students enrolled and completed AHS 160 and AHS 161, along with 9 students enrolling and completing AHS 157, Phlebotomy for Law Enforcement. Both courses utilize identical curriculum, however, AHS 157 is an accelerated course specifically designed for law enforcement. 100% of the students were successful in completing the academic coursework and practical examinations. Out of the 24 students completing AHS 160 and 161, % have begun careers in the phlebotomy field. 100% of those students completing AHS 157 are utilizing learned phlebotomy skills in a workplace environment.

What changes or revisions are being made based on the data collected?

No changes to current curriculum will be made, as results were positive.

Are there budget implications that affect curriculum, professional development, equipment, etc.?

No direct departmental budget implications at this time.

STUDENT OUTCOME #5: Title: **Emergency Medical Services (Objective #1)** Provides State Approved Certification

What data were collected?

Arizona Department of Health Services certification rates for Emergency Medical Services students from Coconino Community College.

What conclusions were reached based on the data collected?

The EMS 100 classes average 15 students per semester. 100% of these students are certified in Health Care Professional CPR through the course. In EMS 131 there is an average of 70 students per semester, including students from Flagstaff, Page, Grand Canyon, Pinewood, Blue Ridge, and outlying communities within our sphere of influence. 95% of these students attempt to become certified as Emergency Medical Technicians. 85% successfully pass the Arizona State/National Registry Certification. In EMS 211, which is the recertification course, an average of 50 students enroll in the course each year. An additional 80 students challenge the State examination through Coconino Community College each year, to maintain employment standards. 100% have successfully completed the recertification examination, thus retaining Arizona state certification. Coconino Community College continues to have a 100% success rate in the recertification program.

What changes or revisions are being made based on the data collected?

No changes are proposed at this time, as results were positive, however, due to the increasing needs throughout the EMS community, additional EMS 131 courses, as well as Wilderness First Responder courses are being offered.

Are there budget implications that affect curriculum, professional development, equipment, etc.? Additional fiscal resources have been identified for the upcoming year, to accommodate the additional EMS courses and testing.

Looking at the program assessment plan as a whole, please answer the following questions:

What program strengths in relationship to student learning did you identify from your review? Courses and programs currently being offered are providing appropriate training to prepare students for future certification examinations and employment.

What, if any, concerns in relationship to student learning did you identify from your review? Utilization of working texts (portfolio type assignments) should be continued and incorporate a rubric to assess writing communication skills. Hands on activities and assignments should be continued, as well as the continuation of outside professional involvement in assessment activities. Faculty have become involved in all aspects of assessing student learning, therefore, it is important that all faculty are aware of assessment results, and apply these results in future delivery of courses.

What specific steps will you take to address identified concerns or improve strengths? Steps have been taken to include all faculty and associate faculty within the department as it relates to overall program assessment activities. Students play a vital role in

assessment; therefore, more emphasis will be placed on writing quality and suggestions given for remediation, as it relates to communication skills throughout the semester. This could be accomplished by review of the working texts at mid-semester. The Department Chair will be working with the English department to address weaknesses in writing skills, and utilize suggestions to improve quality.

What overall improvement in your program has resulted from assessment efforts? Assessment efforts have strengthened relationships throughout the department. All faculty within the department are focused on student learning outcomes, and each course compliments the next. Faculty communicate throughout the year and compare goals and achievements. Comments from professionals outside Coconino Community College reinforce the instructor evaluations of students meeting learning outcomes.

Based on this year’s report, are you making changes or revisions in your program assessment plan for next year? Yes, we will continue to expand the use of practical examinations and further utilize the expertise of those currently in each respective field to assist in program assessment. We will also strengthen relationships with those in other departments in an effort to provide

Did your assessment information require a change in financial resources? If so, please attach. No

