

Community College Impact Study

Final Report Presentation

Henry Brady & Anita Mathur

May 16, 2008

Authors



- **Henry Brady**

Professor of Public Policy and Political Science,
UC Berkeley

Director, Survey Research Center, UC Berkeley

- **Anita Mathur**

Doctoral Candidate, Sociology, UC Berkeley

Purpose of Study
Data & Methodology

Purpose of Study



To assess the impact of Community College on outcomes of **CalWORKs** students in comparison to **Non-CalWORKs** students.

Specifically we assess:

- ❖ Educational Outcomes
- ❖ Employment and Earnings Outcomes
- ❖ Financial Aid Utilization and Impact

Data and Definitions

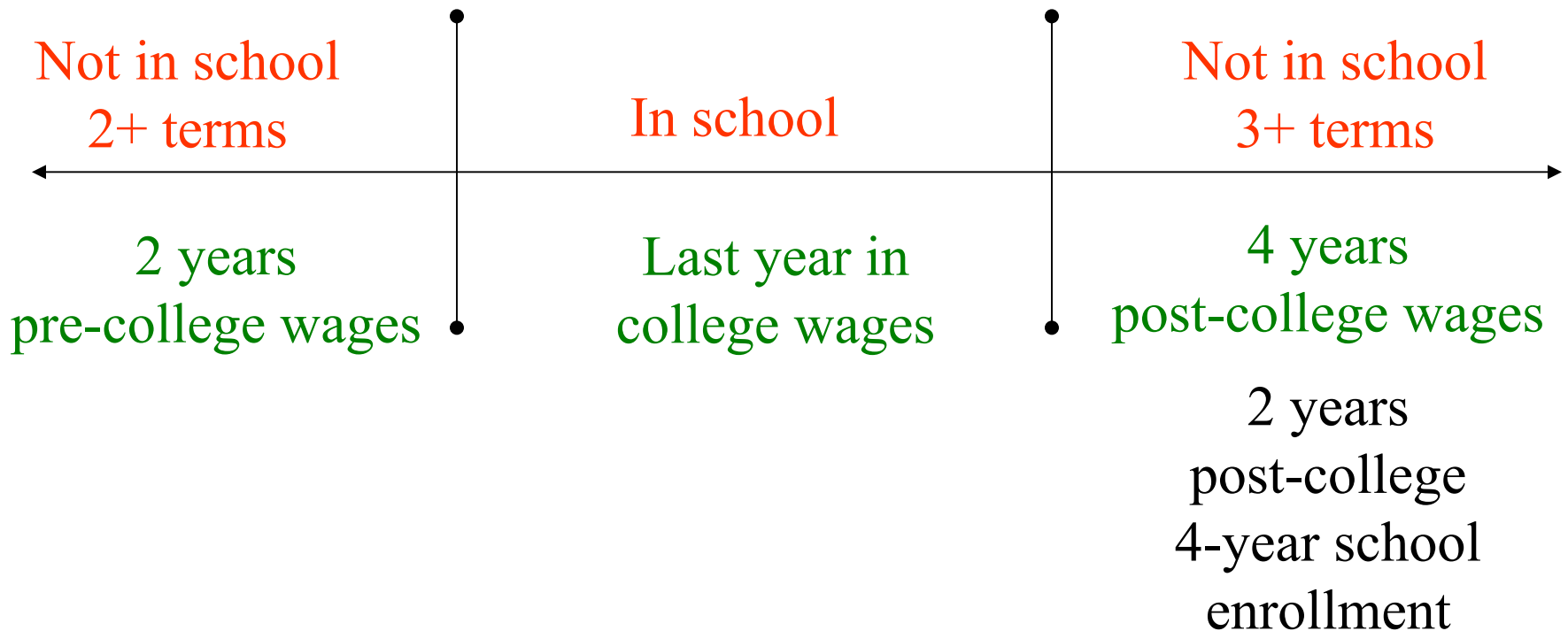
Sample:

1,700,743 students

82,460 CalWORKs and 1,618,283 Non-CalWORKs

Entry
(Any Date)

Exit
(1999-2002)



Data Sample

- Three Exit Groups:

- CCCCO Management Information Systems (MIS) student record database.
- 1999-2000, 2000-2001, 2001-2002 all pooled.

