

**RESEARCH FINDINGS**

**TRANSFER BEHAVIOR AMONG IOWA  
COMMUNITY COLLEGE STUDENTS**

**AND**

**POSTCOLLEGE EARNINGS OF  
IOWA COMMUNITY COLLEGE STUDENTS**

**IOWA DEPARTMENT OF EDUCATION SPONSORED RESEARCH**

Iowa Department of Education  
Division of Community Colleges and Workforce Preparation

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**TRANSFER BEHAVIOR AMONG IOWA  
COMMUNITY COLLEGE STUDENTS**

**National Student Clearinghouse Data Analysis**



## EXECUTIVE SUMMARY

In July 2006, the Iowa State Board of Education issued a five-year strategic plan to meet accountability goals of Iowa Community Colleges through well defined and articulated performance indicators. More specifically, the fifth strategic goal stated that “the community colleges of Iowa [would] recruit, enroll, retain to completion or graduation persons of underrepresented groups in all programs” (Iowa Department of Education, 2006, p. 13). Additionally, this goal indicated that Iowa would strengthen its “support systems that increase successful transfer and/or employment of persons from minority racial/ethnic groups and non-traditional students” in the state. In response to the strategic goal, Dr. Frankie Santos Laanan, Associate Professor in the Department of Educational Leadership and Policy Studies in the College of Human Sciences at Iowa State University, along with his research team partnered with the Iowa Department of Education (IDE) Division of Community Colleges and Workforce Preparation to report on transfer behaviors of Iowa community college award recipients (students who received an associate degree, diploma, certificate, or other credential awarded by the community college) and non-award recipients (students who transferred without receiving any awards from the community college). In addition, policy implications and recommendations for further research are provided.

Data were obtained from the Iowa Department of Education Management Information System (MIS) and the National Student Clearinghouse (NSC) to examine the transfer behaviors of the 2002 cohort of Iowa community college award recipients and non-award recipients. Three data files containing demographic information, educational records, enrollment data and fiscal year 2002 degree award files were merged to analyze transfer behavior in the state of Iowa.

Several objectives guided this investigation:

- **Objective 1:** How many students receiving an Associate in Arts (AA) or Associate in Applied Science (AAS) in fiscal year (FY) 2002 transferred to any postsecondary institution within one year, two years, and three years after graduating from an Iowa community college?
- **Objective 2:** To what types of institutions did AA and AAS award recipients transfer?
- **Objective 3:** How many students attended an Iowa community college in FY 2002 and left without completing a degree transferred to another institution?
- **Objective 4:** To what types of institutions did non-award recipients transfer?
- **Objective 5:** What institutions did AA award recipients, AAS award recipients, and non-award recipients enroll in FY 2002?
- **Objective 6:** What are the top-five or top-ten four-year institutions that enroll most transfer students from Iowa community colleges?

### Highlights of the Findings

Highlights from the investigation of student transfer behaviors among Iowa community college AA and AAS award recipients and non-award recipients were noted in terms of students' enrollment patterns.

### *AA Award Recipients*

- Iowa Regent Universities enrolled one-half to nearly three-fifths (50%-60%) of 2002 AA award recipients in FY 2003, FY 2004, and FY 2005.
- Percentages of 2002 AA award recipients enrolled in private universities in Iowa ranged from 21% to 31% in FY 2003, FY 2004, and FY 2005.
- Out-of-state four-year institutions enrolled about 20% of 2002 AA award recipients in FY 2003, FY 2004, and FY 2005.

### *AAS Award Recipients*

- Iowa Regent Universities enrolled more than one-third (36%-43%) of 2002 AAS award recipients in FY 2003, FY 2004, and FY 2005.
- Private universities in Iowa enrolled between 26%-31% of 2002 AAS award recipients in FY 2003, FY 2004, and FY 2005.
- Out-of-state four-year institutions enrolled between 31%-35% of 2002 AAS award recipients in FY 2003, FY 2004, and FY 2005.

### *Non-Award Recipients*

- Iowa Regent Universities enroll from 42% to 50% of community college students who transfer before completing an associate degree, diploma or certificate.
- Among the three Regent Universities, Iowa State University enrolled the highest percentage of community college non-award recipients in FY 2003, FY 2004, and FY 2005.
- Approximately 75% of all community college non-award recipients enroll in Iowa public and private four-year colleges and universities in FY 2003 and FY 2004.

### *Enrollment Patterns*

- The highest enrollment of AA award recipients and non-award recipients in FY 2002, FY 2003, and FY 2005 in Regent Universities were from Des Moines Area Community College and Kirkwood Community College.
- Buena Vista University was the leading Iowa private in-state enrollment institution for AA and AAS award recipients and Non-award recipients in FY 2004 and FY 2005.
- Western Illinois University was the leading out-of-state four-year enrollment institution for AA award recipients in FY 2003, FY 2004, and FY 2005.

Undoubtedly, Regent Universities enroll approximately one-third to over one-half of AA or AAS award recipients as well as approximately one-half of non-award recipients who transfer from Iowa community colleges. Although private colleges and universities retain slightly more or less than one-quarter to one-third of Iowa transfers, an equivalent amount of Iowa transfers (the state's human capital resources) are lost to neighboring educational institutions in Midwestern states like Illinois, Missouri, Nebraska, and Minnesota.

**Recommendations**

As Iowa Community Colleges continue to meet the diverse needs of the state through access to educational opportunities and workforce development, continuous assessments of student outcomes among degree award recipients and non-award recipients will be vital to the continuation of Iowa's economic stability and the development of a skilled workforce. Further study regarding transfer articulation, student support, and retention should be conducted to retain or reclaim Iowa's human capital and resources as the state competes with educational opportunities found in neighboring states. Moreover, Iowa policy makers and postsecondary institutional administrators should continue to develop policies and procedures that enhance student learning and the upward mobility of Iowa citizens.





## METHODOLOGY

In order to examine the transfer behaviors among Iowa community college award recipients and non-award recipients, data from the Iowa Department of Education Management Information System (MIS) and the National Student Clearinghouse (NSC) were analyzed.

The following research questions guided this study:

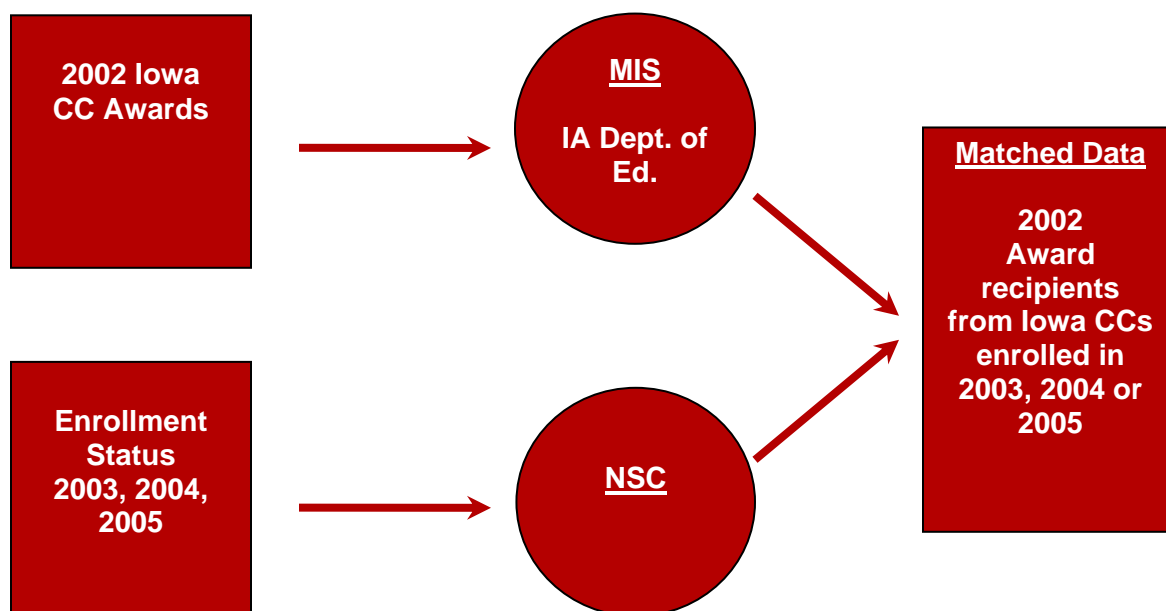
1. How many students receiving an Associate in Arts (AA) or Associate in Applied Science (AAS) in fiscal year 2002 transferred to any postsecondary institutions within one year, two years, and three years after graduating from an Iowa community college?
2. To what types of institutions did AA and AAS award recipients transfer?
3. How many students attended an Iowa community college in fiscal year 2002 and left without completing a degree transferred to another institution?
4. To what types of institutions did non-award recipients transfer?
5. What are the top-five or top ten four-year institutions that enroll most 2002 AA and AAS award recipients and non-award recipients from Iowa community colleges?

### Data Sources

To answer the research questions a new data file was created by merging three data files: 1) the demographic and educational record file stored in the Iowa Department of Education MIS; 2) the National Student Clearinghouse enrollment data for the fiscal year 2002 cohort; and 3) the fiscal year 2002 award file, provided by the Iowa Department of Education. These data files were merged by a valid social security number. The student records file includes demographic and educational data. The data file from the National Student Clearinghouse includes enrollment status of individuals who were found in the fiscal year 2002 Iowa community college student cohort. Enrollment status from the NSC can be analyzed by state, name of the institution, type (2-year or 4-year), control (public or private), and term beginning and end dates. In 2002, 2,636 postsecondary institutions participated in the NSC with a steady increase through 2005 yielding 2,812 participating institutions. Thus, the accuracy of comparisons made between enrollment years is dependent on postsecondary institutional participation.

The fiscal year 2002 award file contains the college number, social security number, the type of award, the date of award, and the Classification of Instructional Programs (CIP) code of the award. The award types are as follows:

- Associate in Arts (AA)
- Associate in Science (AS)
- Associate in General Studies (AGS)
- Associate in Applied Arts (AAA)
- Associate in Applied Science (AAS)
- Diploma
- Certificate
- Other



**Figure 1.** Data Sources for National Student Clearinghouse Data Analysis.

To examine the transfer behaviors among Iowa community college award recipients and non-award recipients, three target years were defined as: 1) fiscal year 2003 (July 1, 2002 – June 30, 2003); 2) fiscal year 2004 (July 1, 2003 – June 30, 2004); and the fiscal year 2005 (July 1, 2004 – June 30, 2005).

### Analytical Approach

Descriptive statistics were conducted, including frequencies and cross-tabulations to measure transfer behaviors among Iowa community college students. In order to answer the first three research questions (regarding how many students who received an award, and how many non-award recipients from 2002 transferred within one year, two years, or three years), students from the 2002 cohort were disaggregated by award type and fiscal year. Figure 1 shows an example of this analytical approach for the 2002 cohort of AA award recipients. This figure illustrates the process of disaggregating students into categories.

The enrollment status of all 2002 AA award recipients were examined in any postsecondary institutions during the target fiscal year (i.e., 2003, 2004, or 2005) using the National Student Clearinghouse enrollment file. Those who are found to be enrolled in any postsecondary institutions were disaggregated according to the type of institution (two- or four-year institution) attended. If students were enrolled in four-year institutions, they were also disaggregated by the location and control of the institution: 1) in-state public (three Regent universities: University of Iowa, Iowa State University, and University of Northern Iowa); 2) in-state private; and 3) out-of-state enrollments.

The same process was repeated for analysis of AAS award recipients and for community college non-award recipients. Non-award recipients were defined as those who: 1) were enrolled in fiscal year 2002 at an Iowa community college; 2) were not enrolled in fiscal year 2002 at any 4-year institutions; 3) were not enrolled in fiscal year

2002 in high school; and 4) did not receive any type of award in fiscal year 2002, 2003, 2004, or 2005 from an Iowa community college.

Another analytical approach was to calculate within one- and three-year transfer rates for AA award recipients, AAS award recipients, and non-award recipients. The within one-year transfer rate represents the number of individuals (unduplicated enrollment) transferring to a four-year institution in 2003 divided by the total number of individuals in the fiscal year 2002 cohort. The within three-year transfer rate represents the number of individuals (unduplicated enrollment) transferring to a four-year institution at any time in 2003, 2004, or 2005.

As a cautionary note, to remove any duplicated enrollment status (e.g., concurrent enrollment in two or more institutions) within a target fiscal year, enrollment status in four-year institutions among AA and AAS award recipients as well as non-award recipients were prioritized over their enrollment status in two-year institutions. Additionally, if there were two or more concurrent enrollments in four-year institutions, then the most recent enrollment was selected within a target fiscal year. Thus, the results were based on unduplicated enrollment status of fiscal year 2002 Iowa community college students in each target fiscal year.

### **Limitations**

There are several limitations with the analysis using the National Student Clearinghouse enrollment data file. First, the NSC provides enrollment status, determined by the beginning and ending of enrollment during each semester or term. The researchers were not able to account for completion of a four-year degree. Similarly, the researchers were not able to account for students' previous degree attainment or educational credential. Nor were the researchers able to examine the goals or educational experiences of students from this data file. Additionally, the student record must have a valid social security number to be included in this investigation.

It is also important to note that the enrollment data file from the NSC does not include selected institutions that have not participated in the NSC data collection during the fiscal years from 2002 to 2005. The findings and interpretations of the analysis are based on the enrollment data obtained from the NSC participants.



## FINDINGS FOR ASSOCIATE IN ARTS AWARD RECIPIENTS

### Cross-Sectional Analysis of Annual Enrollments for AA Award Recipients

Tables 1.1 and 1.2, and Figure 1 show the results for Associate in Arts (AA) award recipients. The results from the analysis include the following:

- Regent Universities enrolled one-half to nearly three-fifths (50%-60%) of 2002 AA award recipients in Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005.
- The percentages of 2002 AA award recipients enrolled in private universities in Iowa ranged from 21% to 31% in the three fiscal years.
- Out-of-State four-year institutions enrolled about 20% of 2002 AA award recipients in Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005.
- Among the three Regent Universities, University of Northern Iowa enrolled the highest percentage of AA award recipients in all three fiscal years.

**TABLE 1.1 – Enrollment Status of Fiscal Year 2002 Associate in Arts (AA) Award Recipients in Four-Year Institutions  
Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005 (N = 3,713)**

Fiscal Year	Iowa Regent Universities						Regent Universities		Iowa Private four-year		Out of State four-year		Total four-year enrollments
	University of Northern Iowa (UNI)		University of Iowa (SUI)		Iowa State University (ISU)								
	N	%	N	%	N	%	N	%	N	%	N	%	
<b>2003</b>	553	27.00%	399	19.48%	268	13.09%	1,220	59.57%	*436	21.29%	392	19.14%	<b>2,048</b>
<b>2004</b>	482	22.62%	350	16.42%	249	11.68%	1,081	50.73%	664	31.16%	386	18.11%	<b>2,131</b>
<b>2005</b>	320	21.93%	231	15.83%	180	12.34%	731	50.10%	417	28.58%	311	21.32%	<b>1,459</b>

Note: This table represents enrollment of 2002 AA award recipients (N=3,713) in four-year institutions in FY 2003, 2004, and 2005.

These are not duplicate enrollments.

