



P r o g r e s s R e p o r t

An Evolutionary Path Toward a More Seamless Delivery System

Making the Senior Year Count: A Focus on Outcomes

September 2004

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I. Background

- A. Enrollment in Regional Academies and Post-secondary Enrollment Options(PSEO):
approximately 650 students per year on and off-campus

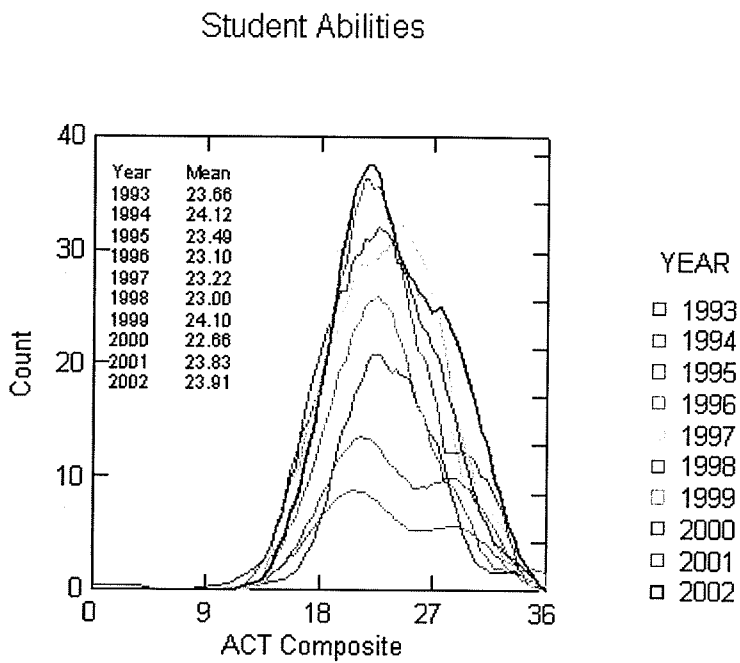
- B. Tech Prep:
 - a. Seventeen high schools offer Tech Prep programs
 - b. Seven Tech Prep Hub sites have been established:
 - i. Clear Lake – Automotive Technology
 - ii. Mason City – Information Systems Technology
 - iii. Garner-Hayfield – Information Systems Technology
 - iv. NIACC Campus – Tool and Die Technology
 - v. West Hancock –Health Education
 - vi. Charles City – Business and Information Technology
 - vii. Hampton -- Business and Information Technology

II. What are the Ability Levels of Students Enrolling in Post-Secondary Enrollment Options Courses?

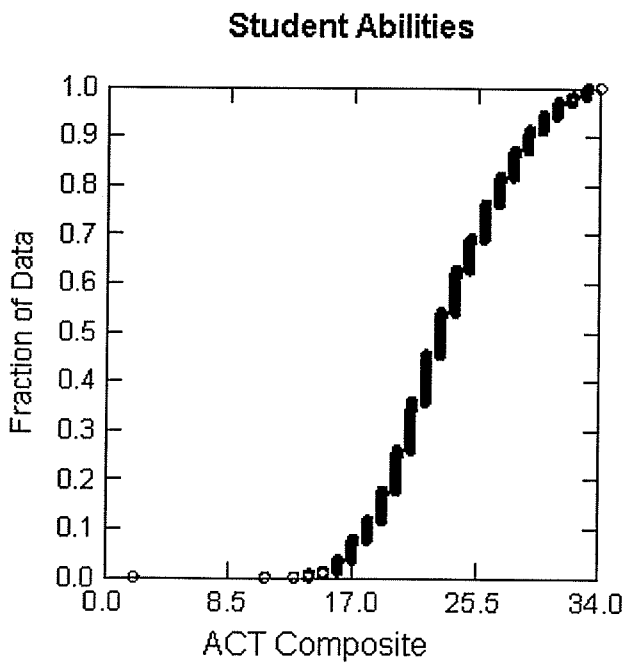
- A. The mean ACT composite scores from 1993 to 2002 are listed below:

| <u>Year</u> | <u>ACT Composite Mean</u> |
|-------------|---------------------------|
| 1993 | 23.66 |
| 1994 | 24.12 |
| 1995 | 23.49 |
| 1996 | 23.10 |
| 1997 | 23.22 |
| 1998 | 23.00 |
| 1999 | 24.10 |
| 2000 | 22.66 |
| 2001 | 23.83 |
| 2002 | 23.91 |