- Type of Students:

- Credit and Non-Credit Students included.
- Age 22-50 to ensure working age population & head of household on CalWORKs case.

- Sample Size: 1,700,743 students total.

- 82,460 CalWORKs Students.
- 1,618,283 Non-CalWORKs (unaided) Students.

Definitions - Entry and Exit



- Entry: Not having been enrolled at a community college for two consecutive primary terms (fall or spring) prior to entry term.
- Exit: Not returning to college for at least three consecutive primary terms.

Definitions - CalWORKs and Non-CalWORKs



- CalWORKs Students:

Students with a CDSS CalWORKs cash aid code (30, 35) or involved in the CCC CalWORKs program during the last year in school (value of 1-6 on SB 27).

- Non-CalWORKs Students:

Students without any CDSS aid code assigned the last year in school and not in the CCC CalWORKs program.

Note: Students with aid codes other than CalWORKs aidcodes are not included in the study, therefore “Non-CalWORKs” students in this study refer to completely unaided students.

Definitions - Educational Outcomes

- Educational Attainment: Any award conferred or the number of credit units or non-credit hours completed between entry and exit.
 - Students might be enrolled or receive an award outside the window of entry/exit, but we do not include these awards or credits as outcomes.
 - Both Credit and Non-Credit awards included in the analysis. Very few non-credit awards given out during the period of the study.

Definitions - Educational Outcomes

- **Field:** Field that an award was given in prior to college exit/employment. Does not necessarily indicate the industry of employment. Due to sample size limitations we only study the major field, not subfields/programs.

85% of students fall into these categories:

- Engineering and Industrial Technologies
- Health
- Business and Management
- Family and Consumer Sciences
- Public and Protective Services
- Interdisciplinary Studies

Engineering and Industrial Technologies

“Instructional programs in the mathematical and natural sciences utilizing the materials and forces of nature for the benefit of human beings. Instructional programs in technology that require the application of scientific and engineering knowledge, methods, and technical skills in support of engineers and other professionals.”

- | | |
|---|---|
| <ul style="list-style-type: none">•Engineering, General (requires Calculus) (<i>Transfer</i>)•Engineering Technology, General (requires Trigonometry)•Electronics and Electric Technology•Electro-Mechanical Technology•Printing and Lithography•Instrumentation Technology•Industrial Systems Technology and Maintenance•Environmental Control Technology•Diesel Technology•Automotive Technology | <ul style="list-style-type: none">•Automotive Collision Repair•Aeronautical and Aviation Technology•Construction Crafts Technology•Drafting Technology•Chemical Technology•Laboratory Science Technology•Manufacturing and Industrial Technology•Civil and Construction Management Technology•Water and Wastewater Technology•Marine Technology•Optics•Musical Instrument Repair |
|---|---|

Health

“Instructional programs that study the theories and techniques for the restoration or preservation of mental and physical health through the use of drugs, surgical procedures, manipulations, or other curative or remedial methods.”

- | | |
|---|---|
| <ul style="list-style-type: none">•Health Occupations, General•Hospital and Health Care Administration•Medical Laboratory Technology•Physicians Assistant•Medical Assisting•Hospital Central Service Technician•Respiratory Care/Therapy•Polysomnography•Electro-Neurodiagnostic Technology•Cardiovascular Technician•Orthopedic Assistant•Electrocardiography•Surgical Technician•Occupational Therapy Technology•Optical Technology•Speech-Language Pathology and Audiology•Pharmacy Technology | <ul style="list-style-type: none">•Physical Therapist Assistant•Health Information Technology•School Health Clerk•Radiologic Technology•Radiation Therapy Technician•Diagnostic Medical Sonography•Athletic Training and Sports Medicine•Nursing•Psychiatric Technician•Dental Occupations•Emergency Medical Services•Paramedic•Mortuary Science•Health Professions, Transfer Core Curriculum•Community Health Care Worker•Massage Therapy |
|---|---|

Business and Management

“Instructional programs that prepare individuals for a variety of activities in planning, organizing, directing, and managing all business office systems and procedures.”