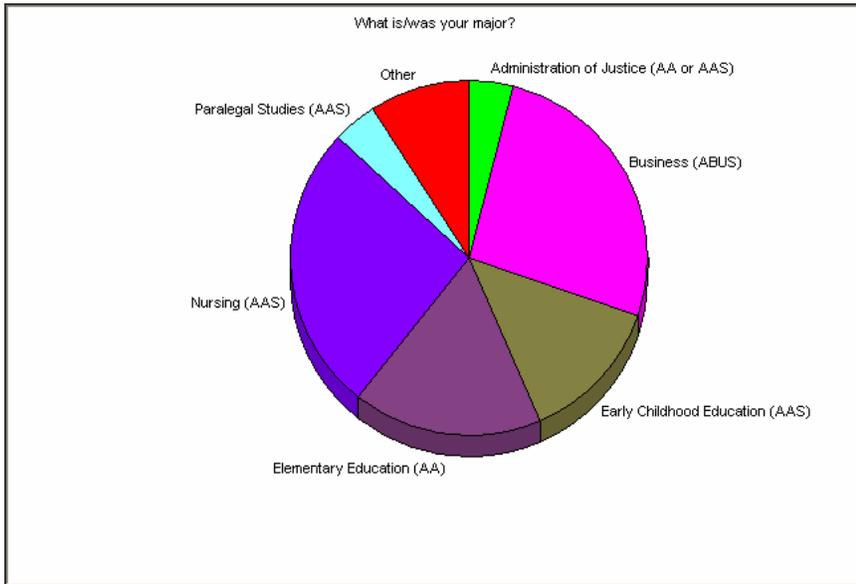
Graduate Exit Survey

CCC mailed 107 Graduate Exit Surveys to fall 2004 and spring 2005 graduates. Twenty-three (21%) self-identified as graduating within the Career and Technical Education Division. The following is a representative sample of questions and corresponding responses:

Q.1 What is/was your major?

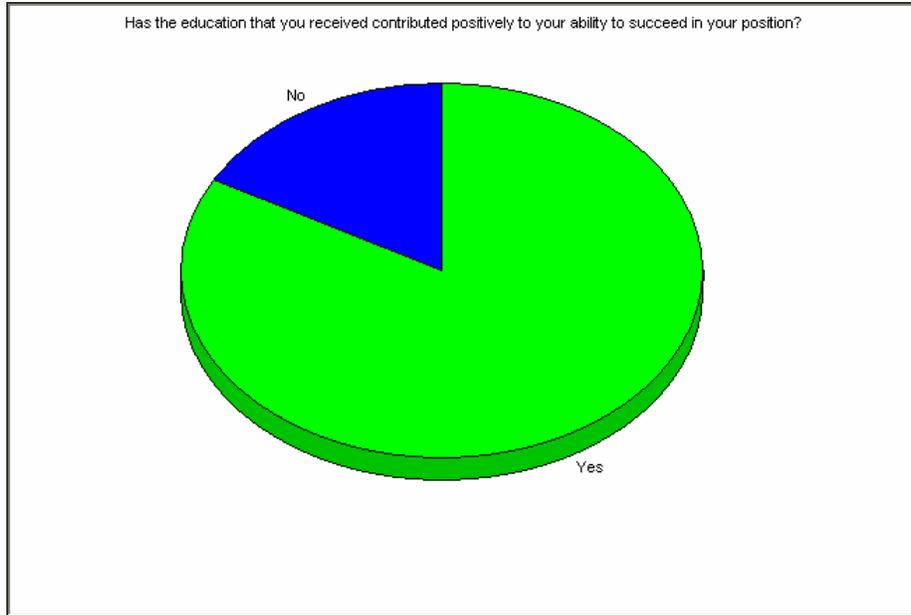
Choice	Count	Percent Answering
Administration of Justice (AA or AAS)	1	4.3%
Alternative Energy Technology (AAS)	0	0.0%
Architectural Design Technology (AAS)	0	0.0%
Business (ABUS)	6	26.1%
Business Technologies (AAS)	0	0.0%
Carpentry Apprenticeship (AAS)	0	0.0%
Computer Software Technology (AAS)	0	0.0%
Construction Management (AA)	0	0.0%
Construction Technology (AAS)	0	0.0%
Early Childhood Education (AAS)	3	13.0%
Elementary Education (AA)	4	17.4%
Fire Science (AAS)	0	0.0%
Hospitality Management (AAS)	0	0.0%
Hotel and Restaurant Management (AA)	0	0.0%
Medical Office Assistant (AAS)	0	0.0%

Network Engineering (AAS)	0	0.0%
Nursing (AAS)	6	26.1%
Office Information Systems (AAS)	0	0.0%
Paralegal Studies (AAS)	1	4.3%
Sheet Metal Apprenticeship (AAS)	0	0.0%
Vocational Technology Education (AA)	0	0.0%
Other	2	8.7%