B. ACT composite scores of PSEO students from 1993-2002:



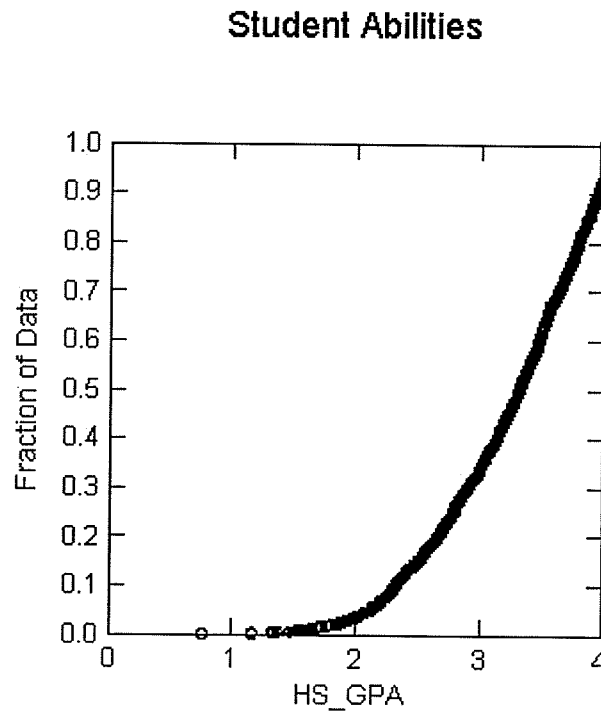
C. The next graph is a quantile plot of ACT Composite scores from 1993-2002. Note that the median ACT composite score is 23.51.



D. Mean high school GPA scores from 1993 to 2002 are listed below:

| <u>Year</u> | <u>Mean High School GPA</u> |
|-------------|-----------------------------|
| 1993 | 3.24 |
| 1994 | 3.21 |
| 1995 | 3.04 |
| 1996 | na |
| 1997 | 3.16 |
| 1998 | 3.25 |
| 1999 | 3.29 |
| 2000 | 3.27 |
| 2001 | 3.17 |
| 2002 | 3.20 |

E. High school GPA scores are displayed as a quantile plot in the next graph:



F. Conclusion about PSEO students:

- a. We are attracting a capable cohort of PSEO students.
- b. PSEO students enter courses with higher levels of ability than traditional college students on the NIACC campus.

III. What are the Outcomes of Regional Academies Post-Secondary Enrollment Options?

A. Quality control studies involving the assessment of student outcomes for Regional Academy/Post-Secondary Enrollment Options (PSEO) courses have been completed for a number of years. The following represents a synopsis of the studies:

a. Communications Skills I

Site: Clear Lake Community School District
Course: Communications Skills I

Methodology: Final writing papers from a traditional NIACC Communication Skills course (25 students) and the PSEO course (28 students in two sections at Clear Lake) were collected. The names of the students and any other identifying characteristics were removed from the papers. The papers were shuffled and then submitted to Dr. James Zirnheld, instructor and Division Chair, for assessment. Each paper was graded on a 0 to 4 scale on six separate criteria: purpose, content, organization, sentences, diction, and mechanics.

Findings: The null hypothesis that the means of the two groups were not significantly different at .05 probability was accepted.

Conclusion: Student writing outcomes are equal, as assessed by an evaluation of final writing papers.

b. General Psychology

Site: Garner-Hayfield Community School District
Course: General Psychology

Methodology: As the Garner students had an average 89th ITED percentile score, a matched pair methodology was employed. That is, a NIACC psychology instructor matched Garner students with high ability traditional students in his class. Outcomes were assessed on the basis of a 100-point multiple-choice exam.