- Business and Commerce, General
- Accounting
- Banking and Finance
- Business Administration
- Business Management
- International Business and Trade
- Marketing and Distribution
- Logistics and Materials Transportation
- Real Estate
- Insurance
- Office Technology/Office Computer Applications
- Labor and Industrial Relations
- Customer Service

Family and Consumer Sciences

“Instructional programs that study the relationship between the physical, social, emotional and intellectual environment in and of the home and family and the development of individuals, including programs in child development, family studies, gerontology, fashion, interior design and merchandising, consumer services, foods and nutrition, culinary arts, and hospitality.”

- Family and Consumer Sciences, General
- Interior Design and Merchandising
- Fashion
- Child Development/Early Care and Education
- Nutrition, Foods, and Culinary Arts
- Hospitality
- Family Studies
- Gerontology

(Topcode Taxonomy, 2004, 6th edition)

Public and Protective Services



“Instructional programs in the theories and techniques of the formulation, implementation and evaluation of public policies and services, including public safety occupations. Includes developing and improving competencies in the management and operation of government agencies.”

- Public Administration
- Human Services
- Administration of Justice
- Fire Technology
- Legal and Community Interpretation

(Topcode Taxonomy, 2004, 6th edition)

Interdisciplinary Studies

“Instructional programs that include those subject field designations which involve more than one major discipline without primary concentration in any one area. Also, courses in guidance, student success, and other categories that do not fall into any other discipline.”

- Liberal Arts and Sciences, General:

- Transfer Studies
- Liberal Studies - *teaching preparation*

- Biological and Physical Sciences, Math

- Humanities:

- Humanities and Fine Arts
- Humanities and Social Sciences

- Vocational ESL

- General Work Experience

- General Studies:

- Supervised Tutoring
- Guidance
- Interpersonal Skills
- Job Seeking/Changing Skills
- Academic Guidance
- Study Skills
- Communication Skills

- Writing

- Speech

- Learning Skills - Handicapped

- Living Skills - Handicapped

- Learning Skills - Learning Disabled

- Learning Skills – Speech Impaired

- Computational Skills

- Pre-Algebra - Basic Math/Arithmetic

- Adult Basic Education - Grades 1-8

- High School Diploma Program/G.E.D.

- Reading Skills, Pre-collegiate

- Reading Skills, College Level

- Skill Development

- ESL–General,

- ESL–College Level,

- ESL–Survival Level,

- Citizenship

Definitions - Educational Outcomes

- “Transfer”: Students that enrolled in a 4-year college or university within two years of exiting community college. Not necessarily official transfer students per-say.
 - Data Match with UC, CSU, NSC (National Student Clearinghouse)
 - Public or private
 - California or out of state

Definitions - Employment and Earnings

- Data Match: EDD UI Quarterly Wage Data
- Window of Observation: Two years prior to entry, last year in college prior to exit, and up through four years after college exit.
 - Due to data restrictions, 99-00 cohort has earnings up to 4 years out, 00-01 has earnings up to 3 years out, 01-02 has earnings up to 2 years out.
- Employment: A student is employed in a year if his or her wage is greater than zero in that year. Don't know if part-time or full time.
- Earnings Adjustment: Mean Annual Earnings adjusted to 2000-2001 CPI.
- “Transfer” students: Kept in the employment earnings analysis.
 - Perhaps earnings estimated on the low side.
 - Very small percentage of exiting students so doesn't make much difference.

Definitions - Financial Aid

Rates of Financial Aid:

- We define a student as receiving financial aid if they have received any financial aid at any point during the entire time they were enrolled (entry to exit).
- 5 broad groupings: BOG waivers, Grants, Loans, Scholarships, Work Study (all Work Study combined - CW, Federal, State).

Amount of Financial Aid:

- Being in college longer will typically generate higher total amounts of aid received. Therefore, to compare students we calculate the average aid amount per term.
- Average aid amount per term: The total amount of aid received across all the terms the student was in college divided by the total number of terms the student was enrolled.