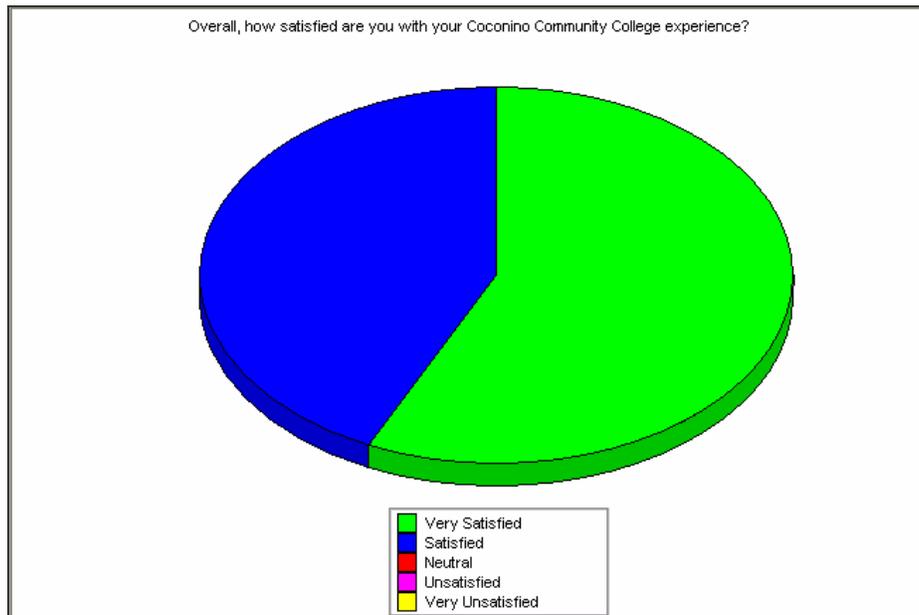
Q.7g Has the education that you received contributed positively to your ability to succeed in your position?

Choice	Count	Percent Answering
Yes	19	82.6%
No	4	17.4%



Q.9 Overall, how satisfied are you with your Coconino Community College experience?

Choice	Count	Percent Answering
Very Satisfied	13	56.5%
Satisfied	10	43.5%
Neutral	0	0.0%
Unsatisfied	0	0.0%
Very Unsatisfied	0	0.0%



Findings:

83% of Career and Technical graduates participating in the survey felt that CCC positively contributed to their ability to succeed in their position. All participants were either satisfied or very satisfied with their CCC experience.

Alumni Survey

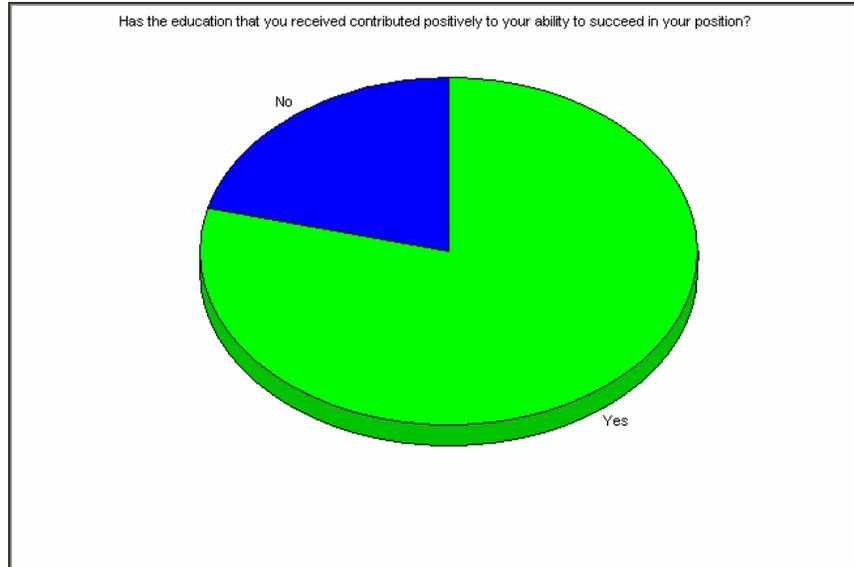
There were 249 surveys mailed during the winter of 2005 to CCC 2002 (fall, spring, and summer) and 2003 (Fall, spring, and summer) Graduates. Thirty-four (14%) self-identified as graduating within the Career and Technical Education Division. A sample of questions and corresponding responses follows:

Q.1 What was your major?