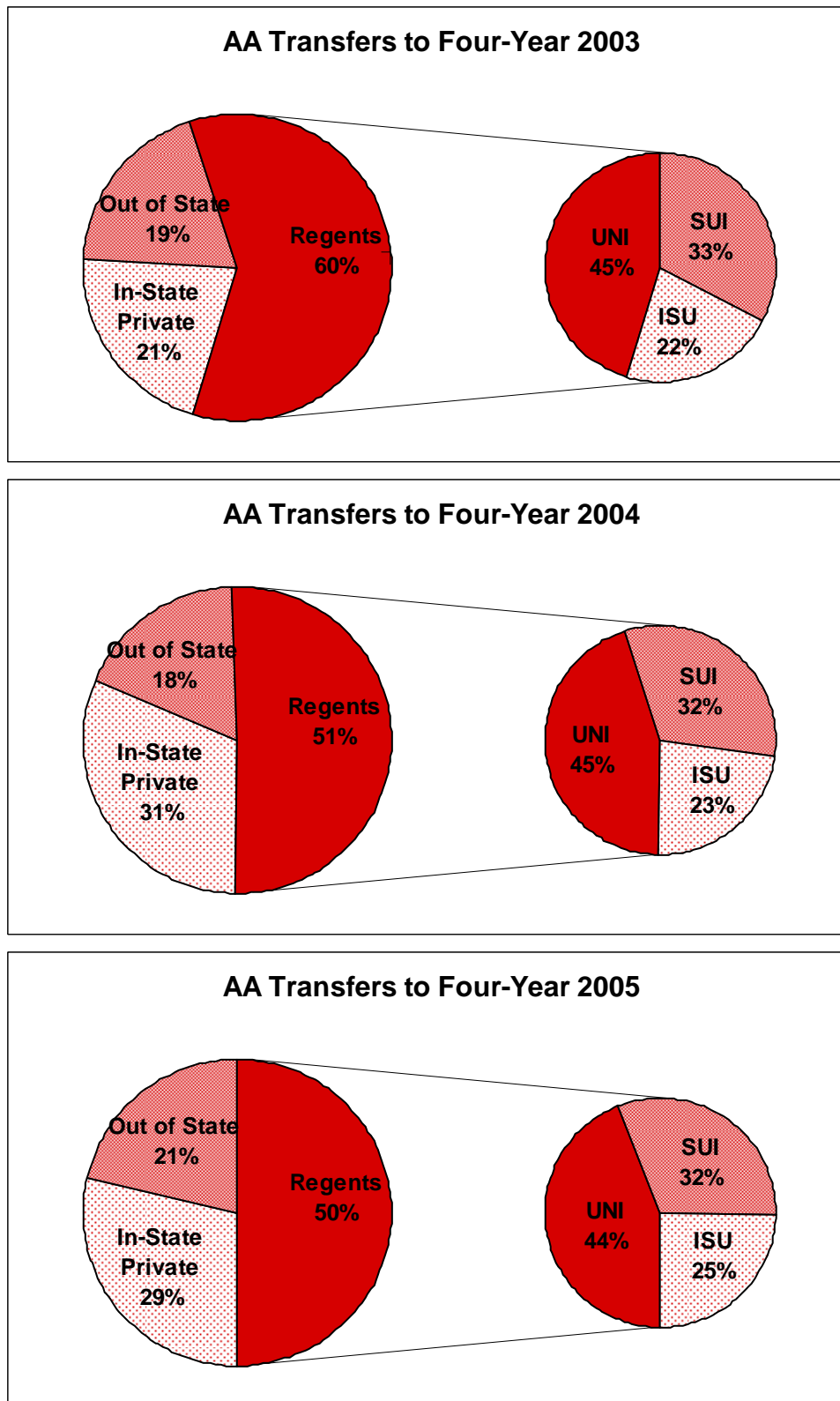
Those who transferred without an AA degree are not included.

Fiscal years are defined from July 1 to June 30 (e.g. Fiscal Year 2003 is from July 1, 2002 to June 30, 2003).

The student record must have a valid social security number to be included in the analysis.

\*Buena Vista University did not participate in the National Student Clearinghouse in 2003, and Drake University did not participate in the National Student Clearinghouse in 2003, 2004, or 2005.

Data Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; National Student Clearinghouse enrollment data



**FIGURE 1.** Percent of AA Award Recipients Enrolled in Four-Year Institutions in Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005.

**Note:** See footnote for Table 1.1.

### Within One, Two, and Three Year Transfer Rates for 2002 AA Award Recipients

The within one-, two-, and three-year cumulative transfer rates for AA award recipients are shown in Table 1.2.

- The within one-year cumulative transfer rate for 2002 AA award recipients was 55.15% (2,048 individuals).
- The within two-year cumulative transfer rate for 2002 AA award recipients was 64.42% (2,392 individuals).
- The within three-year cumulative transfer rate for 2002 AA award recipients was 67.09% (2,491 individuals).

**TABLE 1.2 – Transfer Rate of Fiscal Year 2002 Associate in Arts (AA) Award Recipients to Four-Year Institutions  
Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005 (N = 3,713)**

Fiscal Year	Annual Transfer Rate		Cumulative Transfer Rate	
	N	%	N	%
<b>2003</b>	2,048	55.16%	2,048	55.16%
<b>2004</b>	2,131	57.39%	2,392	64.42%
<b>2005</b>	1,459	39.29%	2,491	67.09%

Note: The annual transfer rate (cross-sectional approach) represents the number of individuals (unduplicated enrollment) transferring to a four-year institution in 2003, 2004, or 2005 divided by the total number of individuals in the fiscal year 2002 cohort.

The cumulative transfer rate (longitudinal approach) represents the number of individuals (unduplicated enrollment) transferring to a four-year institution in 2003, 2003 - 2004, or 2003 - 2005 divided by the total number of individuals in the fiscal year 2002 cohort.

Those who transferred without an AA degree are not included.

Fiscal years are defined from July 1 to June 30 (e.g. Fiscal Year 2003 is from July 1, 2002 to June 30, 2003).

The student record must have a valid social security number to be included in the analysis.

\*Buena Vista University did not participate in the National Student Clearinghouse in 2003, and Drake University did not participate in the National Student Clearinghouse in 2003, 2004, or 2005.

Data Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; National Student Clearinghouse enrollment data

## FINDINGS FOR ASSOCIATE IN APPLIED SCIENCE AWARD RECIPIENTS

### Cross-Sectional Analysis of Annual Enrollments for AAS Award Recipients

Unlike the AA degree which is designed for college transfer, the AAS degree is designed for direct student entry into the workplace. Nonetheless, many AAS award recipients enrolled in 4-year colleges during the following fiscal years. Table 2.1 and 2.2, and Figure 2 show the results for Associate in Applied Science (AAS) award recipients. The results from the analysis include the following:

- Regent Universities enrolled more than one-third (36%-43%) of 2002 AAS award recipients in Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005.
- Percentages of 2002 AAS award recipients enrolled in the Regent Universities in Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005 were equally distributed among the three universities.
- Private Universities in Iowa enrolled between 26% and 31% of 2002 AAS award recipients in Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005.
- Out-of-State four-year institutions enrolled between 31% and 35% of 2002 AAS award recipients in Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005.

**TABLE 2.1 – Enrollment Status of Fiscal Year 2002 Associate in Applied Science (AAS) Award Recipients in Four-Year Institutions  
Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005 (N = 3,631)**

Fiscal Year	Iowa Regent Universities						Regent Universities		Iowa Private four-year		Out of State four-year		Total four-year enrollments
	University of Northern Iowa (UNI)		University of Iowa (SUI)		Iowa State University (ISU)								
	N	%	N	%	N	%	N	%	N	%	N	%	
2003	47	14.29%	50	15.20%	44	13.37%	141	42.86%	*85	25.84%	103	31.31%	329
2004	49	13.76%	41	11.52%	43	12.08%	133	37.36%	111	31.18%	112	31.46%	356
2005	34	11.18%	34	11.18%	42	13.82%	110	36.18%	88	28.95%	106	34.87%	304

Note: This table represents enrollment of 2002 AAS award recipients (N=3,631) in four-year institutions in FY 2003, 2004, and 2005.

These are not duplicate enrollments.

Those who transferred without an AAS degree are not included.

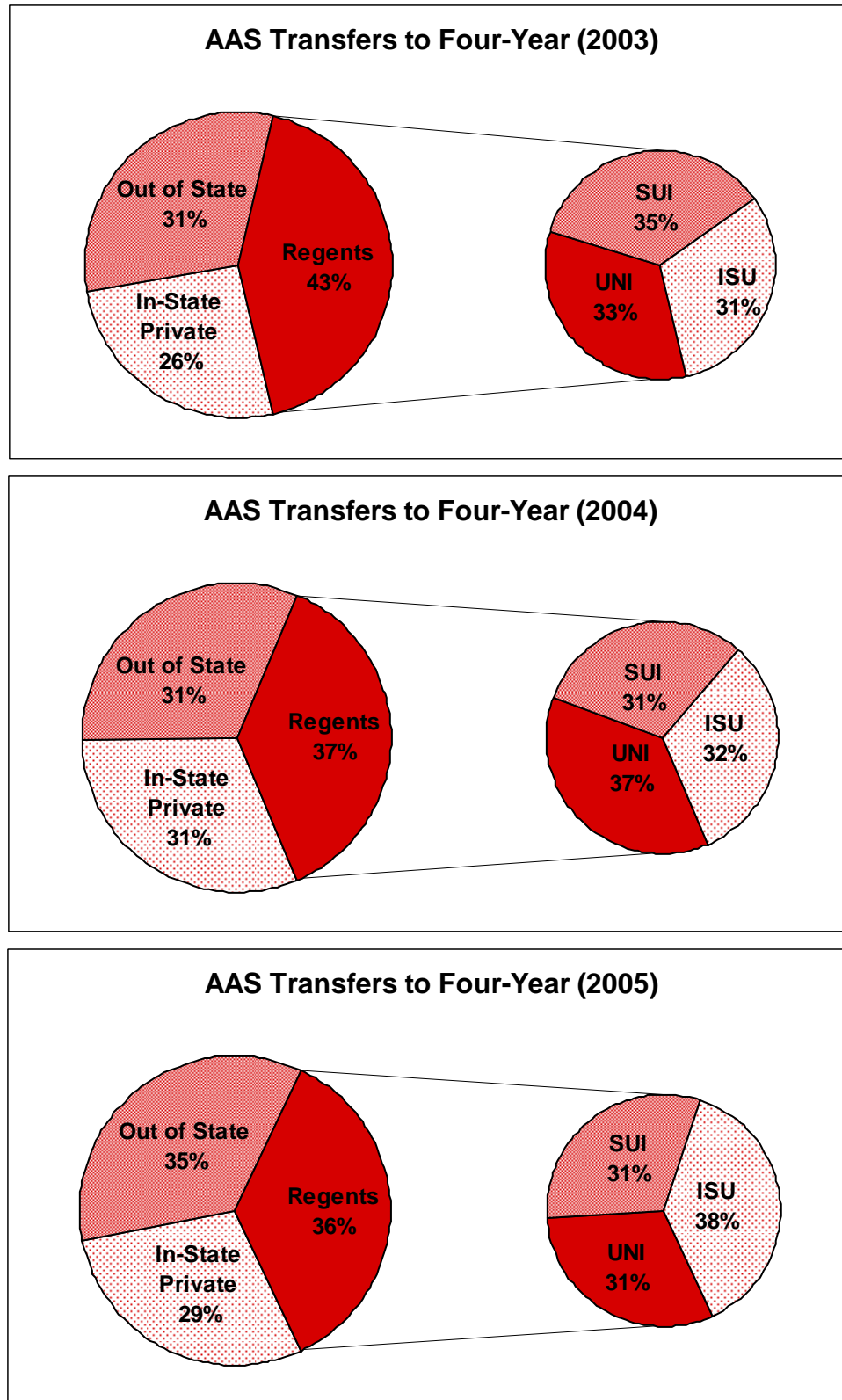
Fiscal years are defined from July 1 to June 30 (e.g. Fiscal Year 2003 is from July 1, 2002 to June 30, 2003).

The student record must have a valid social security number to be included in the analysis.

\*Buena Vista University did not participate in the National Student Clearinghouse in 2003, and Drake University did not participate in the National Student Clearinghouse in 2003, 2004, or 2005.

Data Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; National Student Clearinghouse enrollment data





**FIGURE 2.** Percent of AAS Award Recipients Enrolled in Four-Year Institutions in Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005.

**Note:** See footnote for Table 2.1.

### Within One, Two, and Three Year Transfer Rates for 2002 AAS Award Recipients

The within one, two, and three year transfer rates for AAS award recipients are shown in Table 2.2. The annual transfer rate represents the cross-sectional number of 2002 AAS award recipients enrolled in a given year. The cumulative transfer rate represents the total number of AAS award recipients who have transfer within the given time period (e.g. 2005 cumulative transfer rate represents the total number of transfers within 3 years).

- The within one-year transfer rate for 2002 AAS award recipients was 9.06% (329 individuals).
- The within two-year transfer rate for 2002 AAS award recipients was 12.31% (447 individuals).
- The within three-year transfer rate for 2002 AAS award recipients was 14.54% (528 individuals).

**TABLE 2.2 – Transfer Rate of Fiscal Year 2002 Associate in Applied Science (AAS) Award Recipients to Four-Year Institutions  
Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005 (N = 3,631)**

Fiscal Year	Annual Transfer Rate		Cumulative Transfer Rate	
	N	%	N	%
<b>2003</b>	329	9.06%	329	9.06%
<b>2004</b>	356	9.80%	447	12.31%
<b>2005</b>	304	8.37%	528	14.54%

Note: The annual transfer rate (cross-sectional approach) represents the number of individuals (unduplicated enrollment) transferring to a four-year institution in 2003, 2004, or 2005 divided by the total number of individuals in the fiscal year 2002 cohort.

The cumulative transfer rate (longitudinal approach) represents the number of individuals (unduplicated enrollment) transferring to a four-year institution in 2003, 2003 - 2004, or 2003 - 2005 divided by the total number of individuals in the fiscal year 2002 cohort.

Those who transferred without an AAS degree are not included.

Fiscal years are defined from July 1 to June 30 (e.g. Fiscal Year 2003 is from July 1, 2002 to June 30, 2003).

The student record must have a valid social security number to be included in the analysis.

\*Buena Vista University did not participate in the National Student Clearinghouse in 2003, and Drake University did not participate in the National Student Clearinghouse in 2003, 2004, or 2005.

Data Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; National Student Clearinghouse enrollment data

## FINDINGS FOR NON-AWARD RECIPIENTS

Tables 3.1 and 3.2, and Figure 3 show the results for non-award recipients. The results from the analysis include the following:

- Among the three Regent Universities, Iowa State University enrolled the highest percentage of non-award recipients in all three fiscal years.
- Regent universities enrolled from 42% to 50% of community college students who transfer before completing a degree, diploma, certificate, or other credential in all three fiscal years.
- Approximately 75% of all community college non-award recipients enrolled in Iowa public and private four-year colleges and universities in Fiscal Year 2003 and Fiscal Year 2004.
- Approximately one out of four community college non-award recipients enrolled in out-of-state four-year colleges and universities.

