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ABSTRACT

In fall 1991, the faculty and staff of New Mexico State University-Alamogordo (NMSU-A) designed and implemented a strategic planning process which incorporates a comprehensive annual review of various aspects of student academic achievement (SAA). The faculty-based SAA assessment process includes activities focused on classroom instruction, student success by discipline, program-related successes, and the training and resources provided to support related research and improvement efforts. Many instructors have conducted classroom assessment activities, and some have worked together to study SAA in course or discipline groups. On an institutional level, efforts are underway to study entire groups of students, develop an SAA database, and study the possibility of an institution-wide standardized testing program. This report presents a brief review, by instructional division, of many of these study projects, including: (1) program-related studies in Developmental Mathematics, regular Mathematics, Biology, Chemistry, Engineering, Electronics Technology, Medical Laboratory Technology, and Emergency Medical Technology; (2) assessment activities in seven art classes, four college-level English courses, and two reading classes; (3) employer and graduate satisfaction surveys and state board testing of nursing graduates, and SAA studies of early childhood education, secretarial administration, and photographic technology students; (4) a study of business and education students who transferred to the main campus and other classroom research projects conducted by social sciences instructors in the fields of economics and psychology; (5) institutional initiatives such as the cohort study; and (6) efforts related to in-service training, faculty evaluation, and the institutional planning process. (MAB)

Alamogordo Branch
Community College

Student Academic Achievement

REPORT TO THE PROVOST

Prepared by

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March, 1993

Student Academic Achievement

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ABSTRACT

From a standing start at the beginning of the Fall, 1991 semester, the faculty and staff of NMSU-Alamogordo have designed and implemented a strategic planning process which incorporates a comprehensive annual review of various aspects of student academic achievement (SAA). NMSU-A efforts to address SAA feature the following characteristics.

1. The process is primarily faculty-based; virtually every regular faculty (and many part-time faculty) are involved in various projects.

2. Various faculty designed SAA assessment projects to include activities focused on classroom instruction, on student success by discipline, and on program related success.

3. Institution-wide projects include the establishment of a database, use of student surveys, and implementation of a program for testing of incoming freshmen.

4. The Institutional Assessment and Strategic Planning process incorporates ongoing assessment of SAA.

5. Training and resources have been provided to support research and improvement efforts related to SAA.

6. As defined by NMSU-Alamogordo, the process of assessment of various aspects of SAA includes the definition and implementation of procedures for improvement of SAA.

Student Academic Achievement

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INTRODUCTION

In 1990, the faculty and staff at NMSU-Alamogordo launched an Institutional Self-Study. A critical feature of this self-study was a review of the concept and processes related to student academic achievement at the college. Since student academic achievement was an item of interest of the North Central Association of Colleges and Schools, it was decided to prepare this report to review and summarize the college's effort in this arena.

Research in the concepts of student academic achievement has been addressed in three ways at NMSU-Alamogordo.

1) Many instructors have conducted classroom assessment activities designed to determine ways to improve instructional processes in individual classrooms;

2) Instructors in some academic disciplines have worked together to study student academic achievement in course or academic discipline groups;

3) On an institutional level efforts are underway to study entire cohorts of students, to develop a comprehensive institutional database related to student academic achievement, and to study the possibility of an institution-wide standardized testing program.

This report includes a summary review of each of these activities. Appropriate documentation of each activity is available upon request. In addition to the assessment projects, the college has undertaken several institutional efforts to strengthen the process of assessment and improvement of student academic achievement.

1) The faculty has sponsored a series of in-service training programs related to student academic achievement;

2) Completion of projects related to student academic achievement has been included as objectives in faculty evaluation documents during CY 1993.

INSTRUCTIONAL RESEARCH

The NMSU-Alamogordo approach to improvement of student academic achievement focuses on studies by individual instructors. A great many classroom assessment activities related to student academic achievement have been completed and reported by instructors at NMSU-Alamogordo. Many of these reports have been reported in the college's Institutional Self-Study (1990-1993). Most have been reported in the first two levels of the Institutional Assessment and Strategic Planning Process (1992-93). Following is a brief review, by instructional division, of many of these projects. Other projects are underway during the current semester.

DIVISION OF MATHEMATICS, SCIENCES, AND TECHNOLOGIES

The Division of Mathematics, Sciences and Technologies focused its analysis of student academic achievement on programs. Program related studies were completed in Developmental Mathematics, regular Mathematics, Biology, Chemistry, Engineering, Electronics Technology, and Medical Laboratory Technology.