Choice	Count	Percent Answering
Administration of Justice (AA or AAS)	2	5.9%
Alternative Energy Technology (AAS)	2	5.9%
Architectural Design Technology (AAS)	1	2.9%
Business (ABUS)	7	20.6%
Business Technology (AAS)	0	0.0%
Carpentry Apprenticeship (AAS)	0	0.0%
Computer Software Technology (AAS)	5	14.7%
Construction Management (AA)	0	0.0%
Construction Technology (AAS)	0	0.0%
Early Childhood Education (AAS)	2	5.9%
Elementary Education (AA)	1	2.9%
Fire Science (AAS)	9	26.5%
Hospitality Management (AAS)	0	0.0%
Hotel and Restaurant Management (AA)	0	0.0%
Network Engineering (AAS)	0	0.0%
Nursing (AAS)	3	8.8%
Office Information Systems (AAS)	0	0.0%
Paralegal Studies (AAS)	0	0.0%
Sheet Metal Apprenticeship (AAS)	0	0.0%
Vocational Technology Education (AA)	0	0.0%
Other	2	5.9%

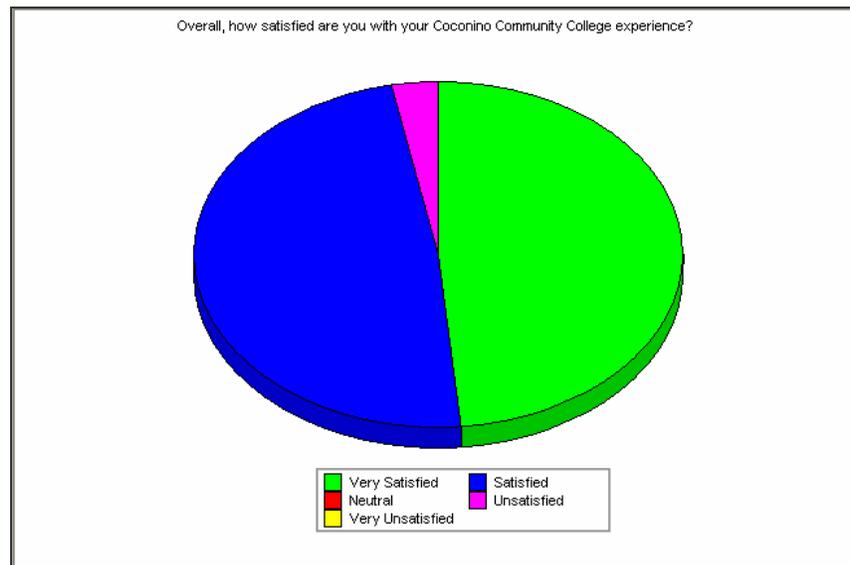
Q.15 Has the education that you received contributed positively to your ability to succeed in your position?

Choice	Count	Percent Answering
Yes	27	79.4%
No	7	20.6%



Q.17 Overall, how satisfied are you with your Coconino Community College experience?

Choice	Count	Percent Answering
Very Satisfied	16	48.5%
Satisfied	16	48.5%
Neutral	0	0.0%
Unsatisfied	1	3.0%
Very Unsatisfied	0	0.0%



Findings:

After our graduates had been away from us for 2-3 years, 79.4% felt their CCC experience positively contributed to their ability to succeed in their positions. In addition, 97% were either satisfied or very satisfied with their CCC experience.

VII. Distance Education Program Assessment of Student Learning

Coconino Community College requested a focus visit for Delivery of Distance Education programs in May 2004. CCC requested authority to deliver degree programs through distance delivery mechanisms that presently include interactive television (ITV) and on-line delivery.

The evaluating team recommended the approval of CCC's request for institutional change to include the authority to deliver the Elementary Education AA degree program through distance delivery methods. After careful review of college documents and following extensive interviews with faculty, students, staff and representative of the District Governing Board, the team acknowledged that the college has made the necessary plans and presentations to adequately support the offering of the Elementary Education degree via distance delivery.