**TABLE 3.1 – Enrollment status of Fiscal Year 2002 Non-Award Recipients in Four-Year Institutions Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005 (N=49,895)**

Fiscal Year	Iowa Regent Universities						Regent Universities	Iowa Private four-year	Out of State four-year	Total four-year enrollments			
	University of Northern Iowa (UNI)		University of Iowa (SUI)		Iowa State University (ISU)								
	N	%	N	%	N	%					N	%	N
<b>2003</b>	441	11.54%	667	17.46%	786	20.58%	1,894	49.58%	*955	25.00%	971	25.42%	<b>3,820</b>
<b>2004</b>	575	10.31%	826	14.81%	1,028	18.43%	2,429	43.54%	1,672	29.97%	1,478	26.49%	<b>5,579</b>
<b>2005</b>	530	9.25%	856	14.93%	1,032	18.00%	2,418	42.18%	1,667	29.08%	1,647	28.73%	<b>5,732</b>

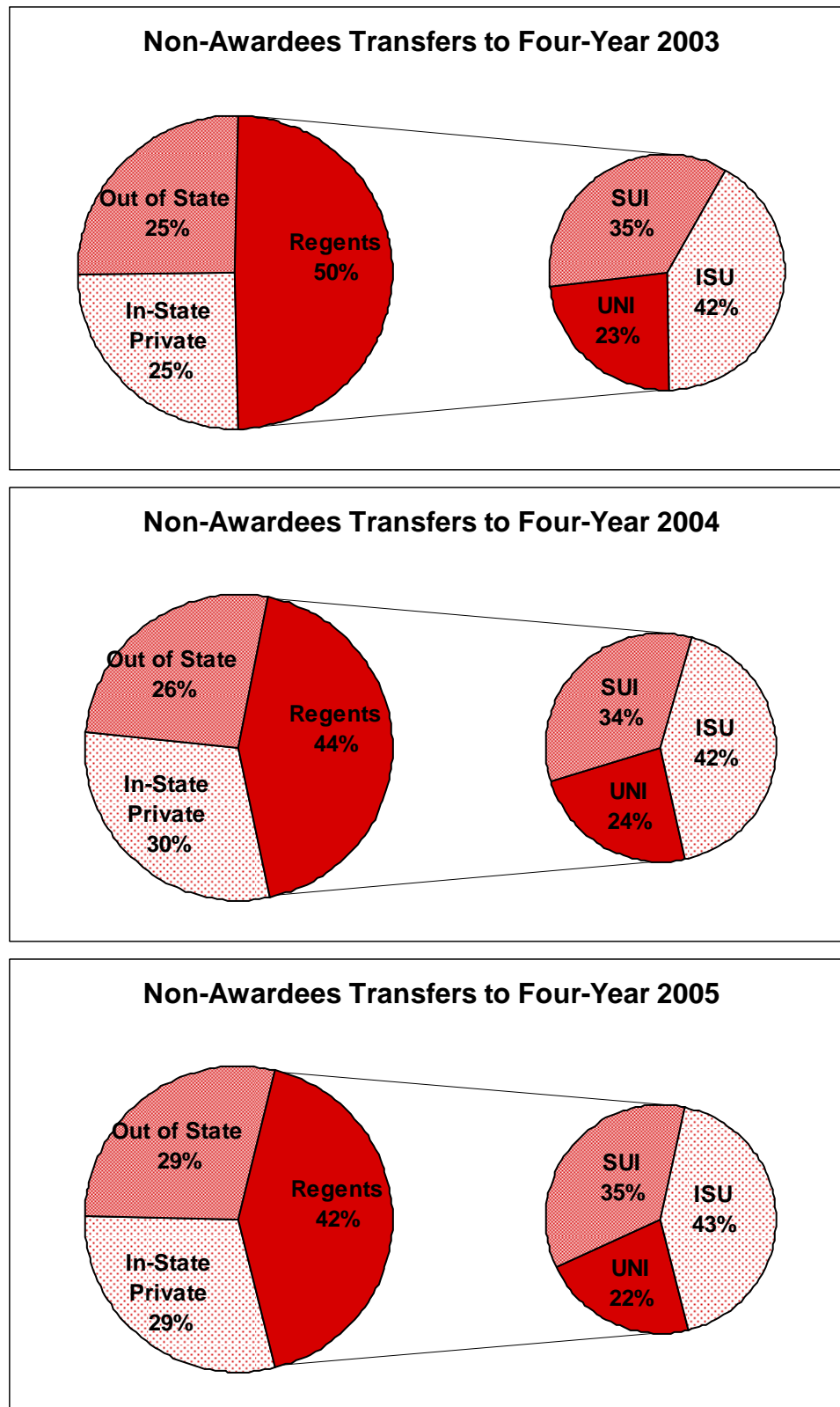
Note: This table represents individuals enrolled in Iowa Community Colleges in 2002 who did not receive an award at any Iowa Community college in 2002, 2003, 2004, or 2005, were not enrolled in any four-year institution in 2002, were not enrolled in high school in 2002, and enrolled in four-year institutions in FY 2003, 2004, and 2005. These are not duplicate enrollments.

Fiscal years are defined from July 1 to June 30 (e.g. Fiscal Year 2003 is from July 1, 2002 to June 30, 2003).

The student record must have a valid social security number to be included in the analysis.

\*Buena Vista University did not participate in the National Student Clearinghouse in 2003, and Drake University did not participate in the National Student Clearinghouse in 2003, 2004, or 2005.

Data Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; National Student Clearinghouse enrollment data



**FIGURE 3.** Percent of 2002 Non-Award Recipients Enrolled in Four-Year Institutions in Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005.

**Note:** See footnote for Table 3.1.

### Within One, Two, and Three Year Transfer Rates for 2002 Non-Award Recipients

The within one, two, and three year transfer rates for non-award recipients are shown in Table 3.2. The annual transfer rate represents the cross-sectional number of 2002 non-award recipients enrolled in a given year. The cumulative transfer rate represents the total number of non-award recipients who have transfer within the given time period (e.g. 2005 cumulative transfer rate represents the total number of transfers within 3 years).

- The within one-year transfer rate for 2002 non-award recipients was 7.66% (3,820 individuals).
- The within two-year transfer rate for 2002 non-award recipients was 12.86% (6,418 individuals).
- The within three-year transfer rate for 2002 non-award recipients was 15.63% (7,798 individuals).

**TABLE 3.2 – Transfer Rate of Fiscal Year 2002 Non-Award Recipients to Four-Year Institutions  
Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005 (N = 49,895)**

Fiscal Year	Annual Transfer Rate		Cumulative Transfer Rate	
	N	%	N	%
<b>2003</b>	3,820	7.66%	3,820	7.66%
<b>2004</b>	5,579	11.18%	6,418	12.86%
<b>2005</b>	5,732	11.15%	7,798	15.63%

Note: The annual transfer rate (cross-sectional approach) represents the number of individuals (unduplicated enrollment) transferring to a four-year institution in 2003, 2004, or 2005 divided by the total number of individuals in the fiscal year 2002 cohort.

The cumulative transfer rate (longitudinal approach) represents the number of individuals (unduplicated enrollment) transferring to a four-year institution in 2003, 2003 - 2004, or 2003 - 2005 divided by the total number of individuals in the fiscal year 2002 cohort.

Note: This table represents individuals enrolled in Iowa Community Colleges in 2002 who did not receive an award at any Iowa Community college in 2002, 2003, 2004, or 2005, were not enrolled in any four-year institution in 2002, were not enrolled in high school in 2002.

Fiscal years are defined from July 1 to June 30 (e.g. Fiscal Year 2003 is from July 1, 2002 to June 30, 2003).

The student record must have a valid social security number to be included in the analysis.

\*Buena Vista University did not participate in the National Student Clearinghouse in 2003, and Drake University did not participate in the National Student Clearinghouse in 2003, 2004, or 2005.

Data Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; National Student Clearinghouse enrollment data



**APPENDIX**

**Additional Tables on  
Transfer Behavior among Iowa Community College Students**

**Table 1A – Enrollment Status of 2002 AA Award Recipients in Top Ten Iowa In-State Private and Top Five Out-of-State Four-Year Institutions  
Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005**

In-state four-year institutions (Private only)	Enrollment		
	FY 2003	FY 2004	FY 2005
Buena Vista University	††	226	145
Mount Mercy College	84	83	42
St. Ambrose University	65	67	47
Iowa Wesleyan College	49	54	32
Upper Iowa University	44	51	40
Grand View College	42	37	20
Simpson College	20	17	*
William Penn University	19	16	*
Loras College	18	17	11
Ashford University	18	17	11
Central College	13	†10	†*
<b>Out-of-state four-year institutions (Private and Public)</b>			
Western Illinois University	94	88	63
Northwest Missouri State	42	29	20
University of Nebraska at Omaha	22	18	13
Minnesota State University - Mankato	15	13	†*
Bellevue University (NE)	10	16	12
University of Phoenix (Online)	†*	†*	15

Note: This table represents enrollment of 2002 AA award recipients in four-year institutions in Fiscal Year (FY) 2003, 2004, 2005.

These are not duplicate enrollments.

Those who transferred without an AA degree are not included.

Drake University did not participate in the National Student Clearinghouse in 2003, 2004 or 2005.

AA award recipients are defined as those students who completed an Associate in Arts degree.

Fiscal years are defined from July 1 to June 30 (e.g. Fiscal Year 2003 is from July 1, 2002 to June 30, 2003).

The student record must have a valid social security number to be included in the analysis.

(\*) Denotes cases suppressed due to fewer than 5 cases represented.

(†) Denotes four-year institution not listed in the top five or ten institutions with AA award recipient transfers that fiscal year.

(††) Buena Vista University did not participate in the National Student Clearinghouse in 2003.

Data Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; National Student Clearinghouse enrollment data.



**Table 2A – Enrollment Status of 2002 AAS Award Recipients in Top Four Iowa In-State Private and Out-of-State Four-Year Institutions  
Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005**

<b>In-state four-year institutions (Private only)</b>	<b>Enrollment</b>		
	<b>FY 2003</b>	<b>FY 2004</b>	<b>FY 2005</b>
Upper Iowa University	21	21	16
Buena Vista University	††	20	17
St. Ambrose University	15	10	*
Mount Mercy College	11	12	14
<b>Out-of-state four-year institutions (Private and Public)</b>			
Bellevue University (NE)	24	22	20
Northwest Missouri State	19	13	*
Western Illinois University	11	11	*
University of Phoenix (Online)	†*	*	14

Note: This table represents enrollment of 2002 AAS award recipients in four-year institutions in Fiscal Year (FY) 2003, 2004, 2005.

These are not duplicate enrollments.

Those who transferred without an AAS degree are not included.

Drake University did not participate in the National Student Clearinghouse in 2003, 2004 or 2005.

AAS award recipients are defined as those students who completed an Associate in Applied Science degree.

Fiscal years are defined from July 1 to June 30 (e.g. Fiscal Year 2003 is from July 1, 2002 to June 30, 2003).

The student record must have a valid social security number to be included in the analysis.

(\*) Denotes cases suppressed due to fewer than 5 cases represented.

(†) Denotes four-year institution not listed in the top five institutions with AAS award recipient transfers that fiscal year.

(††) Buena Vista University did not participate in the National Student Clearinghouse in 2003.

Data Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; National Student Clearinghouse enrollment data.

**Table 3A – Enrollment Status of 2002 Non-Award Recipients in Top Ten Iowa In-State Private and Top Five Out-of-State Four-Year Institutions  
Fiscal Year 2003, Fiscal Year 2004, and Fiscal Year 2005**

In-state four-year institutions (Private only)	Enrollment		
	FY 2003	FY 2004	FY 2005
Buena Vista University	††	283	207
Grand View College	132	213	210
Upper Iowa University	125	210	233
St. Ambrose University	89	125	139
Central College	84	85	67
Mount Mercy College	76	136	138
Loras College	52	56	49
Briar Cliff University	46	58	60
Simpson College	45	76	86
Clarke College	37	†47	49
Morningside College	31	58	†42
William Penn West Des Moines	†21	†54	106
<b>Out-of-state four-year institutions (Private and Public)</b>			
Western Illinois University	76	122	127
University of Nebraska at Omaha	63	66	78
University of South Dakota	62	71	76
Bellevue University	50	100	99
Northwest Missouri State	40	†50	†48
University of Phoenix	†30	82	106

Note: This table represents individuals enrolled in Iowa Community Colleges in 2002 who did not receive an award at any Iowa Community college in 2002, 2003, 2004, or 2005, were not enrolled in any four-year institution in 2002, were not enrolled in high school in 2002, and enrolled in four-year institutions in FY 2003, 2004, and 2005.

These are not duplicate enrollments.

Non-award recipients are defined as those students who do not complete any type of degree at an Iowa community college.

Drake University did not participate in the National Student Clearinghouse in 2003, 2004 or 2005.

Fiscal years are defined from July 1 to June 30 (e.g. Fiscal Year 2003 is from July 1, 2002 to June 30, 2003).

The student record must have a valid social security number to be included in the analysis.

(\*) Denotes cases suppressed due to fewer than 5 cases represented.

(†) Denotes four-year institution not listed in the top five or ten institutions with Non-award recipient transfers that fiscal year.

(††) Buena Vista University did not participate in the National Student Clearinghouse in 2003.

Data Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; National Student Clearinghouse enrollment data.

**POSTCOLLEGE EARNINGS OF IOWA  
COMMUNITY COLLEGE STUDENTS**

**Unemployment Insurance Wage Record Analysis**



## EXECUTIVE SUMMARY

Since November 2004, Frankie Santos Laanan, Associate Professor in the Department of Educational Leadership and Policy Studies in the College of Human Sciences at Iowa State University (ISU), along with his research team, have maintained a working relationship with the Iowa Department of Education, Division of Community Colleges and Workforce Preparation (IDE) to complete a report on the results of Unemployment Insurance (UI) wage record analysis among Iowa community colleges, "Using UI Wage Records to Assess Postcollege Earnings of Iowa Career and Technical Education Students." Building upon the first report, "Vocational Education Accountability in Iowa Community Colleges" submitted to IDE in June 2006; this report presents the research methodology and highlights of findings of Iowa community college students. Recommendations for policy and future research are also provided.

Secondary data were obtained from the Iowa Workforce Development (IWD) and Iowa Department of Education where student records including demographic and educational data (from IDE) were matched with Unemployment Insurance (from IWD) data to investigate post-college earnings of Iowa community college students enrolled 2002 fiscal year (2002 cohort). Median annual median of completers (those who completed an associate degree, certificate or diploma and were not enrolled in any postsecondary institution the year following completion) and leavers (those who did not receive an award and were not enrolled in any high school or other postsecondary institution during the fiscal year) in the last year of enrollment (FY 2002), first year out of college (FY 2003), and third year out of college (FY 2005) were compared with additional analysis by social demographics (i.e., gender, age, and race).

The primary objectives of this study were to investigate the following:

- Objective 1: How do students' post-college earnings differ from their last year in college, first year out of college and third year out of college by age group, race, gender, type of educational credential and level of educational attainment?
- Objective 2: How do earnings differ between students who complete an associate degree, certificate, diploma, or other credential to those who do not complete a credential?

### Highlights of the Findings

Comparisons of earnings among analytic groups (i.e., completers vs. leavers; males vs. females; 25 and over vs. under 25) are highlighted below.