Developmental Math

Assessment of Student Academic Achievement in Developmental Math was reviewed by following students who completed CCDM 114N in the Fall, 1991 to determine subsequent success in a mathematics course. Fifty-seven students who had previously completed CCDM 114 (developmental math) enrolled in Math 115, Intermediate Algebra, in the Spring, 1992 semester. Those fifty-seven Math 115 students who had previously completed CCDM 114N achieved a GPA of 2.4 in Math 115. Those sixty-two students who qualified for Math 115 as a result of their scores on a placement exam achieved a mean GPA of 2.9 in Math 115. Students completing Math 114N in the Fall of 1991 completed a test designed to determine their progress in a variety of math skills taught during the course. Item analysis of the results of this test revealed a number of areas in which the students were less than fully prepared. As a result of this analysis, steps have been taken to strengthen the instructional processes in Math 114N (Table 1).

TABLE 1

AREAS OF WEAKNESS FOR STUDENTS COMPLETING CCDM 114N POST-TEST (N=122)		
Concept	Percentage of Students Who Missed Concept Fall,1991-Spring,1992	
Mixed operations with signed numbers	65%	61%
Finding common denominator	57%	59%
Absolute value	67%	40%
Reducing an algebraic fraction	63%	54%
Evaluating an algebraic expression	83%	52%
Solving an equation with fractions	74%	59%
Multiplying algebraic fractions	34%	55%
CCDM 103N POST-TEST (N=71)		
Percentage increase	61%	62%
Percentage of whole	69%	72%
Perimeter	74%	73%
Average (mean)	53%	50%
Square root of a number	68%	63%
Square root expression	77%	67%
Price per ounce	76%	66%

Source: Math Skills Center Records

Following completion of these post-test assessments, the instructors met and agreed to emphasize more strongly instructional efforts in the identified weak areas. Lab activities were also revised. Percentages Spring, 1992, shown in the right hand column, indicate some improvement in student scores, possibly as a result of changes implemented by the instructors.

Mathematics

Student Academic Achievement in several Math courses was studied by measuring the degree of success in the subsequent math course. The assumption underlying this method was that, for example, a student has achieved sufficient academic gain in Math 115, Intermediate Algebra, if he or she is successful in the following Math course, Math 185, College Algebra. The results of this study, shown in Table 2, show a level of success in subsequent Math courses.

TABLE 2

Student Success by GPA in Follow-On Math Courses			
Course Evaluated	**GPA**	**Subsequent Course**	**GPA**
MATH 111	3.1	MATH 112	2.58
MATH 115	3.3	MATH 185	2.87
MATH 180	3.5	MATH 191	3.16
MATH 185	2.875	MATH 191	2.74
MATH 191	3.4	MATH 192	3.457
MATH 192	3.2	MATH 291	3.6

SOURCE: Student transcripts.

Biology

Assessment of SAA in the Biology program involves review of the scores of nursing graduates on The National League of Nursing Comprehensive Achievement Examination. Percentile scores of NMSU-Alamogordo nursing graduates are shown in Table 3. The Alamogordo graduates scored above the 50th percentile on all biology related subtests, the high score being the 78th percentile in physiology (N=18).

TABLE 3

Mean Component National Percentile Scores of Eighteen Graduates of NMSU-Alamogordo Associate Degree of Nursing Program, 1991	
Test Component	**Percentile Score**
Micro Organisms	54
Immunology	57
Epidemiology	53
Anatomy	70
Physiology	78

SOURCE: New Mexico State Board of Nursing.

Future plans for this assessment project include comparing the achievement of nursing students with the achievement of non-nursing students to insure that analysis of the NLN scores reflect the achievement of a cross section of biology students.

Chemistry

In order to assess SAA in Chemistry, students who complete Chemistry 112 each semester are administered the General Chemistry Test, a nationally normed examination published by the American Chemical Society. The results of the Spring 1991 test indicated that NMSU-Alamogordo students averaged in the 46th percentile of the national norming group for this test (N=30). Since Chemistry 110G, Principles and Applications of Chemistry, is required of all nursing students, scores of NMSU-A students on the chemistry portion of this test were reviewed for the Spring, 1991 class. NMSU-A nursing students averaged in the 65th percentile nationally on this test (N=36).