Challenges illustrated by the evaluators included:

- Adequately document that student learning outcomes in distance course/programs are at least comparable to the outcomes of those produced by traditional instructional methods.
 - *Response: As depicted in the Computer Information Systems, Elementary Education, and Public Safety, Law & Allied Health academic department chair reports that follow, distance students are achieving comparable learning outcomes.*
- Systematically included students enrolled in ITV or online courses in an institution-wide program to assess student academic achievement at the program level.
 - *Response: CCC has administered institution-wide student learning outcomes assessment activities that include online and ITV students as participants. These methods/instruments include: Program and course level direct assessment methods employed by faculty, IDEA evaluations, Academic Profile Test for General Education, Graduate Exit and Alumni surveys.*

Elementary Education Academic Department Chair Report

Academic Year: 2004-2005

Department: Business, Education, Development
Submitted by: Paul Holbrook, Claudia Platt, and Emily McRobbie
Date: 6/7/2005
Program Assessment for: **AA Elementary Education**

Please list three to five student learning outcomes for your department, the data collected, the conclusion reached and changes or revisions made as a result. Please also answer the six summary questions that follow the outcomes section. We are asking the departments to particularly focus on your efforts to address General Education outcomes.

STUDENT OUTCOME #5. Title: Communication Skills: articulate ideas verbally and written using technology.

What **data** were collected? Journals and instructor observation

What **conclusions** were reached based on the data collected? Aggregately the students meet minimum standards for communication. For EDU 200 less than half of the 32 onsite students successfully acknowledged the breadth of philosophy. For EDU 222 courses where 16 were onsite and 17 were web based, collectively students were able to communicate better than expected for the ability to apply course concepts to real world events. EDU 230 with 9 onsite and 19 web based 87% achieved the objective. EDU 235 had 13 web based students achieved a level of 97% proficiency.

What **changes** or revisions are being made based on the data collected? For EDU 200 more time needed on philosophies, distributing a detailed grading rubric, and prep students with a pretest of questions. EDU 222 needs to create an opportunity for oral presentations for onsite course and increase participation rates.

Are there **budget implications** that affect curriculum, professional development, equipment, etc.?

Yes, journals and portfolios have a cost in time to learn for students and faculty.

STUDENT OUTCOME #6. Title: Diversity: recognize, understand, and appreciate diverse cultures

What **data** were collected? Journals, Reflections on service learning events, threaded discussion, exam questions.

What **conclusions** were reached based on the data collected? EDU 230: Both service learning project web students and onsite students achieved the goal of 90% competency. The goal of students carrying forward an understanding of cultural diversity as a result of training in previous EDU coursework appears to be successful. EDU 235: All students in a discussion meet the expectations for gender bias response and 75% meet expectations on an exam for working with diverse learners.

What **changes** or revisions are being made based on the data collected? EDU 230: Provide better structure for encounters and screen for known cultures. EDU 235: Increase frequency of discussions for working with diverse learners.

Are there **budget implications** that affect curriculum, professional development, equipment, etc.?

No.

STUDENT OUTCOME #7. Title: Reflection: Ability to apply ongoing reflective activities involving student learning, teaching practices, and professional & ethical behaviors.

What **data** were collected? Reflection journals from service learning projects in EDU 222, and reflection papers in EDU 235.

What **conclusions** were reached based on the data collected? EDU 222: 53% or 9 of 17 web students, and less than 70% of on site students, meet the expectations for “more qualities and specific examples related to student learning, teaching practices, and professional & ethical behaviors. EDU 235: The three students that answered reflection 3 on long term goals achieved the expected goals.

What **changes** or revisions are being made based on the data collected? To get more data the reflection question will be mandatory for EDU 235 students instead on voluntary. EDU 222: More focus on common disabilities and qualities of teachers. Increase participation rates of students in web classes by redesigning the threaded discussions.

Are there **budget implications** that affect curriculum, professional development, equipment, etc.? No.

Looking at the program assessment plan as a whole, please answer the following questions:

What program **strengths** in relationship to student learning did you identify from your review?

The major strengths are the student’s ability to communicate at the end of their degree in the EDU 235 Capstone class. Both web based and onsite courses had similar achievement rates for like type assessment measures.

What, if any, **concerns** in relationship to student learning did you identify from your review?

Specificity of expectations needs to be increased for assessment measures. Service learning is creating anxiety in some students that needs to be addressed.

What **specific steps** will you take to address identified concerns or improve strengths?

Increased focus on educational philosophies and distribution of grading rubrics to better convey expectations.