#### *Completers and Leavers*

- Completers experienced positive gains in median annual earnings across all education attainment levels.
- Between FY 02 and FY 05, the percentage gains in median annual earnings were almost twice as much for completers (101.46%) than leavers (51.54%).
- During the first year out of college (FY 03) and third year out of college (FY 05), AAS degree completers experienced the highest median annual earnings.

### *Gender*

- Among females and males, completers experienced a larger percentage increase in median annual earnings than leavers between the first year out (FY 02) and the third year out (FY 05).
- Among females, AAS degree completers experienced the largest increase in median annual earnings (101.81%) between FY 02 and FY 05.
- Among males, diploma completers experienced the largest increase in median annual earnings (142.93%) between FY 02 and FY 05.

### *Race*

- Overall, White students experienced a larger percentage increase (51.98%) in median annual earnings between the last year in college (FY 02) and third year out (FY 05) than Non-White students (32.69%).
- For both White and Non-White students, completers had larger percentage increases in median annual earnings than leavers between the last year in college (FY 02) and third year out (FY 05).
- For both White and Non-White students, degree and diploma completers had higher median annual earnings in FY 05, and experienced larger percentage increases between their last year of college (FY 02) and the third year out (FY 05), than certificate completers.

### *Age Group*

- Completers in both age brackets experienced a larger increase in median annual earnings between FY 02 and FY 05 than leavers.
- Diploma completers in both age brackets experienced a larger percentage increase in median annual earnings between FY 2002 and FY 2005.

In general, regardless of demographics (gender, age, or race), completers earned the highest median annual earnings. Additionally, those completers with AAS degrees earned the highest median annual earnings compared to other completers. Although some mixed results were found among other types of completers, modest differences were noted among AAS completers when comparing gender and race.

### **Recommendations**

The results of the wage analysis of CTE program participants in Iowa Community Colleges indicates that the completion of an AAS degree serves as an equalizer regardless of gender, age or race for CTE students; CTE degree completers obtain higher median annual earnings. As such, this informs Iowa and other state policy makers and practitioners that efforts should be made to assist CTE students in completing a degree, especially an AAS degree. In addition, further study should be conducted that accounts for the longitudinal trends in earnings to determine their continual increase or leveling off. Moreover, additional study of the trends in earnings by disaggregated program clusters (e.g., differences in student earnings enrolled in health programs versus those enrolled information technology programs, etc.) will further explain the impact of acquiring an AAS degree.

## METHODOLOGY

The purpose of this study was to understand the relationship between educational attainment and post-college earnings for students who were enrolled in Iowa community colleges, more specifically in career and technical education programs. The methodology of the study has emerged from analysis of many other studies that have been conducted in the past. In particular, much of the methodology is based on studies that have been conducted in California (Sanchez, Laanan & Wiseley, 1999), Florida (Pfeiffer, 1998), Washington (Seppanen, 2000) and other states (Grubb, 2002). An overview of some of these studies is provided in Table 5 in the Appendix.

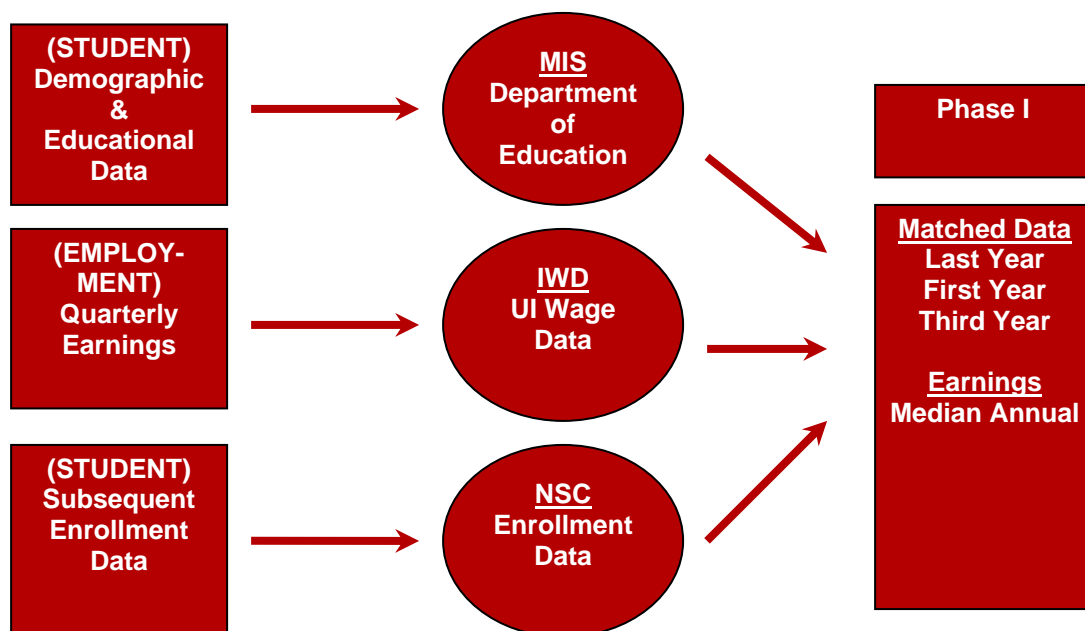
The following research questions guided this investigation:

- How do students' post-college earnings differ from the last year in college, first year out and third year out by age group, race, gender, type of educational credential, and level of educational attainment?
- How do earnings differ between students who complete an associate degree, certificate, diploma, or other credential and those who do not complete a credential?

### Data Sources

#### *Phase I: Matching Data*

A matched dataset was used for this study based on data derived from the Unemployment Insurance (UI) wage record file provided by the Iowa Workforce Development (IWD) and the demographic and educational record file provided by the Iowa Department of Education (see Figure 1). Social security numbers were used to match the UI wage record file with the student record file. The UI wage record file includes individual wages per employment for 16 employment quarters, specifically from the fourth quarter of 2001 to the third quarter of 2005.



**Figure 1:** Phase 1 Data Matching

The student records file includes demographic and educational data stored in the Iowa Department of Education Management Information System (MIS). Furthermore, to determine enrollment status of a cohort of fiscal year 2002 Iowa community college students, enrollment data from the National Student Clearinghouse were matched with the combined data file (UI wage record file and MIS educational file) by using social security numbers.

The matched data for a cohort of fiscal year 2002 Iowa community college students were used to assess earnings for the last year in college (July 1, 2001 – June 30, 2002), the first year after enrollment (July 1, 2002 – June 30, 2003), and the third year after enrollment (July 1, 2004 – June 30, 2005). The annual earnings were defined as a sum of the fourth quarter through the third quarter of each fiscal year defined as:

Fiscal Year 2002

- Annual Earnings: October 1, 2001 – September 30, 2002
- Last year in College: July 1, 2001 – June 30, 2002

Fiscal Year 2003

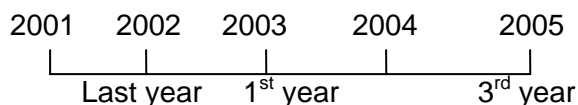
- Annual Earnings: October 1, 2002 – September 30, 2003
- First year out of College: July 1, 2002 – June 30, 2003

Fiscal Year 2005

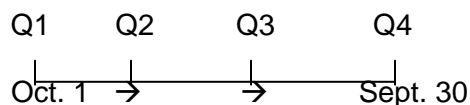
- Annual Earnings: October 1, 2004 – September 30, 2005
- Third year out of College: July 1, 2004 – June 30, 2005

It is noteworthy that the definitions of three fiscal years (2002, 2003, and 2005) to measure the annual earnings do not correspond to the time frames of the student's enrollment status due to the limited availability of the UI wage records to the researchers (See Figure 2).

**Enrollment Status:**



**Annual Earnings:**

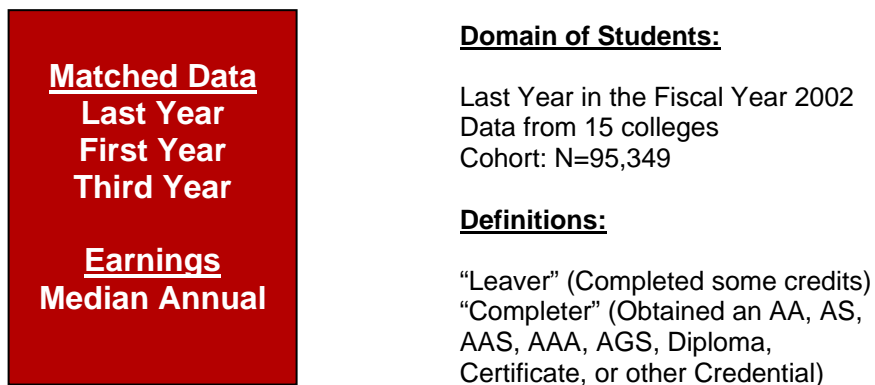


**Figure 2:** Defined timeline for enrollment status and four quarters of employment

The initial data match was based on approximately 100,000 students enrolled in any of Iowa's community colleges during the 2002 fiscal year. Completers were defined as students who were enrolled in an Iowa community college and received an associate degree, certificate, diploma, or other credential during the 2002 fiscal year (July 1, 2001 – June 30, 2002). Excluded from the completers were students who enrolled in any postsecondary institution in the following fiscal year (2003). Students who concurrently enrolled in high school, or any other postsecondary institution, during the fiscal year 2002 were also excluded. Leavers were defined as students who were enrolled in an Iowa community college, but did not complete an associate degree, certificate, diploma, or other credential during the 2002 fiscal year. Students who were concurrently enrolled



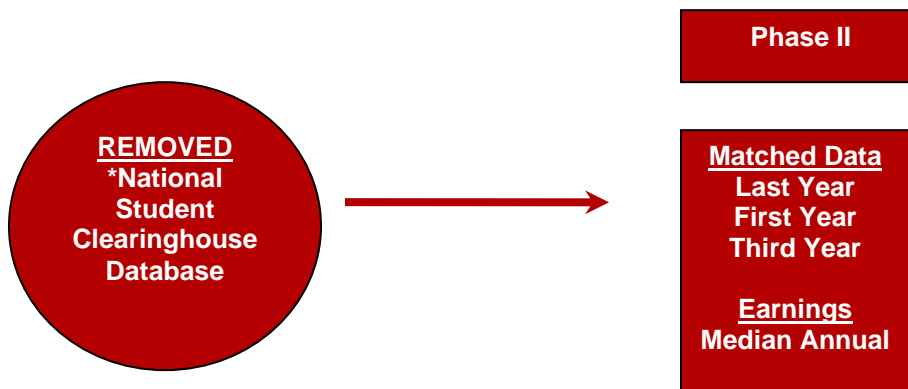
in high school, or any other postsecondary institution, during the fiscal year 2002 were also excluded from the leaver category. Finally, leavers were not enrolled in any postsecondary institution from the fiscal year 2003 to 2005.



**Figure 3:** Domain of Students

*Phase II: Exclusions from Data file*

Figure 4 illustrates the process of determining exclusions from the matched data file. The cohort domain consisted of students with a valid social security number in each case. Any students who were enrolled in high school during the fiscal year 2002 were excluded from the data file.



**Figure 4:** Phase II Determining Exclusions from the Data file.

Any individuals enrolled in the following fiscal year (July 1, 2002 – June 30, 2003) in any postsecondary institutions identified through the National Student Clearinghouse enrollment file were also excluded. Further, availability of UI wage records defined additional limitations. Those not included in the UI wage records include individuals who are:

- in the military
- church employees
- railroad workers covered by railroad unemployment insurance system

- federal government employees
- employed in a college or university as part of a financial aid package
- self-employed
- unemployed
- not in the workforce
- without a valid Social Security Number

### **Analytical Approach**

Descriptive and comparative analyses were conducted to examine the relationship between educational attainment and post-college earnings for students who were enrolled in Iowa community colleges during the fiscal year 2002. Earnings for the last year of enrollment were compared with earnings from the third year after enrollment, and earnings from the first year after enrollment were compared with the third year after enrollment. All earnings were adjusted to the Consumer Price Index (Midwest Urban) 2005 dollars in order to standardize comparisons across time. The median earnings were used rather than the mean because the median is less prone to being influenced by some extremely high or low wages.

Earnings were analyzed and compared by students' age, race or ethnicity, gender, and economic status (economically disadvantaged). Operational definitions of selected variables used in this study were:

- Completers include those who obtained a degree of Associate in Arts (AA), Associate in Science (AS), Associate in General Studies (AGS), Associate in Applied Arts (AAA), Associate in Applied Science (AAS), a diploma, a certificate or other credentials at an Iowa community college in fiscal year 2002.
- Associates include those who completed an AA, AAS, AGS, AS, or AAA degree at an Iowa community college in fiscal year 2002.
- Leavers include those who: enrolled in an Iowa community college during the 2002 fiscal year; were not enrolled in any postsecondary institution in the following fiscal year; did not complete an associate degree, certificate, diploma, or other credential during the 2002 fiscal year; or, were not concurrently enrolled in high school, or any other postsecondary institution, during the fiscal year.

It is important to note that individuals who were not employed during all four quarters in each fiscal year were excluded from the analysis. Annual earnings were computed by summing the earnings of all four quarters in each fiscal year. Median annual earnings were computed for each of the subgroups.

### *Median Annual Earnings by Educational Attainment*

Aggregated analyses of median annual earnings by educational attainment were conducted on students in the cohort based on the three reference years (the last year in, first year out, and third year out). Further, the cohort was disaggregated by student's educational attainment (completers and leavers). Among the completers, students were categorized by the types of credentials (Associates, AAS, Diploma, or Certificate). Specifically, the AAS, Diploma, and Certificate completers were extracted to compare the median annual earnings of CTE students with those who completed other types of credentials. There is an underlying assumption for this comparative analysis that most of the AAS, Diploma, and Certificate completers were considered as CTE students. The

same analysis was conducted for students disaggregated by: 1) gender (female and male); 2) age (under 25 and 25 and over); and 3) race (White and Non-White).

### **Limitations**

This study has limitations that must be addressed. First, the results are valid to the extent that we are able to account for all sectors of employment in the UI wage file. Inability to account for government employees, postal workers, those in the military, and those who are self-employed could limit the generalizability of the findings to all Iowa community college students. Second, UI wage files do not include or account for those individuals who were proprietors, worked for churches, railroad workers who were covered by the railroad unemployment insurance system, nor those employed in other states or enrolled in four-year institutions with employment tied to student financial aid. Third, it is important to also note that UI wage files do include data on full- and part-time workers. Additionally, wage files include paid for vacation, other paid leave, bonuses, stock options, tips, and the cash value of meals and lodging. In some cases, deferred compensation may also be included.

The numbers of students indicated in the results do not correspond to the number of students who are employed in a given year. One of critical limitations of this study is that to be included in the analysis, a student record must have a valid social security number for the researchers to be able to match 1) educational records file from MIS; 2) enrollment records from the National Student Clearinghouse data; and 3) UI wage records. Finally, our analyses were intended to be descriptive in nature, which means that the results should not be interpreted as a prediction of earnings or employment outlook.



## FINDINGS FOR ALL STUDENTS

The figure and tables below show the results for all students in the study. Results are shown for completers and leavers, and completers are divided into all associate degree completers, associate in applied science (AAS), diploma and certificate completers.