Comparison of Outcomes



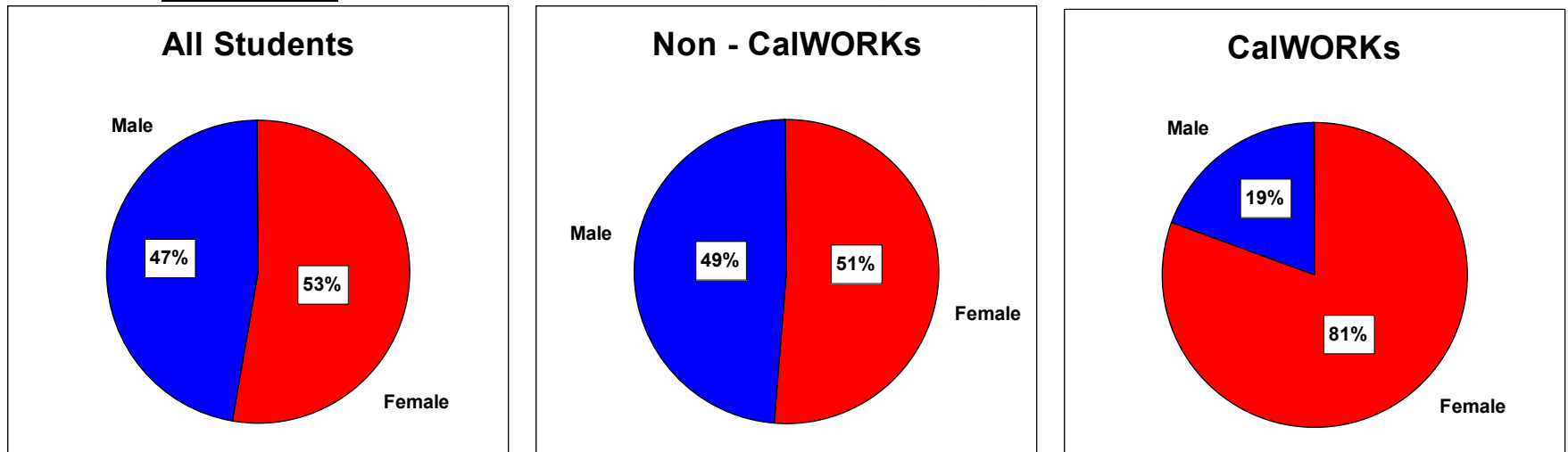
Throughout the analysis we compare the outcomes of:

- Different groups of students within the CalWORKs student population.
(e.g. CalWORKs students exiting with any award vs. CalWORKs students exiting without an award)
- CalWORKs and Non-CalWORKs student groups.
(e.g. CalWORKs students with any award vs. Non-CalWORKs students with any award)

Differences in Background Demographics Between Comparison Groups

- CalWORKs students enter college with different basic characteristics than Non-CalWORKs students.
- CalWORKs students:
 - Are more likely to be female, non-white, have no high school degree, and have lower pre-college earnings.
 - Have a slightly different age distribution and educational goal at entry.

Example: Gender distribution of All, CW, Non-CW students



- Therefore it is important to control for these characteristics when comparing outcomes between CW and Non-CW students.

Matching Methodology

In both types of comparisons:

- CalWORKs vs. CalWORKs (with different educational attainment)
 - CalWORKs vs. Non-CalWORKs
- Comparison groups are matched on 6 demographic characteristics to ensure more similar populations compared on outcomes:

1. Gender	4. Race/Ethnicity
2. Education at Entry	5. Academic Goal at Entry
3. Age	6. Two years of Pre-College Wages

- For some comparisons we add in other matching variables in addition to these basic 6, such as type of award or field of study.

The matches are not perfect!