What **overall improvement** in your program has resulted from assessment efforts?

Instructors are identifying topical areas that are deficient and need more attention.

Based on this year’s report, are you making **changes** or revisions in your program assessment plan for next year?

Yes, some of the expected results have changed to be better aligned with desired expectations.

Did your assessment information require a change in **financial resources**? If so, please attach.

No

CIS PROGRAM ASSESSMENT BY ON-LINE VS ON-CAMPUS

PROGRAM OUTCOME #1: Demonstrate effective use of computer related terminology.

All Students

Course	Number of Sections Taught	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 120	22	318	85.2%
CIS 122	6	79	94.9%
CIS 123	4	38	94.7%
CIS 110	3	27	96.4%

On-line Students

Course	Number of Sections Taught On-line	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 120	7	126	81.6%
CIS 122	2	30	95.3%
CIS 123	2	20	91.3%
CIS 110	3	27	96.4%

On Campus Students

Course	Number of Sections Taught On-line	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 120	15	192	85.2%
CIS 122	4	49	94.9%
CIS 123	2	18	96.9%
CIS 110	0	0	0%

PROGRAM OUTCOME #2: Demonstrate knowledge of electronic communications concepts. Demonstrate efficient and effective use of telecommunications to access remote information. Demonstrate proficiency with electronic communications.

All Students

Course	Number of Sections Taught	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 120	22	318	85.2%
CIS 122	6	79	94.9%
CIS 123			
CIS 110			

On-line Students

Course	Number of	Total Number	Percent of Students Obtaining the
--------	-----------	--------------	-----------------------------------

	Sections Taught On-line	Assessed	Objective at the 70% Level or Higher
CIS 120	7	126	81.6%
CIS 122	2	30	95.3%
CIS 123	2	20	91.3%
CIS 110	3	27	96.4%

On Campus Students

Course	Number of Sections Taught On-line	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 120	15	192	85.2%
CIS 122	4	49	94.9%
CIS 123	2	18	96.9%
CIS 110	0	0	0%

PROGRAM OUTCOME #3: Demonstrate competence with contemporary system and application software related to the student’s chosen degree.

All Students

Course	Number of Sections Taught	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 120	22	318	85.2%
CIS 122	6	79	94.9%
CIS 123	4	38	94.7%
CIS 110	3	27	96.4%

On-line Students

Course	Number of Sections Taught On-line	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 120	7	126	81.6%
CIS 122	2	30	95.3%
CIS 123	2	20	91.3%
CIS 110	3	27	96.4%

On Campus Students

Course	Number of Sections Taught On-line	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 120	15	192	85.2%
CIS 122	4	49	94.9%
CIS 123	2	18	96.9%
CIS 110	0	0	0%

STUDENT OUTCOME #4: Demonstrate oral business communication skills.

What data were collected? This Outcome is assessed through the Business Department

Course	Number of Sections Taught	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
BUS 111			

STUDENT OUTCOME #5: Demonstrate written business communication skills.

All Students

Course	Number of Sections Taught	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 122	6	79	94.9%

On-line Students

Course	Number of Sections Taught On-line	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 122	2	30	95.3%

On Campus Students

Course	Number of Sections Taught On-line	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 122	4	49	93.2%

STUDENT OUTCOME #6: Demonstrate computational skills to analyze and solve mathematical problems as related to business applications

All Students

Course	Number of Sections Taught	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 123	4	38	94.7%

On-line Students

Course	Number of Sections Taught On-line	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 123	2	20	91.3%

On Campus Students

Course	Number of Sections Taught On-line	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 123	2	18	96.9%

STUDENT OUTCOME #7: Demonstrate awareness of social and ethical issues related to the use of computers in society and principles for making informed decisions regarding them (e.g. security, privacy, intellectual property, equity etc.).

All Students

Course	Number of Sections Taught	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 120	22	318	85.2%
CIS 123	4	42	85.7%

On-line Students

Course	Number of Sections Taught On-line	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 120	7	126	81.6%
CIS 123	2	20	91.3%

On Campus Students

Course	Number of Sections Taught On-line	Total Number Assessed	Percent of Students Obtaining the Objective at the 70% Level or Higher
CIS 120	15	192	85.2%
CIS 123	2	18	96.9%

Findings:

As illustrated by the data collected on the seven outcomes listed above, it can be determined that the CIS online learners are achieving the learning outcomes at a comparable rate to the on campus students.