For completers and leavers, as shown in Figure 1 and Table 1, the following results can be seen:

- During the first year out of college (FY 03), completers experienced higher median annual earnings than leavers.
- Students who completed programs of study offered by two-year colleges doubled their earnings between 2002 and 2005.
- Between FY 02 and FY 05 the percentage gains in median annual earnings were almost twice as much for completers (101.46%) than leavers (51.54%).
- Completers had higher median annual earnings (\$23,594) after FY 03 and FY 05 (\$28,217) than leavers.

For different types of completers, as shown in Figure 1 and Table 1.1, the following results can be seen:

- Completers experienced positive gains in median annual earnings across all education attainment levels.
- During the first year out of college (FY 03), Associate in Applied Science (AAS) degree completers experienced the highest median annual earnings (\$28,110).
- Diploma completers experienced the largest percentage gain (120.36%) in median annual earnings between FY 02 and FY 05.
- During the first year out of college (FY 03) and third year out of college (FY 05), AAS degree completers experienced the highest median annual earnings.
- Certificate completers experienced the least percentage gain in median annual earnings between FY 02 and FY 05 (36.53%), and FY 03 and FY 05 (7.22%).

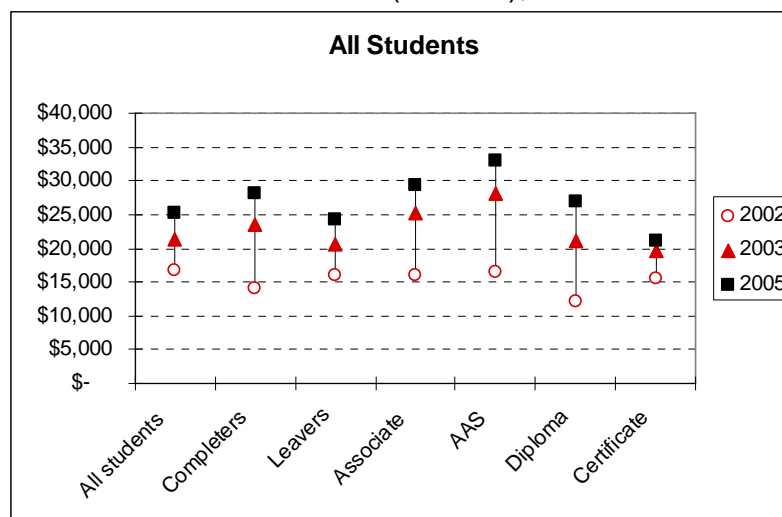


Figure 1. Median Annual Earnings of All Students for Fiscal Year 2002, Fiscal Year 2003, and Fiscal Year 2005.

**Table 1**  
**Median Annual Earnings of 2002 Iowa Community College Completers and Leavers**  
**Fiscal Year 2002, Fiscal Year 2003, and Fiscal Year 2005**

	<u>Last Year in College</u> Fiscal Year 2002		<u>First Year Out</u> Fiscal Year 2003		<u>Third Year Out</u> Fiscal Year 2005		% change 2002-2005	% change 2003-2005
	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings		
<b>All students</b>	20,512	\$16,743	20,933	\$21,399	20,419	\$25,145	50.18%	17.50%
Completers	3,733	\$14,006	4,245	\$23,594	4,252	\$28,217	101.46%	19.59%
Leavers	16,788	\$15,959	16,688	\$20,702	16,167	\$24,184	51.54%	16.82%

Note: Table presents median annual earnings for students who worked all four quarters in respective fiscal year.

Excluded from the analysis are students who enrolled in any postsecondary institution identified by the National Student Clearinghouse enrollment data from July 1, 2002 through June 30, 2003 and not enrolled in high school in the fiscal year 2002 as identified by Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education. Also excluded are those in the military, federal employees, self-employed, unemployed, those not in the workforce and those without valid social security number.

Completers are defined as those who completed an associate degree, Diploma, Certificate, and other credentials at an Iowa Community College in Fiscal Year 2002.

Annual earnings are defined as the sum of earnings in four quarters (e.g., 2002 annual earnings are a sum of earnings from October 1, 2001 [fourth quarter] through September 30, 2003 [third quarter]).

Median annual earnings are adjusted to 2005 Consumer Price Index for Midwest Consumers.

Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; Iowa Workforce Development, Unemployment Insurance wage data; and National Student Clearinghouse enrollment data.

**Table 1.1**  
**Median Annual Earnings of 2002 Iowa Community Colleges Completers**  
**Fiscal Year 2002, Fiscal Year 2003, and Fiscal Year 2005**

	Last Year in College Fiscal Year 2002		First Year Out Fiscal Year 2003		Third Year Out Fiscal Year 2005		% change 2002-2005	% change 2003-2005
	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings		
<b>All students</b>	20,512	\$16,743	20,933	\$21,399	20,419	\$25,145	50.18%	17.50%
Completers	3,733	\$14,006	4,245	\$23,594	4,252	\$28,217	101.46%	19.59%
<i>Associates</i>	2,732	\$15,884	2,983	\$25,170	2,987	\$29,356	84.81%	16.63%
- <i>AAS</i>	1,610	\$16,573	1,886	\$28,110	1,873	\$32,873	98.36%	16.94%
<i>Diploma</i>	734	\$12,158	945	\$21,176	945	\$26,792	120.36%	26.52%
<i>Certificate</i>	230	\$15,507	283	\$19,747	284	\$21,172	36.53%	7.22%

Note: Table presents median annual earnings for students who worked all four quarters in respective fiscal year.

Excluded from the analysis are students who enrolled in any postsecondary institution identified by the National Student Clearinghouse enrollment data from July 1, 2002 through June 30, 2003 and not enrolled in high school in the fiscal year 2002 as identified by Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education. Also excluded are those in the military, federal employees, self-employed, unemployed, those not in the workforce and those without valid social security number.

Completers are defined as those who completed an associate degree, Diploma, Certificate, and other credentials at an Iowa Community College in Fiscal Year 2002.

Associates include those who completed an AA, AAS, AGS, AS, and AAA degrees at an Iowa Community College in Fiscal Year 2002.

Annual earnings are defined as the sum of earnings in four quarters (e.g., 2002 annual earnings are a sum of earnings from October 1, 2001 [fourth quarter] through September 30, 2003 [third quarter]).

Median annual earnings are adjusted to 2005 Consumer Price Index for Midwest Consumers.

Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; Iowa Workforce Development, Unemployment Insurance wage data; and National Student Clearinghouse enrollment data.

## FINDINGS BY GENDER

Results for male and female leavers and completers are available in Figures 2 and 3, Table 2, and tables in the Appendix (i.e., Tables 2A and 2B).

Figures 2 and 3, Table 2, and the tables in the Appendix show the results for gender:

- For both females and males, completers experienced a larger percentage increase in median annual earnings than leavers.
- Among females, AAS degree completers experienced the largest increase in median annual earnings (101.81%) between FY 02 and FY 05.
- Among males, diploma completers experienced the largest increase in median annual earnings (142.93%) between FY 02 and FY 05.
- Between FY 02 and FY 05, female certificate completers had only one-third of the percentage gains (22.03%) in median annual earnings as compared to male certificate completers (73.68%).
- As measured by median annual earnings, males, as a group, tended to experience greater financial benefit from completing degrees, diplomas, and certificates than females.
- Between the first year out (FY 03) and third year out (FY 05) males, as a group, experienced larger percentage increases (20.99%) in median annual earnings than females (13.43%).
- Males, as a group, tend to experience greater earning capacity as completers of degrees, diplomas, and certificates than females.



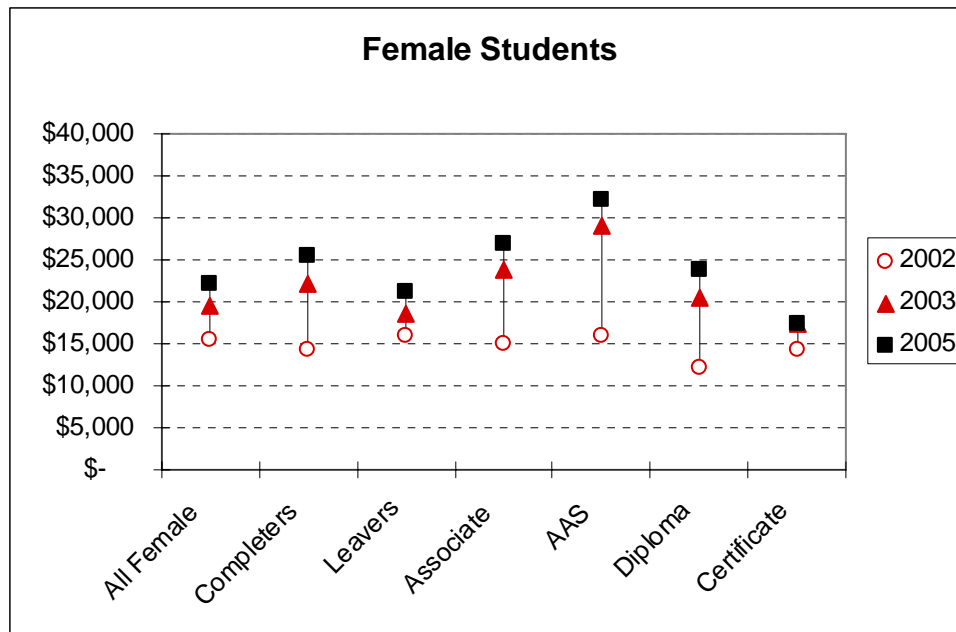


Figure 2. Median Annual Earnings of Female Students for Fiscal Year 2002, Fiscal Year 2003, and Fiscal Year 2005.

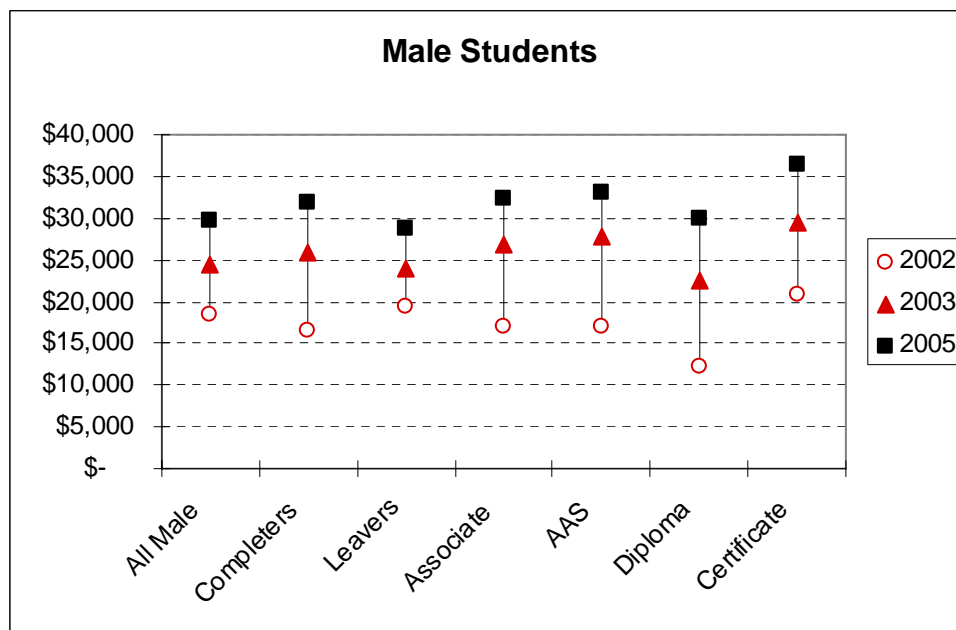


Figure 3. Median Annual Earnings of Male Students for Fiscal Year 2002, Fiscal Year 2003, and Fiscal Year 2005.

**Table 2**  
**Median Annual Earnings of 2002 Iowa Community College Completers and Leavers by Gender**  
**Fiscal Year 2002 and Fiscal Year 2005**

	Female					Male				
	Last Year in College Fiscal Year 2002		Third Year Out Fiscal Year 2005			Last Year in College Fiscal Year 2002		Third Year Out Fiscal Year 2005		
	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings	% change 2002-2005	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings	% change 2002-2005
<b>All</b>	12,003	\$15,565	11,813	\$22,114	42.07%	8,466	\$18,515	8,558	\$29,605	59.90%
Leavers	9,741	\$16,009	9,279	\$21,207	32.47%	6,996	\$19,298	6,841	\$28,775	49.11%
Completers	2,262	\$14,340	2,534	\$25,560	78.25%	1,470	\$16,518	1,717	\$31,935	93.34%
<i>Associates</i>	1,601	\$15,087	1,728	\$26,984	78.86%	1,131	\$16,971	1,259	\$32,284	90.23%
-AAS	833	\$15,895	963	\$32,077	101.81%	777	\$16,993	910	\$33,088	94.72%
<i>Diploma</i>	481	\$12,114	596	\$23,840	96.80%	252	\$12,324	348	\$29,939	142.93%
<i>Certificate</i>	160	\$14,187	192	\$17,312	22.03%	70	\$20,920	92	\$36,333	73.68%

Note: Table presents median annual earnings for students who worked all four quarters in respective fiscal year.

Excluded from the analysis are students who enrolled in any postsecondary institution identified by the National Student Clearinghouse enrollment data from July 1, 2002 through June 30, 2003 and not enrolled in high school in the fiscal year 2002 as identified by Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education. Also excluded are those in the military, federal employees, self-employed, unemployed, those not in the workforce and those without valid social security number.

Completers are defined as those who completed an associate degree, Diploma, Certificate, and other credentials at an Iowa Community College in Fiscal Year 2002.

Associates include those who completed an AA, AAS, AGS, AS, and AAA degrees at an Iowa Community College in Fiscal Year 2002.

Annual earnings are defined as the sum of earnings in four quarters (e.g., 2002 annual earnings are a sum of earnings from October 1, 2001 [fourth quarter] through September 30, 2003 [third quarter]).

Median annual earnings are adjusted to 2005 Consumer Price Index for Midwest Consumers.

Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; Iowa Workforce Development, Unemployment Insurance wage data; and National Student Clearinghouse enrollment data.

## FINDINGS BY RACE

Results for White and Non-White leavers and completers are available in Figures 4 and 5, Table 3, and tables in the Appendix (i.e., Tables 3A and 3B).

Figures 4 and 5, Table 3, and the tables in the Appendix show the results for race:

- Overall, White students experienced a larger percentage increase (51.98%) in median annual earnings between the last year in college (FY 02) and third year out (FY 05) than Non-White students (32.69%).
- For both White and Non-White students, completers had larger percentage increases in median annual earnings than leavers between the last year in college (FY 02) and third year out (FY 05).
- White and Non-White AAS degree completers experienced the highest median annual earnings after the third year out (FY 05).
- For both White and Non-White students, degree and diploma completers had higher median annual earnings in FY 05, and experienced larger percentage increases between their last year of college (FY 02) and the third year out (FY 05), than certificate completers.
- Graduating with a diploma or degree results in greater earning capacity the first year following graduation for White students than Non-White students.
- Considering all educational levels, Whites, as a group, experienced higher median annual earnings (\$25,238) than Non-White students (\$22,447) after the third year out (FY 05).
- White students, as a group, tend to experience greater earning capacity as completers of degrees, diplomas, and certificates than Non-White students.