Findings: The Garner class mean was 84.35 with a standard deviation of 8.82. Campus mean was 84.82 with a standard deviation of 7.76. The t-test revealed no significant difference between the two groups at .05 probability.

Conclusion: Psychology outcomes as measured by a final exam are equal.

c. Criminal Law I

Site: Mason City Community School District
Course: Criminal Law I

Methodology: The final test was utilized for the evaluation. Nineteen students were enrolled in the Mason City PSEO class while 21 students were enrolled in the NIACC on-campus class.

Findings: The mean of the Mason City High School group was 42.37 with a standard deviation of 4.425. This compared to the NIACC mean score of 45.62 with a standard deviation of 8.43. A t-test was utilized to test the null hypothesis that there was no significant difference between the means. The null hypothesis was accepted at .05 probability.

Conclusion: Outcomes for the telecommunications course, Criminal Law I, as measured by the final exam were not significantly different for the PSEO class as compared to the NIACC on-campus class.

d. General Psychology

Site: North Central Community School District, Manly
Course: General Psychology

Methodology: A final exam was given to both the PSEO and traditional NIACC classes. As group size varied, it was agreed that the NIACC instructor would use the first 14 names in his grade book to compare with the 14 TAG (Talented and Gifted) students in the Manly class.

Findings: The mean of the Manly TAG class was higher, 3.53, than the mean of the traditional NIACC class, 3.03. A t-test was utilized to test the null hypothesis that there was no significant difference between the means. The null hypothesis was accepted at .02 probability.

Conclusion: Outcomes for the General Psychology as measured by the final exam were not significantly different for the PSEO class as compared to the NIACC on-campus class.

e. General Psychology

Site: Garner-Hayfield Community School District
Course: General Psychology

Methodology: As the Garner students represent a very high ability group, a matched pair methodology was employed. That is, a NIACC psychology instructor matched Garner students with high ability traditional students in his class.

Findings: The Garner class mean was 81.2 with a standard deviation of 7.23. The campus mean was 83.1 with a standard deviation of 6.36. The t-test revealed no significant difference between the two groups at .05 probability.

Conclusion: Psychology outcomes as measured by a final exam are equal.

f. Business Statistics

Site: Garner-Hayfield Community School District

Course: Business Statistics

Methodology: As the Garner students represent a very high ability group, a matched pair methodology was employed. ACT scores were used to create the matched pairs.

Findings: The Garner class mean was 68.4 with a standard deviation of 4.49. The campus mean was 54.4 with a standard deviation of 6.12. The Garner class mean was higher than the campus class mean. However, the sample size was only five students, so the t-test revealed no significant difference between the two groups at .01 probability.

Conclusion: Business statistics outcomes as measured by a final exam are equal.

g. Business Statistics

Site: CAL Community School District

Course: Business Statistics

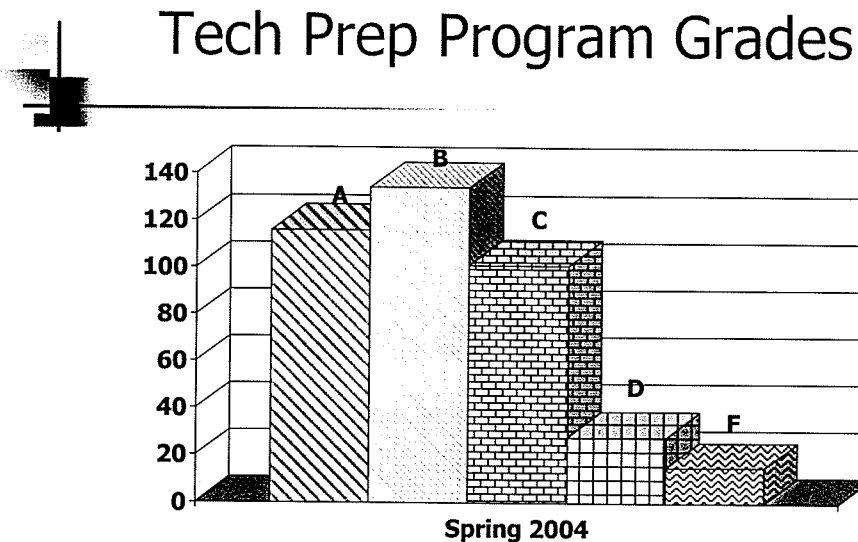
Methodology: As the CAL students represent a very high ability group, a matched pair methodology was employed. ACT scores were used to create the matched pairs.