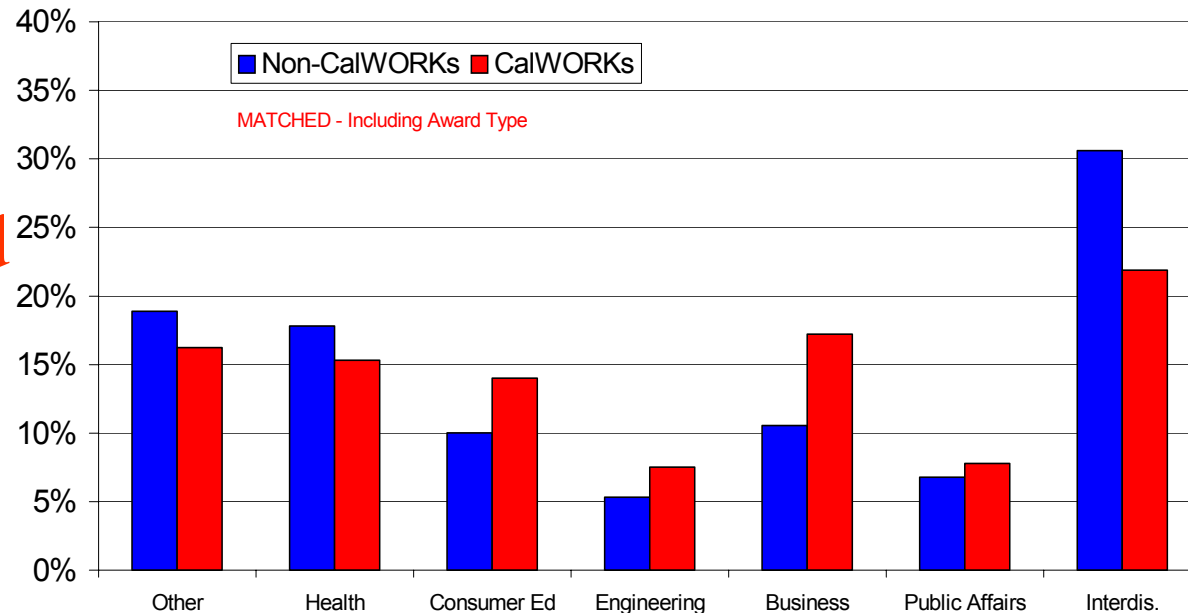
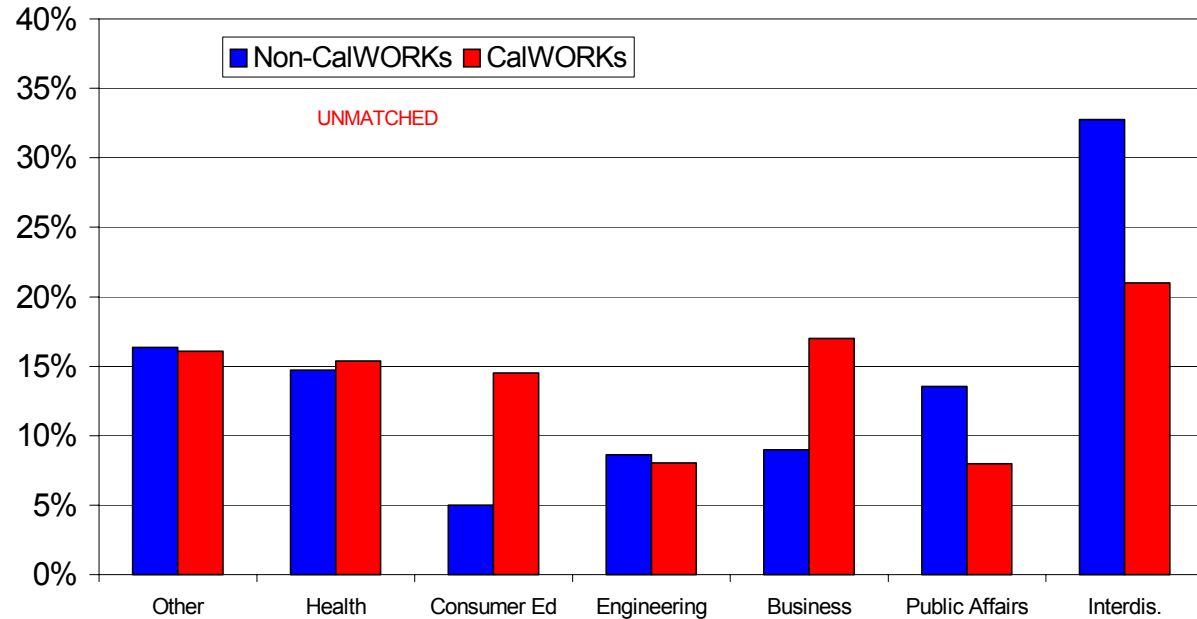
- There are some key variables that we could not include in the match due to data limitations - such as number of children in the household and marital status.
- The categories within each matching characteristic must be relatively broad in order to find an adequate number of matches.