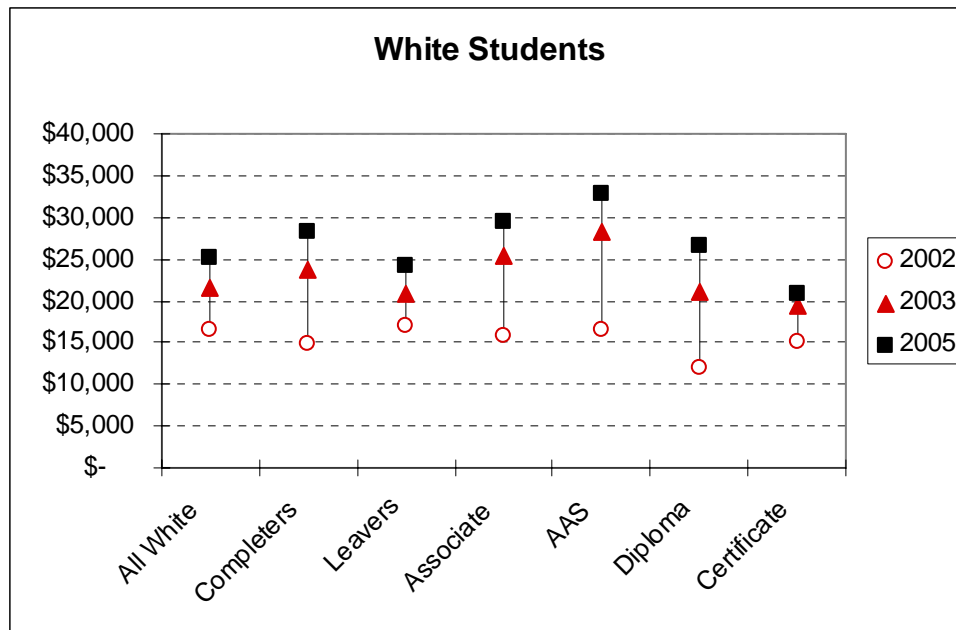


Figure 4. Median Annual Earnings of White Students for Fiscal Year 2002, Fiscal Year 2003, and Fiscal Year 2005.

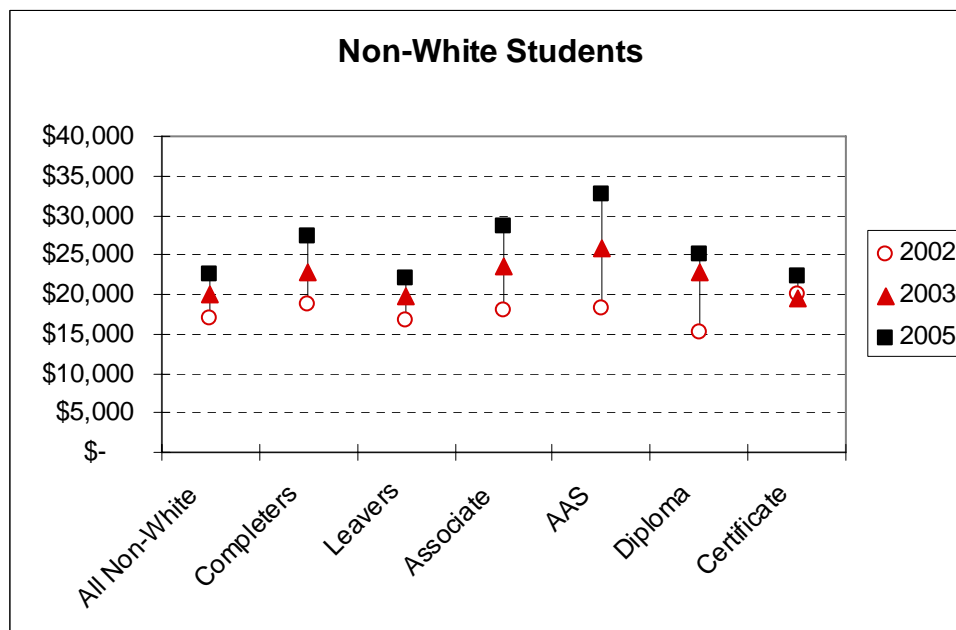


Figure 5. Median Annual Earnings of Non-White Students for Fiscal Year 2002, Fiscal Year 2003, and Fiscal Year 2005.

**Table 3**  
**Median Annual Earnings of Students from Iowa Community Colleges in Fiscal Year 2002 by Race**  
**Fiscal Year 2002 and Fiscal Year 2005**

	White					Non-White				
	Last Year in College Fiscal Year 2002		Third Year Out Fiscal Year 2005			Last Year in College Fiscal Year 2002		Third Year Out Fiscal Year 2005		
	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings	% change 2002-2005	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings	% change 2002-2005
<b>All</b>	18,001	\$16,606	18,062	\$25,238	51.98%	1,265	\$16,917	1,169	\$22,447	32.69%
Leavers	14,483	\$17,066	14,053	\$24,270	42.21%	1,141	\$16,690	1,038	\$22,036	32.03%
Completers	3,518	\$14,957	4,009	\$28,217	88.66%	124	\$18,797	131	\$27,245	44.94%
<i>Associates</i>	2,595	\$15,842	2,835	\$29,391	85.52%	77	\$18,067	80	\$28,521	57.87%
-AAS	1,528	\$16,573	1,777	\$32,897	98.50%	44	\$18,327	47	\$32,769	78.80%
<i>Diploma</i>	683	\$12,036	888	\$26,500	120.16%	29	\$15,233	30	\$25,170	65.24%
<i>Certificate</i>	203	\$15,056	250	\$20,816	38.26%	18	\$19,987	21	\$22,197	11.06%

Note: Table presents median annual earnings for students who worked all four quarters in respective fiscal year.

Excluded from the analysis are students who enrolled in any postsecondary institution identified by the National Student Clearinghouse enrollment data from July 1, 2002 through June 30, 2003 and not enrolled in high school in the fiscal year 2002 as identified by Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education. Also excluded are those in the military, federal employees, self-employed, unemployed, those not in the workforce and those without valid social security number.

Completers are defined as those who completed an associate degree, Diploma, Certificate, and other credentials at an Iowa Community College in Fiscal Year 2002.

Associates include those who completed an AA, AAS, AGS, AS, and AAA degrees at an Iowa Community College in Fiscal Year 2002.

Annual earnings are defined as the sum of earnings in four quarters (e.g., 2002 annual earnings are a sum of earnings from October 1, 2001 [fourth quarter] through September 30, 2002 [third quarter]).

Median annual earnings are adjusted to 2005 Consumer Price Index for Midwest Consumers.

Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; Iowa Workforce Development, Unemployment Insurance wage data; and National Student Clearinghouse enrollment data.

## FINDINGS BY AGE

Results for students 25 and over and for students under 25 are available in Figures 6 and 7, Table 4, and tables in the Appendix (i.e., Tables 4A and 4B).

Figures 6 and 7, Table 4, and the tables in the Appendix show the results for age:

- Completers in both age brackets experienced a larger increase in median annual earnings between FY 02 and FY 05 than leavers.
- Diploma completers in both age brackets experienced the largest increase in median annual earnings between FY 02 and FY 05.
- Associate degree and diploma completers in both age brackets experienced a larger percentage increase in median annual earnings through FY 05 than certificate completers.
- Students 25 and under awarded an AAS degree experienced the greatest increase in wage earnings in their first year after graduation and continued to see steady gain in wage increase through 2005.
- As measured by percentage increases in median annual earnings, students under the age of 25 received more benefit from furthering their education than students 25 and over. However, it should be noted that older students, who had been in the workforce longer, already had greater median annual earnings during the last year in college (FY 02) than their younger counterparts.

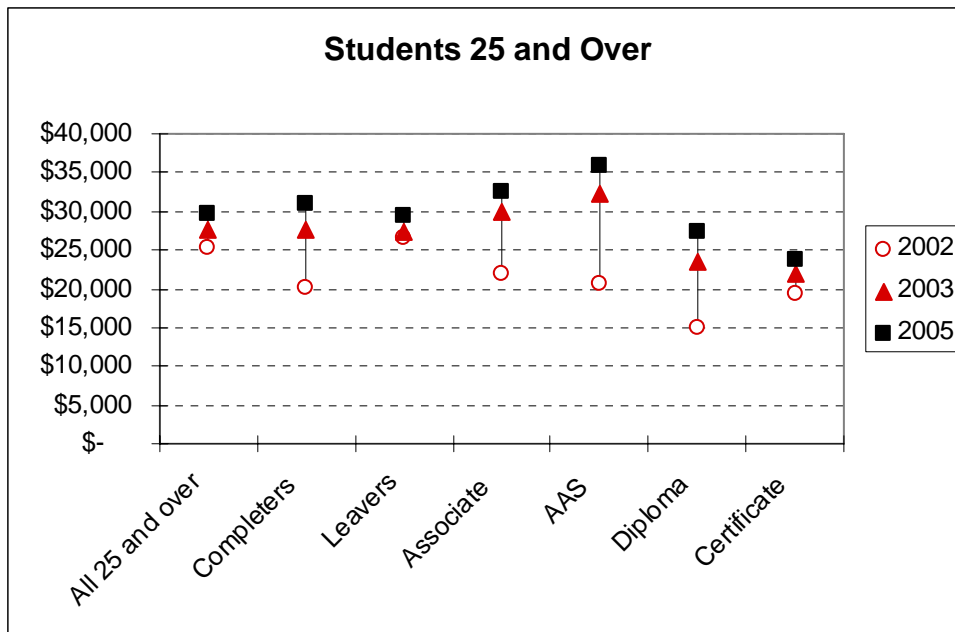


Figure 6. Median Annual Earnings of Student 25 and over for Fiscal Year 2002, Fiscal Year 2003, and Fiscal Year 2005.

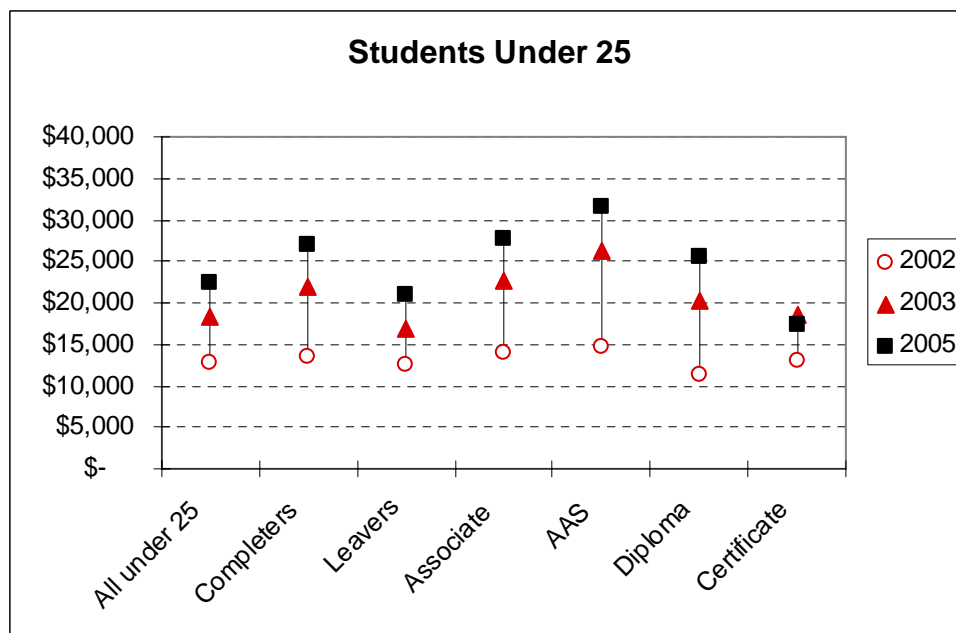


Figure 7. Median Annual Earnings of Students under 25 for Fiscal Year 2002, Fiscal Year 2003, and Fiscal Year 2005.

**Table 4**  
**Median Annual Earnings of Students from Iowa Community Colleges in Fiscal Year 2002 by Age**  
**Fiscal Year 2002 and Fiscal Year 2005**

	Students Under 25					Students 25 and Over				
	Last Year in College Fiscal Year 2002		Third Year Out Fiscal Year 2005			Last Year in College Fiscal Year 2002		Third Year Out Fiscal Year 2005		
	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings	% change 2002-2005	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings	% change 2002-2005
<b>All</b>	10,579	\$12,777	10,278	\$22,452	75.73%	9,307	\$25,343	9,478	\$29,709	17.23%
Leavers	8,297	\$12,604	7,863	\$20,975	66.41%	7,883	\$26,531	7,686	\$29,371	10.70%
Completers	2,282	\$13,380	2,415	\$27,032	102.04%	1,424	\$20,058	1,792	\$30,918	54.14%
<i>Associates</i>	1,692	\$13,964	1,758	\$27,755	98.77%	1,033	\$21,845	1,216	\$32,421	48.41%
-AAS	976	\$14,715	1,079	\$31,517	114.18%	631	\$20,613	788	\$35,784	73.60%
<i>Diploma</i>	789	\$11,406	557	\$25,446	123.09%	244	\$14,848	382	\$27,382	84.42%
<i>Certificate</i>	92	\$13,100	92	\$17,337	32.35%	120	\$19,233	167	\$23,709	23.27%

Note: Table presents median annual earnings for students who worked all four quarters in respective fiscal year.

Excluded from the analysis are students who enrolled in any postsecondary institution identified by the National Student Clearinghouse enrollment data from July 1, 2002 through June 30, 2003 and not enrolled in high school in the fiscal year 2002 as identified by Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education. Also excluded are those in the military, federal employees, self-employed, unemployed, those not in the workforce and those without valid social security number. Age is defined as the student's age as of July 1, 2002.

Completers are defined as those who completed an associate degree, Diploma, Certificate, and other credential at an Iowa Community College in Fiscal Year 2002.

Associates include those who completed an AA, AAS, AGS, AS, and AAA degrees at an Iowa Community College in Fiscal Year 2002.

Annual earnings are defined as the sum of earnings in four quarters (e.g., 2002 annual earnings are a sum of earnings from October 1, 2001 [fourth quarter] through September 30, 2003 [third quarter]).

Median annual earnings are adjusted to 2005 Consumer Price Index for Midwest Consumers.

Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; Iowa Workforce Development, Unemployment Insurance wage data; and National Student Clearinghouse enrollment data.



## FINDINGS FOR PELL RECIPIENTS

Figure 8 and Table 5 show the results for Pell Recipients (identified for the purposes of this study as economically disadvantaged individuals). This category represents one of the special population categories for Perkins accountability measures. Table 5 shows the earnings of Pell recipients for fiscal year 2003, fiscal year 2004, and fiscal year 2005.

The results from the analysis include the following:

- Among Pell recipients, completers experienced a larger percentage increase (115.25%) in median annual earnings between the last year in college (FY 02) and the third year out (FY 05) than leavers (62.93%).
- Among Pell recipients who completed either a diploma or AAS degree experienced the largest percentage increases in median annual earnings between the last year in college (FY 02) and the third year out (FY 05), 136.86% and 125.58%, respectively.
- Considering all educational levels, Pell recipients who completed a certificate experienced lesser earning capacity.