Engineering

Many engineering students complete their first two year of preparation at NMSU-Alamogordo prior to transferring to the Las Cruces campus to complete their studies. As an indication of their preparation in engineering at NMSU-A, the engineering staff followed the progress of a group of engineering students after transfer to Las Cruces. Analysis of the *Branch to Main Campus Report* (Fall, 1991) indicates that eleven students who had earned a GPA of 3.2 at Alamogordo attained a GPA of 2.5 during their initial semester in the College of Engineering at NMSU-Las Cruces. In addition, those students listed on the *Branch to Main Campus Report* (Fall. 1988) were tracked as of June, 1992, five of the fourteen students identified have received bachelors degrees. The mean GPA for the 1988 cohort was 3.088 for courses taken at Alamogordo, and 3.002 for courses taken at Las Cruces.

Electronics Technology

Student Academic Achievement of students in the Electronics Technology Program was reviewed by surveying employers of recent graduates. Survey questions and responses were shown in Table 4. The results indicate that employers are generally well satisfied with selected items of knowledge and ability of program graduates. No responses reflected below average degree of satisfaction with graduates in any area surveyed.

TABLE 4

ASSESSMENT OF TECHNICAL SKILLS OF NINE GRADUATES OF NMSU-ALAMOGORDO ELECTRONICS TECHNOLOGY PROGRAM					
Question	Extremely Well	Fairly Well	Average	Not Very Well	Not Observed
1. How well does this person understand digital circuits?	66.7%	33.3%			
2. How well does this person understand analog circuits?	66.7%	33.3%			
3. How well does this person use test equipment?	77.8%	11.1%	11.1%		
4. How well does this person read and understand technical data?	66.7.%	33.3%			
5. How well does this person remove and replace electronic components?	88.9%	11.1%			
6. How well is this person able to troubleshoot electronic equipment?	55.6%	33.3%	11.1%		
7. How well does this person write technical reports?	33.3%		11.1%		55.6%

SOURCE: Survey of Employers of graduates of Electronics Technology Program.

Medical Laboratory Technology

Student academic achievement of students in the Medical Laboratory Technology program is evaluated bi-annually using scores on the National Registry Exam taken by students following graduation. The student mean scores for the 1991 class were above the national average in all subtest categories (Table 5). Scores of students from previous graduating classes from the MLT program have been consistently very high compared to national norms.

TABLE 5

Mean Percentage Score by Subtest of Five Graduates of NMSU-Alamogordo Medical Laboratory Technology Program, 1991		
	Program Mean P-Scores	National Mean P-Scores
*MICR	0.81	0.55
*HEMA	0.69	0.66
*CHEM	0.85	0.67
*BBNK	0.74	0.68
*IMMU	0.85	0.70
*BF	0.75	0.64
*MICR = Microbiology, HEMA = Hematology, CHEM = Chemistry, BBNK = Blood Bank, IMMU = Immunology, BF = Body Fluids		

SOURCE: Medical Laboratory Technology program records.

Emergency Medical Technology

A direct measure of student academic achievement of students completing the Emergency Medical Services course (OEEM 110) is obtained through administration of the state-sponsored Emergency Medical Services Academy examination for the Emergency Medical Technician's Certificate. Seventy percent of graduates are successful the first time they take this test. Ninety-nine percent of graduates pass the test by the second attempt.

DIVISION OF HUMANITIES

The Division of Humanities sponsors developmental studies in English as well as instructional courses in Art, Communications, English, Music, Spanish and Theatre Arts. Assessment activities related to student academic achievement have been completed in each of these areas.

Art

Student academic achievement was reviewed in all art courses during the 1991-92 academic year. Many students had their work displayed in and-of-the-year exhibit. The focus of the art department was assessment of progress by individual students rather than progress by groups of students.

Art 101G, Orientation in Art. At the outset of this lecture course, the instructor solicited a list of individual expectations for the course. The attempt was then made to design the course content to enable students to meet expectations. In addition, a pretest-posttest design was employed to assess student academic gain during the course. The mean student gain was 9.7 points out of a total possible of 25 points (N=47).