Example of Matching Effect

• Non-CW students are matched to CW students on the 6 background criteria (plus award type).

✓ After matching, the difference in the percentage of CW and Non-CW students in many fields is diminished.

Percentage of CW and Non-CW in Different Fields
(Among Award Holders)



Report #1
Educational Outcomes

**Coursework Only Versus Awards
Awarded & Transfer Students**

Coursework Only Versus Awards

Summary of Key Findings – Educational Outcomes

Coursework Only Versus Awards

Awards:

- ✓ The vast majority of CW and Non-CW students exit college without having completed an award during the enrollment period under observation (over 90%).

Credit Coursework:

- ✓ CW and Non-CW students have similar percentages exiting with more than 12 units (CW have slight advantage).
- ✓ CW students are more likely to exit without completing any coursework or with only non-credit coursework; Non-CW are likely to have taken a few credits prior to exit.

Non-Credit Coursework:

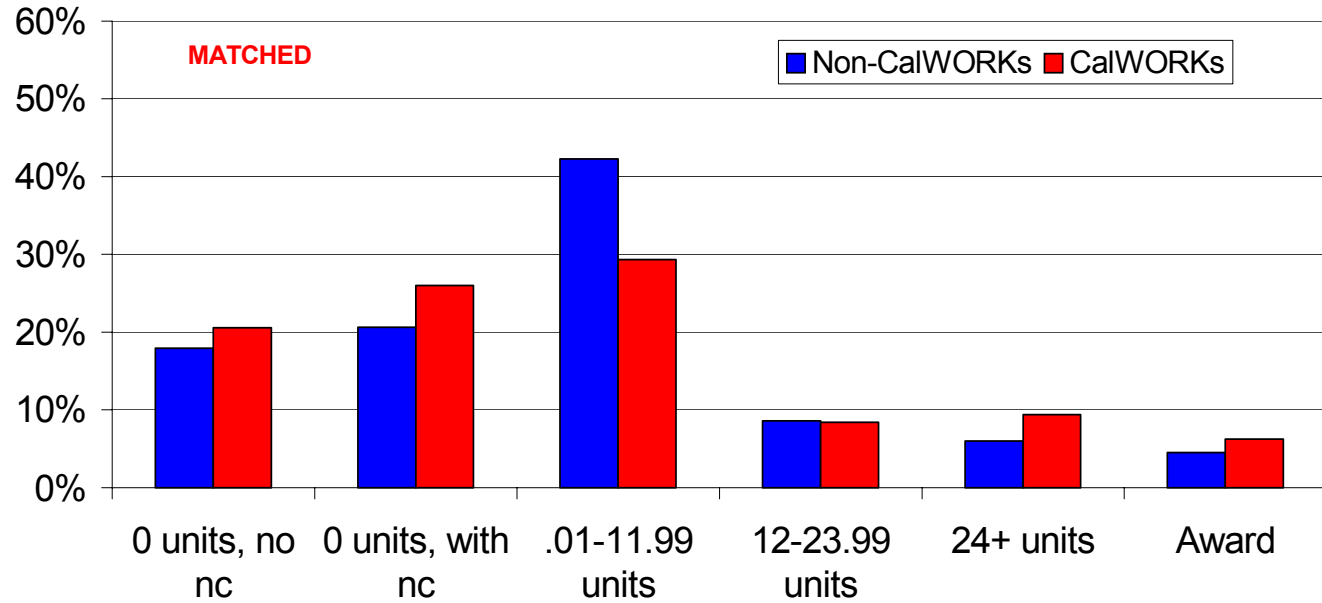
- ✓ CW are more likely than Non-CW to have taken some non-credit coursework prior to exit.
- ✓ Of those with some non-credit, CW are more likely than Non-CW to have taken over 200 non-credit hours prior to exit.

CW and Non-CW Fairly similar in Credit/Award Distribution

- CW slightly more likely to have incomplete coursework or non-credit only.

- Non-CW students more likely to have at least a few credits completed prior to exit (in the .01-11.99 unit range).