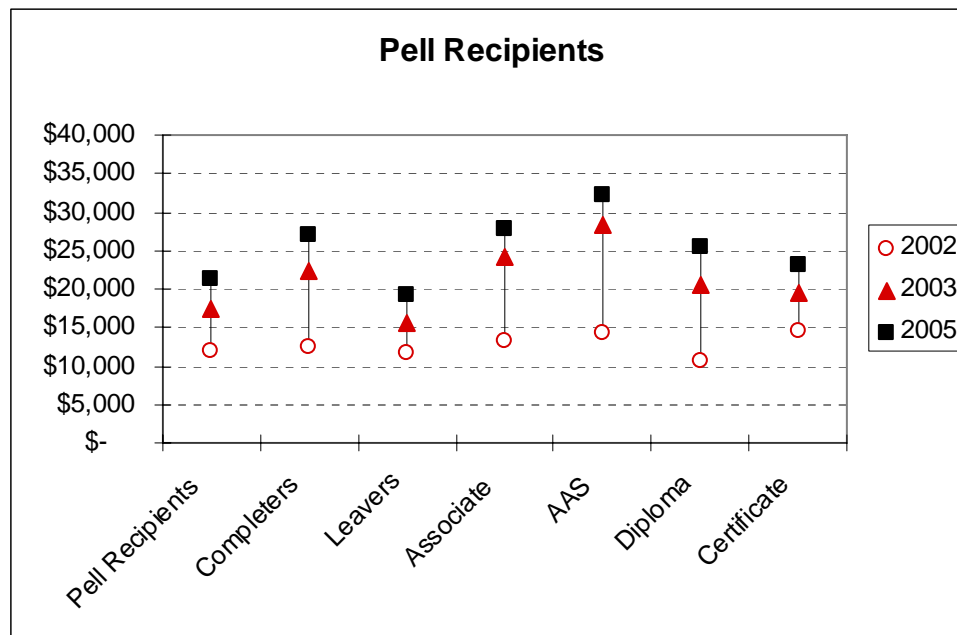


Figure 8. Median Annual Earnings of Pell Recipients for Fiscal Year 2002, Fiscal Year 2003, and Fiscal Year 2005.

**Table 5**  
**Median Annual Earnings of Pell Recipients from Iowa Community Colleges in Fiscal Year 2002**  
**Fiscal Year 2002, Fiscal Year 2003, and Fiscal Year 2005**

	<u>Last Year in College</u> Fiscal Year 2002		<u>First Year Out</u> Fiscal Year 2003		<u>Third Year Out</u> Fiscal Year 2005		% change 2002-2005	% change 2003-2005
	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings		
<b>All Pell Recipients</b>	4,228	\$11,930	4,753	\$17,497	4,826	\$21,288	78.44%	21.67%
Leavers	3,171	\$11,775	3,383	\$15,668	3,439	\$19,185	62.93%	22.45%
Completers	1,057	\$12,514	1,370	\$22,371	1,387	\$26,936	115.25%	20.40%
<i>Associates</i>	764	\$13,257	937	\$24,059	959	\$27,829	109.92%	15.67%
-AAS	463	\$14,263	620	\$28,331	621	\$32,175	125.58%	13.57%
<i>Diploma</i>	267	\$10,700	397	\$20,412	397	\$25,343	136.86%	24.16%
<i>Certificate</i>	26	\$14,442	35	\$19,514	31	\$23,111	60.03%	18.43%

Note: Table presents median annual earnings for students who worked all four quarters in respective fiscal year.

Excluded from the analysis are students who enrolled in any postsecondary institution identified by the National Student Clearinghouse enrollment data from July 1, 2002 through June 30, 2003 and not enrolled in high school in the fiscal year 2002 as identified by Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education. Also excluded are those in the military, federal employees, self-employed, unemployed, those not in the workforce and those without valid social security number.

Completers are defined as those who completed an associate degree, Diploma, Certificate, and other credentials at an Iowa Community College in Fiscal Year 2002.

Associates include those who completed an AA, AAS, AGS, AS, and AAA degrees at an Iowa Community College in Fiscal Year 2002.

Annual earnings are defined as the sum of earnings in four quarters (e.g., 2002 annual earnings are a sum of earnings from October 1, 2001 [fourth quarter] through September 30, 2003 [third quarter]).

Median annual earnings are adjusted to 2005 Consumer Price Index for Midwest Consumers.

Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; Iowa Workforce Development, Unemployment Insurance wage data; and National Student Clearinghouse enrollment data.

**APPENDIX**

**Additional Tables for  
Postcollege Earnings of Iowa Community College Students**

**Table 1A**  
**Median Annual Earnings of 2002 Iowa Community College Completers and Leavers**  
**Fiscal Year 2002, Fiscal Year 2003, and Fiscal Year 2005**

	Last Year in College Fiscal Year 2002		First Year Out Fiscal Year 2003		Third Year Out Fiscal Year 2005		% change 2002- 2005	% change 2003- 2005
	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings		
<b>All students</b>	20,512	\$16,743	20,933	\$21,399	20,419	\$25,145	50.18%	17.50%
Leavers	16,788	\$15,959	16,688	\$20,702	16,167	\$24,184	51.54%	16.82%
Completers	3,733	\$14,006	4,245	\$23,594	4,252	\$28,217	101.46%	19.59%
<i>Associates</i>	2,732	\$15,884	2,983	\$25,170	2,987	\$29,356	84.81%	16.63%
-AAS	1,610	\$16,573	1,886	\$28,110	1,873	\$32,873	98.36%	16.94%
<i>Diploma</i>	734	\$12,158	945	\$21,176	945	\$26,792	120.36%	26.52%
<i>Certificate</i>	230	\$15,507	283	\$19,747	284	\$21,172	36.53%	7.22%

Note: Table presents median annual earnings for students who worked all four quarters in respective fiscal year.

Excluded from the analysis are students who enrolled in any postsecondary institution identified by the National Student Clearinghouse enrollment data from July 1, 2002 through June 30, 2003 and not enrolled in high school in the fiscal year 2002 as identified by Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education. Also excluded are those in the military, federal employees, self-employed, unemployed, those not in the workforce and those without valid social security number.

Completers are defined as those who completed an associate degree, Diploma, Certificate, and other credentials at an Iowa Community College in Fiscal Year 2002.

Associates include those who completed an AA, AAS, AGS, AS, and AAA degrees at an Iowa Community College in Fiscal Year 2002.

Annual earnings are defined as the sum of earnings in four quarters (e.g., 2002 annual earnings are a sum of earnings from October 1, 2001 [fourth quarter] through September 30, 2003 [third quarter]).

Median annual earnings are adjusted to 2005 Consumer Price Index for Midwest Consumers.

Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; Iowa Workforce Development, Unemployment Insurance wage data; and National Student Clearinghouse enrollment data.

**Table 2A**  
**Median Annual Earnings of Female Students from Iowa Community Colleges in Fiscal Year 2002**  
**Fiscal Year 2002, Fiscal 2003, and Fiscal Year 2005**

	Last Year in College Fiscal Year 2002		First Year Out Fiscal Year 2003		Third Year Out Fiscal Year 2005		% change 2002- 2005	% change 2003- 2005
	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings		
<b>All Female</b>	12,003	\$15,565	12,225	\$19,496	11,813	\$22,114	42.07%	13.43%
Leavers	9,741	\$16,009	9,664	\$18,618	9,279	\$21,207	32.47%	13.91%
Completers	2,262	\$14,340	2,561	\$22,175	2,534	\$25,560	78.25%	15.27%
<i>Associates</i>	1,601	\$15,087	1,735	\$23,743	1,728	\$26,984	78.86%	13.65%
-AAS	833	\$15,895	984	\$29,106	963	\$32,077	101.81%	10.21%
<i>Diploma</i>	481	\$12,114	614	\$20,535	596	\$23,840	96.80%	16.10%
<i>Certificate</i>	160	\$14,187	194	\$17,445	192	\$17,312	22.03%	-0.76%

Note: Table presents median annual earnings for students who worked all four quarters in respective fiscal year.

Excluded from the analysis are students who enrolled in any postsecondary institution identified by the National Student Clearinghouse enrollment data from July 1, 2002 through June 30, 2003 and not enrolled in high school in the fiscal year 2002 as identified by Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education. Also excluded are those in the military, federal employees, self-employed, unemployed, those not in the workforce and those without valid social security number.

Completers are defined as those who completed an associate degree, Diploma, Certificate, and other credentials at an Iowa Community College in Fiscal Year 2002.

Associates include those who completed an AA, AAS, AGS, AS, and AAA degrees at an Iowa Community College in Fiscal Year 2002.

Annual earnings are defined as the sum of earnings in four quarters (e.g., 2002 annual earnings are a sum of earnings from October 1, 2001 [fourth quarter] through September 30, 2003 [third quarter]).

Median annual earnings are adjusted to 2005 Consumer Price Index for Midwest Consumers.

Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; Iowa Workforce Development, Unemployment Insurance wage data; and National Student Clearinghouse enrollment data.

**Table 2B**  
**Median Annual Earnings of Male Students from Iowa Community Colleges in Fiscal Year 2002**  
**Fiscal Year 2002, Fiscal Year 2003, and Fiscal Year 2005**

	Last Year in College Fiscal Year 2002		First Year Out Fiscal Year 2003		Third Year Out Fiscal Year 2005		% change 2002- 2005	% change 2003- 2005
	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings		
<b>All Male</b>	8,466	\$18,515	8,655	\$24,469	8,558	\$29,605	59.90%	20.99%
Leavers	6,996	\$19,298	6,972	\$24,017	6,841	\$28,775	49.11%	19.81%
Completers	1,470	\$16,518	1,683	\$25,861	1,717	\$31,935	93.34%	23.49%
<i>Associates</i>	1,131	\$16,971	1,248	\$26,816	1,259	\$32,284	90.23%	20.39%
-AAS	777	\$16,993	902	\$27,667	910	\$33,088	94.72%	19.59%
<i>Diploma</i>	252	\$12,324	330	\$22,454	348	\$29,939	142.93%	33.34%
<i>Certificate</i>	70	\$20,920	89	\$29,454	92	\$36,333	73.68%	23.36%

Note: Table presents median annual earnings for students who worked all four quarters in respective fiscal year.

Excluded from the analysis are students who enrolled in any postsecondary institution identified by the National Student Clearinghouse enrollment data from July 1, 2002 through June 30, 2003 and not enrolled in high school in the fiscal year 2002 as identified by Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education. Also excluded are those in the military, federal employees, self-employed, unemployed, those not in the workforce and those without valid social security number.

Completers are defined as those who completed an associate degree, Diploma, Certificate, and other credentials at an Iowa Community College in Fiscal Year 2002.

Associates include those who completed an AA, AAS, AGS, AS, and AAA degrees at an Iowa Community College in Fiscal Year 2002.

Annual earnings are defined as the sum of earnings in four quarters (e.g., 2002 annual earnings are a sum of earnings from October 1, 2001 [fourth quarter] through September 30, 2003 [third quarter]).

Median annual earnings are adjusted to 2005 Consumer Price Index for Midwest Consumers.

Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; Iowa Workforce Development, Unemployment Insurance wage data; and National Student Clearinghouse enrollment data.

**Table 3A**  
**Median Annual Earnings of White Students from Iowa Community Colleges in Fiscal Year 2002**  
**Fiscal Year 2002, Fiscal Year 2003, and Fiscal Year 2005**

	Last Year in College Fiscal Year 2002		First Year Out Fiscal Year 2003		Third Year Out Fiscal Year 2005		% change 2002- 2005	% change 2003- 2005
	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings		
<b>All White</b>	18,001	\$16,606	18,422	\$21,483	18,062	\$25,238	51.98%	17.48%
Leavers	14,483	\$17,066	14,417	\$20,727	14,053	\$24,270	42.21%	17.09%
Completers	3,518	\$14,957	4,005	\$23,675	4,009	\$28,217	88.66%	19.18%
<i>Associates</i>	2,595	\$15,842	2,836	\$25,282	2,835	\$29,391	85.52%	16.25%
-AAS	1,528	\$16,573	1,788	\$28,343	1,777	\$32,897	98.50%	16.07%
<i>Diploma</i>	683	\$12,036	886	\$21,187	888	\$26,500	120.16%	25.08%
<i>Certificate</i>	203	\$15,056	249	\$19,514	250	\$20,816	38.26%	6.67%

Note: Table presents median annual earnings for students who worked all four quarters in respective fiscal year.

Excluded from the analysis are students who enrolled in any postsecondary institution identified by the National Student Clearinghouse enrollment data from July 1, 2002 through June 30, 2003 and not enrolled in high school in the fiscal year 2002 as identified by Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education. Also excluded are those in the military, federal employees, self-employed, unemployed, those not in the workforce and those without valid social security number.

Completers are defined as those who completed an associate degree, Diploma, Certificate, and other credentials at an Iowa Community College in Fiscal Year 2002.

Associates include those who completed an AA, AAS, AGS, AS, and AAA degrees at an Iowa Community College in Fiscal Year 2002.

Annual earnings are defined as the sum of earnings in four quarters (e.g., 2002 annual earnings are a sum of earnings from October 1, 2001 [fourth quarter] through September 30, 2003 [third quarter]).

Median annual earnings are adjusted to 2005 Consumer Price Index for Midwest Consumers.

Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; Iowa Workforce Development, Unemployment Insurance wage data; and National Student Clearinghouse enrollment data.

**Table 3B**  
**Median Annual Earnings of Non-White Students from Iowa Community Colleges in Fiscal Year 2002**  
**Fiscal Year 2002, Fiscal Year 2003, and Fiscal Year 2005**

	Last Year in College Fiscal Year 2002		First Year Out Fiscal Year 2003		Third Year Out Fiscal Year 2005		% change 2002- 2005	% change 2003- 2005
	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings		
<b>All Non-White</b>	1,265	\$16,917	1,251	\$20,037	1,169	\$22,447	32.69%	12.03%
Leavers	1,141	\$16,690	1,115	\$19,807	1,038	\$22,036	32.03%	11.25%
Completers	124	\$18,797	136	\$22,818	131	\$27,245	44.94%	19.40%
<i>Associates</i>	77	\$18,067	82	\$23,596	80	\$28,521	57.87%	20.87%
-AAS	44	\$18,327	54	\$25,750	47	\$32,769	78.80%	27.26%
<i>Diploma</i>	29	\$15,233	33	\$22,877	30	\$25,170	65.24%	10.02%
<i>Certificate</i>	18	\$19,987	21	\$19,538	21	\$22,197	11.06%	13.61%

Note: Table presents median annual earnings for students who worked all four quarters in respective fiscal year.

Excluded from the analysis are students who enrolled in any postsecondary institution identified by the National Student Clearinghouse enrollment data from July 1, 2002 through June 30, 2003 and not enrolled in high school in the fiscal year 2002 as identified by Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education. Also excluded are those in the military, federal employees, self-employed, unemployed, those not in the workforce and those without valid social security number.

Completers are defined as those who completed an associate degree, Diploma, Certificate, and other credentials at an Iowa Community College in Fiscal Year 2002.

Associates include those who completed an AA, AAS, AGS, AS, and AAA degrees at an Iowa Community College in Fiscal Year 2002.

Annual earnings are defined as the sum of earnings in four quarters (e.g., 2002 annual earnings are a sum of earnings from October 1, 2001 [fourth quarter] through September 30, 2003 [third quarter]).

Median annual earnings are adjusted to 2005 Consumer Price Index for Midwest Consumers.

Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; Iowa Workforce Development, Unemployment Insurance wage data; and National Student Clearinghouse enrollment data.