Findings: The CAL class mean was 47.7 with a standard deviation of 6.02. The campus mean was 50.3 with a standard deviation of 1.89. The t-test revealed no significant difference between the two groups at .01 probability.

Conclusion: Business statistics outcomes as measured by a final exam are equal.

B. Tech Prep Outcomes

a. Example: Spring 2004 Grades:



b. College GPA at the completion of the 'high school component' of the program

1. 1999 Grads --- 2.80
2. 2000 Grads --- 2.77
3. 2001 Grads --- 2.81
4. 2002 Grads --- 2.87

c. Longitudinal Studies of the Tech Prep Classes of 1997, 1998, and 1999

NIACC has conducted three longitudinal studies of graduates in the Tech Prep program for the high school classes 1997, 1998 and 1999 who completed the Tech Prep sequence of courses during their junior and senior years. Telephone surveys, NIACC student history files, the Iowa Employee Centralized Register, and the National Student Clearinghouse Report were utilized to gather the information reported below:

Tech Prep Outcomes for the High School Class of 1997

| Average college credits earned by high school graduation | Average NIACC GPA at the time of high school graduation | Awarded a NIACC one-year career diploma | Awarded an associate degree | Transferred to a university or private college | Employed in Iowa | Average hourly wage |
|--|---|---|-----------------------------|--|------------------|---------------------|
| 26 semester hours | 2.80 | 35% | 47% | 15% | 93% | \$ 14.27 in 2003 |

Tech Prep Outcomes for the High School Class of 1998

| Average college credits earned by high school graduation | Average NIACC GPA at the time of high school graduation | Awarded a NIACC one-year career diploma | Awarded an associate degree | Transferred to a university or private college | Employed in Iowa | Average hourly wage |
|--|---|---|-----------------------------|--|------------------|---------------------|
| 28 semester hours | 2.70 | 15% | 59% | 18% | 90% | \$ 13.95 in 2003 |

Tech Prep Outcomes for the High School Class of 1999

| Average college credits earned by high school graduation | Average NIACC GPA at the time of high school graduation | Awarded a NIACC one-year career diploma | Awarded an associate degree | Transferred to a university or private college | Employed in Iowa | Average hourly wage |
|--|---|---|-----------------------------|--|------------------|---------------------|
| 28 semester hours | 2.82 | 48% | 52% | 22% | 88% | \$ 13.46 in 2004 |

Survey results indicate that 88-90% of NIACC Tech Prep graduates are working in Iowa with current average hourly pay of approximately \$14.00. The hourly wages ranged from \$8.00 (lowest) to \$25.00 (highest).

A sampling of Iowa employers for the 1997 graduates includes: Curries, Menards, Lichtsinn Motors, Cenex, Capital Financial, Ernie Williams LTD, Rydell Chevrolet, Schukei Chevrolet, Mic Gage Plumbing & Heating, Mechanical Air Systems, St. Mary's Hospital-Mayo Clinic, Cole Sewell, Walgreen Drug Stores, and Econo Foods.

A sampling of Iowa employers for the 1998 graduates includes: Eaton Corporation, Pritchard Auto, Lyons Toyota-Dodge, Ebert Chrysler Village, Deike Implement, Forest City Ford, Forest City Chrysler, Winnebago Industries, Iowa Department of Transportation, City of Mason City, Casey's General Store, Sukup Manufacturing, and Holcim Inc.