**Public Safety, Law & Allied Health Distance Education Assessment
Conclusions**

During the fall and spring semesters this past year, 99 students were enrolled in the assessed AJS 101 and 209 courses. Four students attended class via Interactive Television. 100% of the students attending class from remote locations, via I.T.V. exhibited knowledge of competency in all of the performance objectives. 100% of the students from remote sites submitted portfolios, as did the students from Flagstaff. The work submitted by the students from remote locations exhibited excellence in comparison to those received from Flagstaff campus based students.

Summary of Assessing Student Learning Outcomes at Coconino Community College

Coconino Community College illustrates, and has documented through a thorough academic assessment program in accordance with the expectations of the Higher Learning Commission, that it fulfills the criteria for accreditation. The College presents data throughout this report that it carries out its vision and mission and is driven by its core values of learning.

The College's dedication to effective teaching and learning is strongly stated in its vision and mission and that dedication is apparent in a large number of ways throughout college academic programs. CCC's academic assessment program was composed in an attentive and concerted approach to address student learning at many different levels. Through our academic assessment activities we have recognized our strengths and weaknesses and continue to implement changes to improve student learning.

**Projects, documents and studies referred to in this monitoring report can be found on the CCC Institutional Research and Assessment Website
<http://www.coco.cc.az.us/instres/>**

Appendix

Coconino Community College Academic Assessment Program

Coconino Community College is committed to its mission to promote student success through comprehensive learning opportunities. Assessment is the ongoing process of analyzing and evaluating CCC's functions and activities. Information gathered enables the College to understand its effectiveness and improve its educational offerings and services. Assessment and institutional effectiveness activities at CCC emphasize feedback on teaching and learning. The information is used to plan and improve instruction, support services, administrative functions, and cultural and community support.

CCC's Annual Academic Assessment Plan consists of the following institutionalized processes:

- **Academic Department Chair Assessment Activity Reports**
 - Each Department Chair submits an annual report describing assessment activities, feedback-based results, related curricular/instructional changes, and budget implications.
- **Developmental Education Assessment Studies**
 - **English and Math Placement Test Scores/Student Course Grade Correlation Study** - CCC has been conducting a study of placement scores for math and English in correlation with final grades of the courses students were placed.
 - **Page Campus Developmental Education Study** - Comprehensive assessment of developmental education student success.
- **General Education Assessment Studies**
 - **Academic Profile Test (ETS)** - The Academic Profile assesses academic skills acquired through undergraduate general education course. The Academic Profile measures not only college-level reading, writing, and critical thinking in the context of the humanities, social sciences and natural sciences but also mathematics.
 - **Page Campus General Education Pilot Study** - Rotates its focus on several general education learning outcomes each year.
- **Graduate Exit Survey** - A comprehensive survey asking graduates their satisfaction with their CCC experience and success with their continued education and/or employment information.
- **Alumni Survey** - A comprehensive survey asking two-year out graduates their satisfaction with their CCC experience and success with their continued education and/or employment information.
- **IDEA Evaluations/Survey Report and Longitudinal Study** - Evaluates the correlation between faculty responses regarding "essential" general education learning outcomes and student responses to their perceived progress towards those outcomes.
- **ASSIST Report** (Arizona State tracking system of transfer students)
- **Northern Arizona University/Coconino Community College Transfer Student Survey**

2005-2006 Academic Assessment Schedule

Assessment Activity/Study	Administration Timeline	Report Results
Academic Dept Chair Assessment Activity Reports	Fall/Spring 2005-2006	May 2006
Eng & Math Plcmt Test Scr/Stud Crse Grade Corr Study	Fall/Spring 2005-2006	Summer 2006
Page Campus Developmental Education Study	Fall/ Spring 2005-2006	May 2006
Academic Profile Test	March/April 2006	May 2006
Page Campus General Education Pilot Study	Fall/Spring 2005-2006	May 2006
Graduate Exit Survey	Winter 2006	Spring 2006
Alumni Survey	Winter 2006	Spring 2006
IDEA Evaluations/Survey Report and Longitudinal Study	Fall/Spring 2005-2006	Spring 2006
ASSIST	Summer 2005	Fall 2005
NAU/CCC Transfer Student Survey	Winter/Spring @ NAU	Spring 2006