**Table 4A**  
**Median Annual Earnings of Students 25 and Over from Iowa Community Colleges in Fiscal Year 2002**  
**Fiscal Year 2002, Fiscal Year 2003, and Fiscal 2005**

	Last Year in College Fiscal Year 2002		First Year Out Fiscal Year 2003		Third Year Out Fiscal Year 2005		% change 2002- 2005	% change 2003- 2005
	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings		
<b>All 25 and over</b>	9,307	\$25,343	9,689	\$27,498	9,478	\$29,709	17.23%	8.04%
Leavers	7,883	\$26,531	7,910	\$27,459	7,686	\$29,371	10.70%	6.96%
Completers	1,424	\$20,058	1,779	\$27,643	1,792	\$30,918	54.14%	11.85%
<i>Associates</i>	1,033	\$21,845	1,216	\$30,052	1,216	\$32,421	48.41%	7.88%
-AAS	631	\$20,613	806	\$32,164	788	\$35,784	73.60%	11.25%
<i>Diploma</i>	244	\$14,848	363	\$23,554	382	\$27,382	84.42%	16.25%
<i>Certificate</i>	120	\$19,233	173	\$21,874	167	\$23,709	23.27%	8.39%

Note: Table presents median annual earnings for students who worked all four quarters in respective fiscal year.

Excluded from the analysis are students who enrolled in any postsecondary institution identified by the National Student Clearinghouse enrollment data from July 1, 2002 through June 30, 2003 and not enrolled in high school in the fiscal year 2002 as identified by Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education. Also excluded are those in the military, federal employees, self-employed, unemployed, those not in the workforce and those without valid social security number.

Age is defined as the student's age as of July 1, 2002.

Completers are defined as those who completed an associate degree, Diploma, Certificate, and other credentials at an Iowa Community College in Fiscal Year 2002.

Associates include those who completed an AA, AAS, AGS, AS, and AAA degrees at an Iowa Community College in Fiscal Year 2002.

Annual earnings are defined as the sum of earnings in four quarters (e.g., 2002 annual earnings are a sum of earnings from October 1, 2001 [fourth quarter] through September 30, 2003 [third quarter]).

Median annual earnings are adjusted to 2005 Consumer Price Index for Midwest Consumers.

Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; Iowa Workforce Development, Unemployment Insurance wage data; and National Student Clearinghouse enrollment data.

**Table 4B**  
**Median Annual Earnings of Students Under 25 from Iowa Community Colleges in Fiscal Year 2002**  
**Fiscal Year 2002, Fiscal Year 2003, and Fiscal Year 2005**

	Last Year in College Fiscal Year 2002		First Year Out Fiscal Year 2003		Third Year Out Fiscal Year 2005		% change 2002- 2005	% change 2003- 2005
	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings	# worked Four quarters	Median Annual Earnings		
<b>All under 25</b>	10,579	\$12,777	10,570	\$18,197	10,278	\$22,452	75.73%	23.39%
Leavers	8,297	\$12,604	8,143	\$16,952	7,863	\$20,975	66.41%	23.73%
Completers	2,282	\$13,380	2,427	\$21,873	2,415	\$27,032	102.04%	23.59%
<i>Associates</i>	1,692	\$13,964	1,755	\$22,739	1,758	\$27,755	98.77%	22.06%
-AAS	976	\$14,715	1,073	\$26,297	1,079	\$31,517	114.18%	19.85%
<i>Diploma</i>	789	\$11,406	576	\$20,134	557	\$25,446	123.09%	26.38%
<i>Certificate</i>	92	\$13,100	90	\$18,554	92	\$17,337	32.35%	-6.56%

Note: Table presents median annual earnings for students who worked all four quarters in respective fiscal year.

Excluded from the analysis are students who enrolled in any postsecondary institution identified by the National Student Clearinghouse enrollment data from July 1, 2002 through June 30, 2003 and not enrolled in high school in the fiscal year 2002 as identified by Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education. Also excluded are those in the military, federal employees, self-employed, unemployed, those not in the workforce and those without valid social security number.

Age is defined as the student's age as of July 1, 2002.

Completers are defined as those who completed an associate degree, Diploma, Certificate, and other credentials at an Iowa Community College in Fiscal Year 2002.

Associates include those who completed an AA, AAS, AGS, AS, and AAA degrees at an Iowa Community College in Fiscal Year 2002.

Annual earnings are defined as the sum of earnings in four quarters (e.g., 2002 annual earnings are a sum of earnings from October 1, 2001 [fourth quarter] through September 30, 2003 [third quarter]).

Median annual earnings are adjusted to 2005 Consumer Price Index for Midwest Consumers.

Sources: Iowa Department of Education, Bureau of Community Colleges and Career and Technical Education; Iowa Workforce Development, Unemployment Insurance wage data; and National Student Clearinghouse enrollment data.

**Table 5**  
**Summary of Research Studies Related to Postcollege Earnings**

<b>State</b>	<b>Data Sources</b>	<b>Variables</b>	<b>Methodology</b>	<b>Basic Findings</b>	<b>Limitations/ Delimitations</b>	<b>Sources of information</b>
California	UI records; MIS records	Major, age, ethnicity, economic status, gender, economic status, program of study	700,564 matched records First year in, first year out, and third year out 1992-1993 Cohort	Program completers have greater gains than leavers, particularly for economically disadvantaged students; earnings gap for women closes for vocational students	Does not account for military, federal employees, self- employed, or those working in other states.	Freidlander, 1996; Sanchez, Laanan & Wiseley, 1999; Sanchez & Laanan, 1998; Laanan, 1998
Florida	UI Records; MIS Records; National Student Clearinghouse; Postal service; Department of Defense; Federal employees, WRIS	Employment, full-time earnings, job training relatedness and placement rates; Completers and leavers; Type of degree or certificate program; can compare high school graduates with community college	FETPIP collects data from 4th quarter after and 4 years after Data collected yearly	A higher percentage of community college graduates were employed in Florida than any other group; Short-term analysis showed that AS completers made more than bachelor's degree completers, but bachelor's degree completers had greater gains	The FETPIP system can be used for more longitudinal studies of earnings over time.	Grubb, 2002; Pfeiffer, 1998; FETPIP, 1996, 2005
Illinois (Truman College, Chicago)	Student data; UI records	Age, gender, degree or certificate, economic status	1,449 matched records Last year in (FY 1997), First year out (FY 1998), second year out (FY 1999)	Economically disadvantaged individuals who earn associates degrees or certificates make significant increases in earnings, greater than those who do not complete a degree or certificate (215% increase from last year to second year)	Researchers were not allowed access to raw data; small sample size	Brauchle & Hastings, 2002

Summary of research studies related to postcollege earnings, continued

State	Data Sources	Variables	Methodology	Basic Findings	Limitations/ Delimitations	Sources of information
Iowa (Western Iowa Tech)	Student data; UI records; National Student Clearinghouse	Completers, leavers, and applicants; Program category; number of employers; gender	557 completers 23,999 leavers 1,447 applicants Annual wage gains for four years; analyzed using ANOVA 1994-1999 leavers; 1999 completers; 1994-1999 applicants	Completers earn more than leavers, and leavers earn more than applicants	Cohort years of comparison groups are not the same	Stoik, 2004
Maryland	Data from three workforce training programs; apprenticeship data; Community college certificate and degree data; UI records	Type of training; program category; individual community college and region	21,766 matched records Analyze earnings from pre-year (97-98), exit- year (98-99), and post- years one (99-00), two (00-01), and three (01- 02) Leaving or completing FY 1999	75% of career graduates were found to be working in Maryland one year after graduation; the highest wages and most dramatic earnings gains were for completers of health programs; economically disadvantaged program had great increase but moderate final wages	Does not address gender, race/ ethnicity, age, etc. Does not address leavers	Stevens, 2003
New Mexico	UI records;	Industry of employment	5,700 completers Certificate, degree, or at least 45 credits; Tracked wages one year before enrollment and one year after enrollment		Without age information the pre-year data is not meaningful, high school students and older workers together	New Mexico Commission on Higher Education, 2002
North Carolina		Age, completion level, distinguishing students who leave and return to school, Distinguishing part- time workers	Includes data from Department of Corrections, Labor, and Employment and Training, as well as K- 12, CC, and university system			Grubb, 2002; Gracie, 1998; <a href="http://www.nccs.cc.nc.us/External_Affairs/nccaggfs.htm">http://www.nccs.cc.nc.us/External_Affairs/nccaggfs.htm</a>

Summary of research studies related to postcollege earnings, continued

<b>State</b>	<b>Data Sources</b>	<b>Variables</b>	<b>Methodology</b>	<b>Basic Findings</b>	<b>Limitations/ Delimitations</b>	<b>Sources of information</b>
Ohio	Ohio Board of Regents data, Ohio Department of Jobs, annual match of fourth quarter earnings since 1998	Discipline Area; Major; Level of degree (community college, baccalaureate, and master's data); State of Residence/retention in state;	4th quarter earnings from 1999 compared with 4th quarter earnings of 2000, 2001, 2002, and 2003	Growth in earnings is greater for bachelor's degree recipients; Associates degree		Ohio Board of Regents, 2005
Texas		Reports Academic, Technical, and Tech. prep. leavers and graduates who are either working only or who are working and pursuing higher education.	Local control: individual colleges have carried out most of the analysis—very little statewide analysis.			Grubb, 2002
Washington	Data warehouse; UI records; match with neighboring states	Gender; ethnicity; Major (high, middle, and low-wage occupation groups); industry of employment before and after college; compare with goals of students (transfer or non-transfer)	200,000 students per year in the system  3rd quarter before start of college and 3rd quarter after college. Data is collected annually	The study found that high wage occupations such as health, industrial tech, and electronics have higher premium for completers than for non-completers. As a result of the information provided by the system, the state has focused on providing programs in high-wage areas and on including more minority students in underrepresented programs.		Grubb, 2002: Seppanen, 2000; <a href="http://www.wtb.wa.gov/wtr04.pdf">http://www.wtb.wa.gov/wtr04.pdf</a>

Summary of research studies related to postcollege earnings, continued

<b>State</b>	<b>Data Sources</b>	<b>Variables</b>	<b>Methodology</b>	<b>Basic Findings</b>	<b>Limitations/ Delimitations</b>	<b>Sources of information</b>
Wyoming	UI, MIS, match with nine states, survey of employers	State of Origin; age; gender; industry; survey of employers	Tracked graduates one year after graduation Track employment in 9 states through memoranda of agreement		Only tracked one year after graduation, does not account for students enrolled in further postsecondary education	Wyoming Department of Education, 2003

## GLOSSARY

**Annual Earnings:** Annual earnings are defined as the sum of earnings in four quarters (e.g., 2002 median annual earnings are a sum of earnings from October 1, 2001 [fourth quarter] through September 30, 2003 [third quarter]). (*See Median Annual Earnings*)

**Annual Transfer Rate:** The annual transfer rate (cross-sectional approach) represents the number of individuals (unduplicated enrollment) transferring to a four-year institution in 2003, 2004, or 2005 divided by the total number of individuals in the fiscal year 2002 cohort.

**Associate in Applied Arts Degree (AAA):** The degree awarded for satisfying the curriculum requirements and demonstrated competence for employment in the occupational field for which the program was designed. Typically, these degrees apply to occupations requiring significant amounts of applied scientific and mathematical knowledge. These degrees require a minimum of 60 semester credit hours (90 quarter hours) in length with a minimum of 12 semester credit hours (18 quarter hours) of general education. Programs awarding these degrees shall not exceed 19 semester credit hours per term (28.5 quarter hours) and shall not exceed 86 semester credit hours (129 quarters hours) in length. (281 Iowa Administrative Code 21.2(10)(b).)

**Associate in Applied Science Degree (AAS):** The degree awarded for satisfying the curriculum requirements and demonstrated competence for employment in the occupational field for which the program was designed. Typically, these degrees apply to occupations requiring significant amounts of applied scientific and mathematical knowledge. These degrees require a minimum of 60 semester credit hours (90 quarter hours) in length with a minimum of 12 semester credit hours (18 quarter hours) of general education. Programs awarding these degrees shall not exceed 19 semester credit hours per term (28.5 quarter hours) and shall not exceed 86 semester credit hours (129 quarters hours) in length. (281 Iowa Administrative Code 21.2(10)(b).)

**Associate in Arts Degree (AA):** The degree awarded for satisfying the curriculum requirements of arts and science courses designed as college parallel programs transferable as the first two years of a baccalaureate degree. These programs are referred as college parallel/liberal general studies/college transfer. They include a minimum of 60 semester credit hours (90 quarter hours) of credit courses designed and acceptable for transfer with the understanding that 16 semester hours (24 quarter hours) of career/technical courses could be included in the total. (281 Iowa Administrative Code 21.2(10)(a).)

**Associate in General Studies Degree (AGS):** The degree awarded for satisfying the curriculum requirements of a two-year program other than set forth in 281 Iowa Administrative Code 21.2(10) associate of arts or science. The degree requirements are flexible for individual students, not intended for transfer, and include a minimum of 60 semester credit hours (90 quarter hours). (281 Iowa Administrative Code 21.2(10)(c).)

**Associate in Science Degree (AS):** The degree awarded for satisfying the curriculum requirements of arts and science courses designed as college parallel programs transferable as the first two years of a baccalaureate degree. These programs are referred as college parallel/liberal general studies/college transfer. They include a minimum of 60 semester credit hours (90 quarter hours) of credit courses designed and acceptable for transfer with the understanding that 16 semester hours (24 quarter hours) of career/technical courses could be included in the total. (281 Iowa Administrative Code 21.2(10)(a).)

**Certificate:** The award for satisfying the curriculum requirements of an activity, course, and/or program other than one that is intended for a diploma or a degree. (281 Iowa Administrative Code 21.2(10)(e).)

**Cumulative Transfer Rate:** The cumulative transfer rate (longitudinal approach) represents the number of individuals (unduplicated enrollment) transferring to a four-year institution in 2003, 2003 - 2004, or 2003 - 2005 divided by the total number of individuals in the fiscal year 2002 cohort.

**Diploma:** The award granted for satisfying the curriculum requirements of a program that consist of a minimum of 15 semester credit hours (22 quarter hours) with the general education component consisting of a minimum of 3 semester hours (4 quarter hours). (281 Iowa Administrative Code 21.2(10)(d).)

**Completer:** An individual who received a degree, certificate, or diploma from an Iowa community college. Completers do not include program or goal completers defined by Perkins accountability measures.

**Leaver:** An individual who attended an Iowa community college and left without receiving a degree, certificate or diploma

**Median Annual Earnings:** Median annual earnings are adjusted to 2005 Consumer Price Index for Midwest Consumers. (*See Annual Earnings*)

**Non-Award Recipient:** One who attended an Iowa community college and left without receiving a degree, certificate or diploma, did not receive a community college award in 2002, 2003, 2004, or 2005, was not enrolled in any four-year institution in 2002, was not enrolled in high school in 2002, and enrolled in four-year institutions in 2003, 2004 or 2005.

**Unemployment Insurance (UI) Wage Records:** Records of wages collected by the Iowa Workforce Development containing quarterly earnings. These records do not contain information about hours worked or full-time/part-time employment status. The records also do not include wage data for individuals who are employed out of state, in federal occupations, or who are self-employed. (*See pages 32 and 32 for a complete description of UI wage records.*)



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