A sampling of Iowa employers for the 1999 graduates includes: Wells Fargo Bank, Moffitt's Inc. Lyons Toyota Dodge, John Deere, Kiefer Built, Hanson Family Life Center, Stellar Industries, Scripp's Mercy Hospital, Pella, Knorr Electric, Midwest Meter, Rochester Methodist Hospital, Don LaFrenz Ford, Mercy Family Care - Forest Park, North Iowa Eye Clinic, Winnebago Industries, CH Wilson, Alliant Energy, Cybersmith Engineering, North Star Plumbing & Heating, Snap-On Tools, Blazek Electric Inc., Grawmondbeck's High Performance Engines, and Mercy Medical Center.

c. Other Benefits of Regional Academies/Tech Prep Programs

- a. Expansion of program offerings at the high school
- b. High school students have access to state-of-the art equipment and curriculum
- c. Full-year of college, tuition free
- d. Improved transition to college expectations
- e. Excellent use of the senior year
- f. Rigor
- g. Leveraging high school, community college and state resources
- h. Savings to the State of Iowa.
 - i. By completing one year of College in high school the State recovers considerable savings in State General Aid to Community Colleges, Regents and Private institutions of higher education.

IV. Systems-Building: High School Articulation Agreements

| Area Two High Schools/NIACC Courses | 15:101 Intro. to Business | 15:109 Introduction to Accounting | 15:110 Electronic Calculators | 15:112 Keyboarding Level I | 15:113 Keyboarding Level II | 15:114 Computer Literacy | 15:134 Computer Applications | 91:159 Introduction to the P.C. | 96:162 Computer Orientation | 70:112 Animal Science I | 90:160 Crop Science I | 90:161 Crop Science II | 90:170 Intro to Ag Business | 90:183 Ag Economics | 90:186 Soil Science | 90:121 Intro to Drafting | 91:104 Intro to Tech. Comp. & CAD | 91:151 Fundamentals of Carpentry I | 96:132 Electrical Concepts | 96:150 Career Physics | 98:144 Intro. to Auto Tech. | 98:161 Metal Processing | 60:152 Intro to Anatomy & Physiology | 94:104 Body Structure & Function |
|-------------------------------------|---------------------------|-----------------------------------|-------------------------------|----------------------------|-----------------------------|--------------------------|------------------------------|---------------------------------|-----------------------------|-------------------------|-----------------------|------------------------|-----------------------------|---------------------|---------------------|--------------------------|-----------------------------------|------------------------------------|----------------------------|-----------------------|-----------------------------|-------------------------|--------------------------------------|----------------------------------|
| Belmond-Klemme | | X | | X | X | | | | | | | X | | X | X | | | | | | | | X | |
| CAL-Dows | X | X | | X | X | X | X | X | X | X | | X | | | | | | | X | X | | | | X |
| Charles City | X | X | | X | X | X | X | X | X | X | | | | | | | | X | X | | X | | | X |
| Clear Lake | | X | | X | X | X | X | X | X | | | | | | | | | | X | | | X | | |
| C-W-L | | | | | | | | | X | X | | X | | | | | | | X | | | | | |
| Forest City | | X | | X | X | X | X | | X | X | X | | | | | | | X | X | X | | | X | X |
| Garner-Hayfield | X | X | | X | X | X | X | | X | X | X | | | | | | | | X | | X | X | | X |
| Greene | X | X | | | | | X | | | | | X | | | | | | X | | | | | | |
| Hampton-Dumont | X | X | | X | X | | X | | | X | X | X | | X | | | | | X | X | | X | | |
| Lake Mills | | X | | | | | | | | | | X | | X | | | X | X | | | | X | | |
| Mason City | X | X | | X | X | X | X | X | X | | | | | | | | | X | X | X | X | | | X |
| Newman | | | | | | | X | | | | | | | | | | | | | | | | | X |
| NS-RF | | X | | X | X | X | X | | | | | | | | | | | X | X | | | | | |
| North Central | | X | | X | X | X | X | X | | | | | | | | | | X | X | X | | X | | X |
| North Iowa | | X | | | | | X | | | X | X | | X | | X | X | | | | | | X | | X |
| Northwood-Kensett | | X | | | | | X | | | | | X | | | | | | X | X | X | | X | | X |
| Osage | | X | | X | X | X | X | | | | | X | | | | | | X | | X | | X | | X |
| R-R-MR | X | X | | X | X | X | X | | | X | | | | | | | | X | | | | | | X |
| Rockwell-Swaedale | X | X | | X | X | X | X | X | X | X | X | | | | X | | | X | | | | | | |
| St. Ansgar | | | | | | | | | | | | | | | | | | X | | | | | | |
| SC/MT | X | X | | X | X | X | X | | | X | X | | | | X | | | | | X | | | | |
| Ventura | | X | | X | X | X | X | | | X | X | | X | | | | | X | | | | X | | |
| West Hancock | X | X | | X | X | X | X | X | X | X | X | | | | | | | X | X | X | | X | | X |
| W-CL-T | | X | | | | X | X | X | | | | | | | | | | | | X | | X | | X |