Art 110G, Introduction to Visual Concepts. The instructor employed a pretest-posttest design to assess student acquisition of key concepts defined by the course. In addition students identified; 1) what concepts had been discussed; 2) how those concepts were identified by student work; and 3) what concepts of ideas remained unclear. The results of the assessment project identified those concepts which larger numbers of students failed to grasp. The instructor was enabled to adjust her teaching strategies for future sections of the course (N=9).

Art 150, Drawing I. The instructor assessed SAA by examining drawings of twenty-seven students from the beginning of the course and from the end of the course. The student was then asked to compare the two drawings, reflecting what he or she had learned. In addition, an assessment committee of three individuals, a student, the instructor, and another instructor,

reviewed SAA as related to the course objectives. Specific areas of deficiency were identified, enabling the instructor to design alternative instructional modes for future classes.

Art 151, Drawing II. Student academic achievement of four students in Art 151 was reviewed using two tools: self-identification of gains, and participation in an art exhibit. Using questionnaires designed by the instructor, students identified personal objectives and results very similar to those identified by the instructor. As a result of student concerns, the instructor has incorporated additional work in specific areas into her course. In addition, each student in the course developed a portfolio. These portfolios were displayed in an exhibit at the end of the semester.

Art 251 and Art 252, Drawing III, IV. The instructor evaluated SAA of seven students in these courses by means of a portfolio evaluation process. Each student prepared a portfolio of work produced during the semester. At the end of the semester the instructor summarized strengths and concerns related to each student's work. Students were then asked which problems were most challenging and difficult.

Art 260, Painting I; Art 261 and Art 262, Aspects of Painting. Student gain in the painting classes was reviewed through the use of group critiques and instructor analysis of student efforts. The student group critiques enabled students to obtain insight into their own work from the perspective of other students. In addition, student portfolios were displayed at the end-of-semester art display (N=7).

Art 294, Special Topics: Watercolors. Assessment of SAA in this course was achieved by means of videotapes of students critiquing their own work. In addition, the instructor made a separate videotape of student work and provided comments to individual students about progress made and concerns (N=19).

English

Instructors in the English discipline cooperatively developed a strategy for assessing SAA by means of a case study process. Studies were completed for CCDE 105N, Effective Communication Skills (developmental), and for a number of academic English courses.

CCDE 105N, Effective Communication Skills. The instructors assessed progress of five randomly selected students by tracking their scores on the Blumenthal English 2600 tests, by holistically grading three of their compositions, and by comparing their levels of self-confidence at the beginning of the course with their levels of self-confidence at the end of the course. The instructors prepared detailed analyses of the subjects.

English 111G, Freshman Composition I. The instructors for this course assessed the academic achievement of six randomly selected ENGL 111G students by holistically grading two of their numbered compositions, one from the beginning of the course and one from the end of the course. From these samples, the team concluded that the course does improve the students' use of English mechanics; it does foster detailed and specific writing as opposed to shallow, generalized writing; it does help students improve sentence structure and organizational skills; and it does foster a sense of self-confidence in the student relative to his or her writing ability.

English 112, Freshman Composition II. A team of English 112 instructors assessed the academic achievement of students by holistically grading the entrance essays and the exit essays of the entire class. Improvements were identified in these essays in such areas as improved sentence structure, organization, specificity of diction, and audience identification.

English 218G, Technical and Scientific Communication. The assessment team holistically graded four assignments for a sample of ENGL 218G students selected from two sections of the course. Students demonstrated progress as the semester progressed in terms of their mean holistic scores on the various assignments.

Reading

Students are placed in one of several reading courses on the basis of a score in the Nelson-Denny Reading Test Form C. Student academic achievement is evaluated for all students by administering Form D of the same test to all reading students during the final day of class. Table 6 presents a sample of scores of various students from Reading 108. Table 7 presents a similar array for students in Reading 113. The results, on balance, indicate significant progress by reading students during the semester.