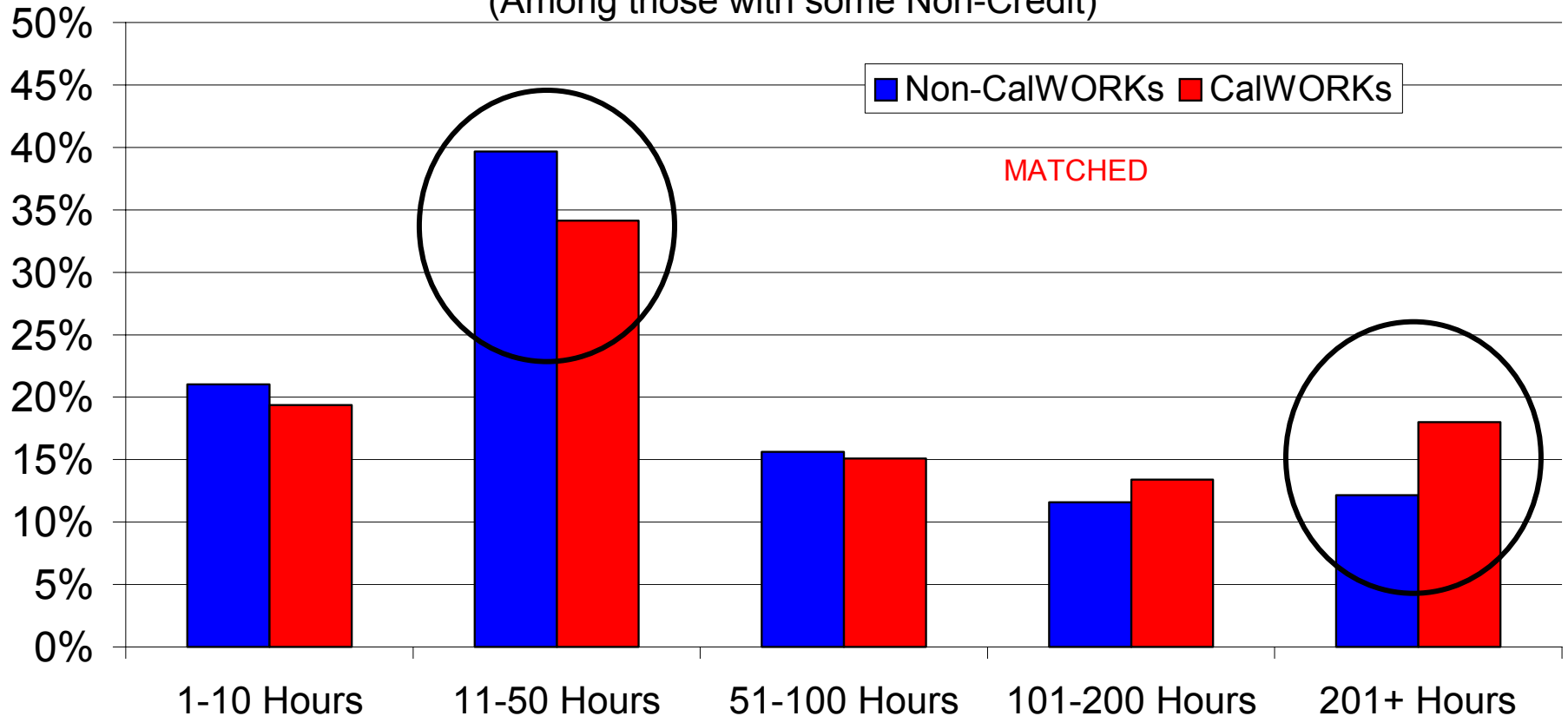
Percentage Receiving Credits/Awards



- CW at par with Non-CW at higher number credits (12+).
- Fewer than 10% of both CW and Non-CW students complete an award prior to exit.

Non-Credit Hours Detailed

Percentage with Particular number of Non-Credit Hours
(Among those with some Non-Credit)



- CW students more likely to have taken at least some non-credit coursework (58% versus 45%).
- Among those with Non-Credit, CW more likely to have 200+ hours while Non-CW more likely to have only 11-50 hours.