V. Systems-Building: Articulation with Four-Year Colleges and Universities

A. NIACC and Four-year college/university articulation agreements:

| <u>NIACC</u> | <u>Four-year</u> | <u>Degree/Program</u> |
|-------------------------|----------------------------------|--|
| <u>Degree/Program</u> | <u>College/University</u> | <u>Degree/Program</u> |
| AA/course equivalency | Iowa State University | Bachelor degree |
| AA/course equivalency | University of Northern Iowa | Bachelor degree |
| AA/course equivalency | University of Iowa | Bachelor degree |
| AA/course equivalency | Buena Vista University | Bachelor degree |
| AA/course equivalency | Drake University | Bachelor degree |
| AA/course equivalency | Grand View College | Bachelor degree |
| AA/course equivalency | Palmer College of Chiropractic | Bachelor degree |
| AA/course equivalency | Simpson College | Bachelor degree |
| AA/ course equivalency | Luther College | Bachelor degree |
| AA/course equivalency | Upper Iowa University | Bachelor degree |
| AA/course equivalency | Wartburg College | Bachelor degree |
| AA/course equivalency | Briar Cliff College | Bachelor degree |
| AA/course equivalency | Coe College | Bachelor degree |
| AA/course equivalency | Minnesota State University –Mkto | Bachelor degree |
| AA/course equivalency | Northwest Missouri State | Bachelor degree |
| AA/course equivalency | Waldorf College | Bachelor degree |
| AA | Iowa State University | Bachelor degree – Comm/Reg. Planning |
| AA | Capella University | BS (Business or Information Technology) |
| AA, ASB, AS or AAS | Franklin University | BS (Business Administration, Management Information Systems, Computer Science, Digital Communication, Health Care Management, Public Safety, Technical Management) |
| AAS (Automotive) | University of Northern Iowa | BS degree (General Industrial Technology) |
| AAS (Climate Control) | University of Northern Iowa | BS degree (General Industrial Technology) |
| AAS (Tool and Die) | University of Northern Iowa | BS degree (General Industrial Technology) |
| AAS (Electronics) | University of Northern Iowa | BS degree (General Industrial Technology) |
| AAS (Mechanical Design) | University of Northern Iowa | BS degree (General Industrial Technology) |
| AAS (Automotive) | University of Northern Iowa | BA degree (Technology Education) |
| AAS (Climate Control) | University of Northern Iowa | BA degree (Technology Education) |
| AAS (Tool and Die) | University of Northern Iowa | BA degree (Technology Education) |
| AAS (Electronics) | University of Northern Iowa | BA degree (Technology Education) |
| AAS (Mechanical Design) | University of Northern Iowa | BA degree (Technology Education) |
| ADN (Nursing) | University of Iowa | BSN (Nursing) |
| ADN (Nursing) | Briar Cliff College | BSN (Nursing) |
| ADN (Nursing) | Clarke College | BSN (Nursing) |
| ADN (Nursing) | Coe College | BSN (Nursing) |
| ADN (Nursing) | Drake University | BSN (Nursing) |
| ADN (Nursing) | Graceland College | BSN (Nursing) |
| ADN (Nursing) | Morningside College | BSN (Nursing) |
| ADN (Nursing) | Mt. Mercy College | BSN (Nursing) |
| AAS (Electronics) | Iowa State University | BS (Industrial Technology/ Manufacturing) |
| AAS (Mechanical Design) | Iowa State University | BS (Industrial Technology/ Manufacturing) |
| AAS (Agricultural Op) | Iowa State University | BS (Agricultural Business) |
| AAS (Ag Sales & Serv.) | Iowa State University | BS (Agricultural Business) |
| AAS (Ag Marketing) | Iowa State University | BS (Agricultural Business) |
| AAS (Agricultural Op) | Iowa State University | BS (Ag Education and Studies) |
| AAS (Ag Sales & Serv.) | Iowa State University | BS (Ag Education and Studies) |