TABLE 6

Assessment for CCDS 108 - Section AA, Spring 1992 (N=10)									
Student	Form C			Form D			Improvement		
	VGE	CGE	RRGE	VGE	CGE	RRGE	VGE	CGE	RRGE
S #1				11.6	8.7	13.8			
S #2	13.1	8.1	7.7	13.8	12.6	13.8	.7	4.5	6.1
S #3	8.6	7.5	6.0	11.3	10.6	12.7	2.7	3.1	6.7
S #4	13.9	8.1	6.5	14.9	9.2	15+	1.0	1.1	8.5
S #5	9.2	8.1	6.0	11.6	10.6	12.7	2.4	2.5	6.7
S #6	10.9	6.3	6.0	11.0	11.2	15+	.1	4.9	9.0
S #7	13.3	7.5	7.7	14.7	13.7	15+	1.4	6.2	7.7
S #8	13.6	7.0	-6.0	13.9	11.9	13.2	.3	4.9	7.2
S #9	11.7	10.8	6.0	12.5	11.2	13.8	.8	.4	7.8
S #10	13.5	8.1	15.3	13.6	10.6	15+	.1	2.5	

TABLE 7

Assessment for Reading 113 - Sections AA, AB, & AC (N=25)

Spring 1992

Student	Nelson-Denny Form C			Nelson-Denny Form D			Improvement		
	Voc.	Comp.	Rate	Voc.	Comp.	Rate	Voc.	Comp.	Rate
S #1	11.1	6.6	-6.0	11.9	10.6	15+	.8	4.0	9.0
S #2	13.1	10.1	10.3	13.1	10.6	15+		.5	4.7
S #3	8.1	7.0	7.0	8.3	7.5	15+	.2	.5	8.0
S #4	14.8	8.1	6.5	14.8	8.1	15+			8.5
S #5	15.0	11.5	7.0	15+	11.2	15+		-.3	8.0
S #6	15.0	8.7	10.3	15+	13.4	15+		4.7	4.7
S #7	7.9	7.0	6.0	9.6	9.2	15+	1.7	2.2	9.0
S #8	14.3	7.5	11.3	14.7	14.0	15+	.4	6.5	3.7
S #9	14.5	13.5	10.3	15+	14.0	15+	.5	.5	4.7
S #10	15+	6.0	15.3	15+	13.1	15+		7.1	
S #11	14.7	7.5	8.4	14.7	10.6	10.3		3.1	1.9
S #12	8.1	9.3	13.0	11.6	11.9	15+	3.5	2.6	2.0
S #13	13.9	10.8	8.4	13.9	11.2	15+		.4	6.6
S #14	12.7	8.7	15.3	15+	13.4	15+	2.3	4.7	
S #15				12.7	11.2	15+			
S #16	10.1	8.1	10.3	11.3	10.6	15+	1.2	2.5	4.7
S #17	13.6	13.2	6.5	13.8	11.9	15+	.2	-1.3	8.5
S #18	12.7	9.3	-6.0	13.5	11.9	15+	.8	2.6	9.0
S #19	13.3	10.8	13.0	13.8	13.7	15.1	.5	2.9	2.1
S #20	13.6	10.0	7.0	14.6	10.6	15+	1.0	.6	8.0
S #21	12.0	7.5	-6.0	12.2	11.2	13.8	.2	3.7	7.8
S #22	13.3	10.0	10.3	13.3	10.6	15+		.6	4.7
S #23	10.5	13.5	12.3	7.6	13.7	15+	-2.9	.2	2.7
S #24	15+	10.0	11.3	15+	11.2	15+		1.2	3.7
S #25	9.6	7.5	9.1	12.7	8.1	15+	3.1	.6	5.9

DIVISION OF PROFESSIONAL OCCUPATIONS AND TECHNOLOGIES

The Division of Professional Occupations and Technologies (PROTEC) includes several Associate Degree and Certificate programs. Assessment of Student Academic Achievement has been assessed within the division in Nursing, Early Childhood Education, Secretarial Administration, and Photographic Technology.

Nursing

The nursing staff annually assesses SAA using several strategies. The results of these assessment projects have been used to adjust curriculum, revise teaching strategies, and strengthen course content.

Employer Survey Each semester a survey of employers of graduates of the NMSU-Alamogordo ADN program is conducted. The survey is sent to employers one year after a student graduates. Results of this survey have typically indicated that students are generally well-prepared but may require additional clinical practice in such areas as nursing skills, time management, and organization of client care.

Graduate Comfort Survey This survey which has been used for many years, is sent to NMSU-Alamogordo ADN graduates six months and one year after graduation. The purpose is to ascertain student perceptions as to the adequacy of their of their preparation once they have entered the work world. Typically there is little change in graduate perceptions between the six-month and the one-year surveys.

State Board Testing ADN graduates who wish to become certified must successfully complete the NCLEX State Board Examination. The New Mexico State Board of Nursing requires a long-term school pass rate of 80% or better. Table 8 depicts the pass rate of students from NMSU-Alamogordo from May, 1988 to the present.