| | | |
|-----------------------|-----------------------------|---|
| AAS (Ag Marketing) | Iowa State University | BS (Ag Education and Studies) |
| ASB (Information Sys) | Iowa State University | BS in one of eight majors: Accounting, Finance, Management Information Systems, Marketing, General Business, Production Operations, Management, and Transportation Logistics |
| ASB (E-Commerce) | Iowa State University | BS in one of seven majors: Accounting, Finance, Management Information Systems, Marketing, Production Operations, Management, and Transportation Logistics |
| ASB (Sports Mgmt) | Iowa State University | B.A. (Sports Management) |
| ASB (Sports Mgmt) | Simpson College | B.A. (Sports Administration) |
| ASB (Information Sys) | University of Northern Iowa | B.A. (Management) |
| ASB (Information Sys) | Upper Iowa University | B.A. (Management Information Systems) |
| ASB (Information Sys) | Buena Vista University | B.A. Technology and Systems Integration |
| All Degrees | University of Phoenix | Bachelor degree |

B. Graduation Rates -- Iowa Community College Students at Regents' Universities

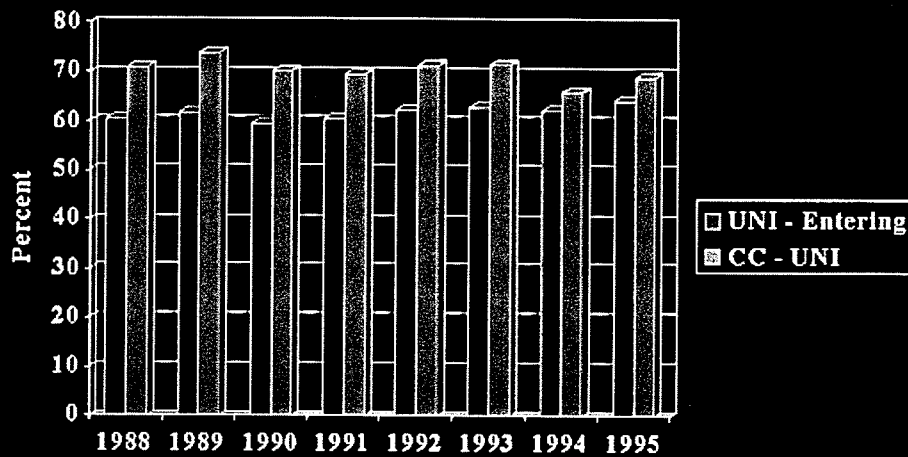
a. In November 2001, the Iowa Board of Regents released a report on retention and six-year graduation rates at the three Regents institutions. A section of the report provides data about Iowa Community College transfer graduation rates. The Regents Board Office provides the following conclusion:

“Except for the entering (Regents) class of 1995, transfer students typically have had higher six-year graduation rates than entering freshmen.”

(Board of Regents, Annual Report on Retention and Graduation Rates, November 6, 2001)

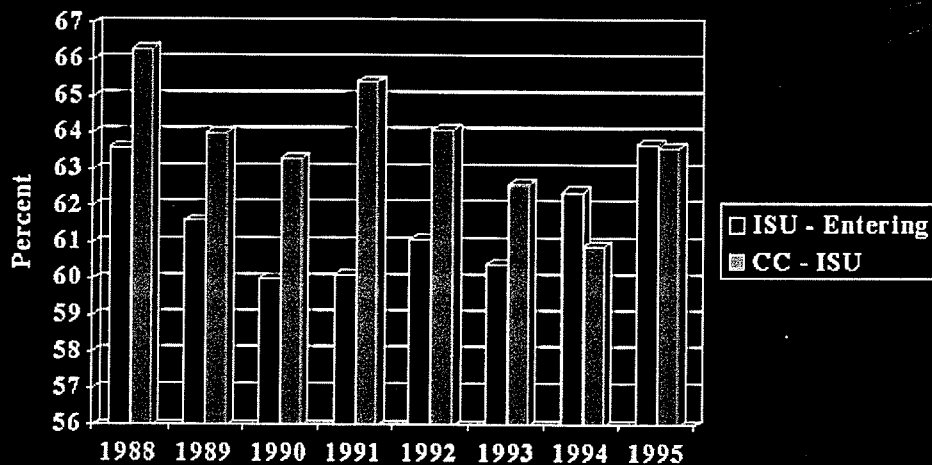
The following charts, comparing graduation rates of native Regents freshmen with Iowa Community College transfer student graduation rates, were compiled from the report:

Six-Year Graduation Rates of Community College Transfer Students to UNI



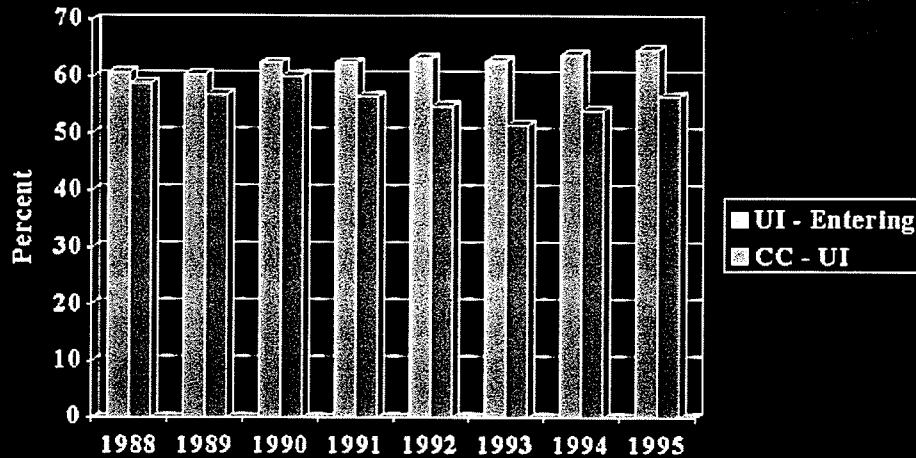
Source: Board of Regents, *Annual Report on Student Graduation and Retention Rates*, November 2001, pages 5 and 11.

Six-Year Graduation Rates of Community College Transfer Students to ISU



Source: Board of Regents, *Annual Report on Student Graduation and Retention Rates*, November 2001, pages 5 and 11.

Six-Year Graduation Rates of Community College Transfer Students to U of I



Source: Board of Regents, *Annual Report on Student Graduation and Retention Rates*, November 2001, pages 5 and 11.

- b. The latest Regents' 2002 study, "*Annual Report on Student Retention and Graduation Rates*", provides additional positive data for Iowa Community College transfer students who receive the AA Degree:

| | Graduation Rate in Six Years |
|---------------------------------------|-------------------------------------|
| AA Degree Transfer Students | 70.4% |
| University of Iowa Students | 64.4% |
| Native Iowa State University Students | 65.3% |
| University of Northern Iowa Students | 66.5% |

The value of the AA degree is compelling! And at a lower cost!