TABLE 8

School Pass Rate for First-Time Testees Who Are Graduates of the NMSU-Alamogordo ADN Program, 1988-1992 Test Results		
	Graduates	State Board Pass Rates
May, 1988	20	80%
May, 1989	20	95%
December, 1989	14	92.7%
May, 1990	21	85.7%
December, 1990	3	100%
May, 1991	32	87%
December, 1991	19	89.4%
July, 1992	19	78.9%

SOURCE: New Mexico State Board of Nurses.

Early Childhood

The Early Childhood Education program at NMSU-Alamogordo is relatively new, having been fully instituted for the Fall 1991 semester. Student Academic Achievement in the program is assessed on the basis of state administered certification testing program. As of this writing three persons have graduated from this program; all three successfully completed their certification testing on the first attempt. It will not be possible to develop a meaningful pass rate until many more graduates have tested.

Secretarial Administration

Students in Secretarial Administration typing courses (SA 102 and SA 202), are tested each semester to determine their total gain during the course. During the second eight week program, seven of eight students were tested and completed their final typing tests with scores better than the required 45 words per minute.

As a result of this assessment process, the instructors decided to lengthen the course from eight to sixteen weeks in order to provide students more opportunity to practice typing skills and improve their final typing scores.

Photographic Technology

The SAA of students enrolled in the various photographic technology courses is assessed in two ways. During the semester critiques of student photographs are critiqued by both fellow students and the instructor. These critiques not only identify strengths and concerns about student works, but also provide suggestions for improvement. As the semester progresses, photography students assemble portfolios, which are placed on public display at the conclusion of the semester.

DIVISION OF SOCIAL SCIENCES AND BUSINESS

Several projects related to the study of student academic achievement have been completed by instructors in the Division of Social Sciences and Business.

Branch-to-Main Campus Report

The Branch-to-Main Campus Reports (Fall, 1992) identified students from both business and education who had transferred from NMSU-Alamogordo to main campus. After their initial semester at main campus, three of ten education students had improved their GPA's after transfer; six others had experienced a decline in grades, while one had withdrawn. Of seventeen education students who had transferred from NMSU-Alamogordo, six had improved their GPA's after their first semester at main campus, while ten had earned lower grades and one had withdrawn. A study of previous cohorts of transfer students indicates that grades tend to drop somewhat during the first semester following transfer, and then tend to rise to approximately the level they were prior to transfer.

Economics

Employing a pretest/posttest design a study was completed of academic achievement made by students in five sections of economics courses. The instructor reported that "what appears to be significant improvement [in academic achievement] took place in all three courses (five sections)". The most improvement occurred in ECON 252 (Microeconomics). There was evidence of greater improvement in afternoon classes than in evening classes. Ten students participated in the study from ECON 201G. The study also included fifty-eight students from ECON 251G, and twenty-two students from ECON 252G.

Psychology

One psychology instructor demonstrated to his students the importance of studying daily rather than cramming for examinations. He designed an in-class research project involving students. In preparation for a quiz, students were asked to record the number of minutes they studied during each of the six days prior to the quiz. "r" was calculated for the relationship between 1)

the student's grade on the quiz and the total number of minutes spent preparing for the quiz; and 2) the student's grade and the number of days during which any study time was devoted to the quiz. The results of the project were such that there was no significant statistical relationship between grade and number of minutes studied, while there was a significant relationship between actual days during which study took place and grade ($r = .46$, $\alpha = .05$). The results of the study tended to reinforce for students the importance of daily attention to study activities (N=45).

A different psychology instructor employed a pretest-post-test design to assess SAA in three separate courses: PSY 201G (N=101), PSY 266 (N=26), and CEP (N=50). The instructor indicated that satisfactory progress was made by students in all three classes. As a result of these processes the instructor implemented certain activities to facilitate improvement of learning by students.

INSTITUTIONAL INITIATIVES

Student Academic Achievement

The foregoing section of this report outlined assessment and improvement efforts related to student academic achievement and generated by individual faculty and teams of faculty within the institution's divisional structure. In addition three significant SAA initiatives are currently underway at the institutional level. One project is reviewing the progress of the Fall, 1992 cohort of NMSU-A students as they proceed through the college system. A second, related initiative involves establishing an institutional database to enable rapid response research in a multititude of student related areas. The third effort, currently in its infancy, involves development of a comprehensive testing program for incoming freshmen (first-time college students) in order to establish an objective basis for admission and assignment to classes (including developmental classes). This project would also establish a database for future institution wide assessment of student academic achievement. Under the management of the Associate Provost, each of these projects is being coordinated through The Office of Institutional Research.
The current status of each of these projects is outlined below.

Cohort Study A comprehensive demographic survey was completed by nearly all students registering during the Fall, 1992 registration period. Attachment 1 is a blank survey form. The survey form was voluntarily completed by 1,773 of 2,000 registering students. This information has already been entered into the institutional database, coded by student SSAN. It is the strategy of the Institutional Research Coordinator to gather approximately the same information from each incoming group of students during each subsequent Fall semester.
This information is now available for research projects related to individual students. Forthcoming projects will focus not only on student academic achievement but also on segment-related factors such as student retention, program development, and student attitudes. In addition, student demographic data is available for projects initiated by individual faculty and teams of faculty.
Initial results based on this data should be available as early as March, 1993.

Student Institutional Database Information obtained from student surveys described above will be merged with data from the Las Cruces Campus Student Information Files into a student

database for NMSU-Alamogordo students. Student related information in this database is coded by student SSAN. The Coordinator of Institutional Research has already established this database, which involves on-line access to the NMSU-Las Cruces mainframe. Since specific information is available related to individual students, this information may now be used for a variety of research purposes. Projects studying student academic achievement can be segmented a myriad of ways including by group (male/female, ethnicity, age, etc.). Other efforts may precisely describe the demographic makeup of the body of students. The availability of this student-specific database may be unique in the State of New Mexico among two-year institutions. Results of initial projects employing this database should be available as early as March, 1993.

Testing Program for First-Semester Freshmen The Academic Council has taken the initiative in examining the possibility of instituting an institutional testing program for incoming freshman: The impetus for this program has been the recent enrollment (under the present open-enrollment policy) of a number of students who are clearly not academically equipped for college-level work.

This project is currently in the research phase. The following sequence of events is envisioned as the committee develops this project.

1. A review of literature is to be completed.
2. Copies of various standardized tests will be reviewed (several are already under review).
3. Projects underway at other two-year institutions are to be considered.
4. NMSU-Alamogordo requirements will be specifically defined.
5. NMSU, State and Federal rules will be reviewed.
6. Student attrition will be examined.
7. A recommendation will be made as to whether such a program should be instituted at NMSU-A.
8. If the recommendation is to proceed with institution of a testing program, then recommendations will be made as to specific procedures and test(s) to be employed.

Final recommendation of the committee can be expected by May, 1994. It is anticipated that such a testing program, if adopted, would provide an objective academic baseline for the ongoing assessment of student academic achievement.

RELATED EFFORTS

In addition to specific research efforts outlined above, the college has instituted three additional efforts designed to strengthen assessment of student academic achievement.

In-service Training

A program of in-service training projects was instituted during the Fall, 1992 semester, presenting topics related to student academic achievement. These sessions have provided both theoretical background and training in specific SAA techniques. Thus NMSU-A faculty was not only encouraged to participate in the program, but also provided technical background to use in the development of SAA projects. These training sessions, under the sponsorship of the College Teaching Committee, are ongoing.

Faculty Investment

Virtually all regular faculty have participated in various projects related to the assessment of student academic achievement. To further reinforce faculty involvement, each faculty member was asked to include a project related to SAA on his or her CY 1993 evaluation document.

Institutional Assessment and Strategic Planning Process (IASP)

The NMSU-Alamogordo IASP process was designed and implemented to incorporate assessment of SAA on an annual basis. The IASP process involves not only the specified research projects, but also means of defining instructional and other improvements instituted as a result of information obtained from the assessment process. Thus SAA research and improvement projects are now institutionalized and should be an integral part of the business of the college in years to come.

References

Cross, K. P., & Angelo, T. A. (1988). Classroom assessment techniques: A handbook for faculty (Technical Report No. 88-1-004.0). Ann Arbor, MI: University of Michigan, National Center for Research to Improve Postsecondary Teaching and Learning.

New Mexico State University at Alamogordo (March, 1993). Institutional Self-Study, 1990-1993 Alamogordo, New Mexico