Awarded & “Transfer” Students

Summary of Key Findings – Educational Outcomes

Among Award Holders:

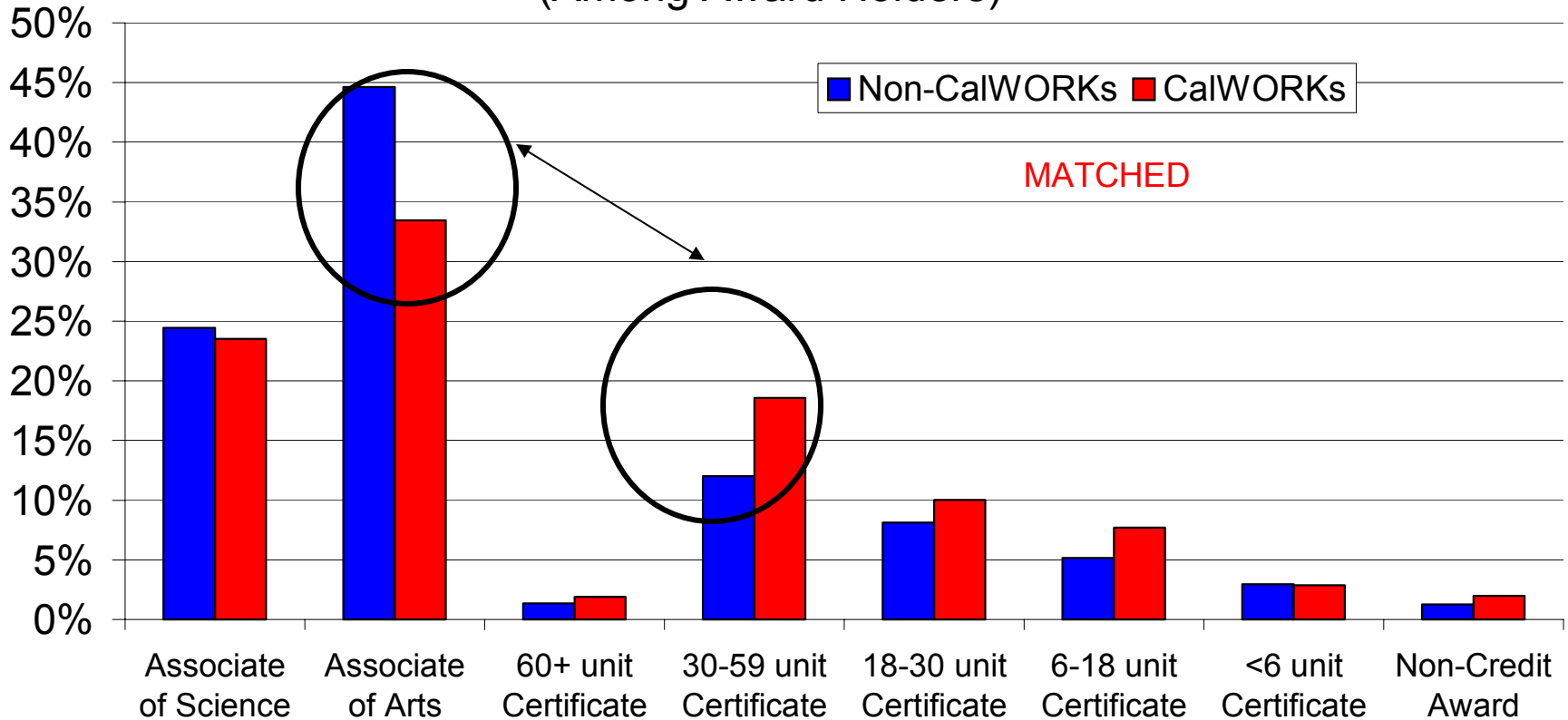
- ✓ CW are as likely as Non-CW to get AS degrees but are less likely to earn an AA and more likely to receive a 30-59 unit certificate.
- ✓ CW are more likely than Non-CW to receive awards in Consumer Education and Business.

Transfer:

- ✓ CW are less likely than Non-CW to have an initial goal of transfer and are two times less likely to enroll in a four year college within two years of exit.
- ✓ Among students who enroll in a 4 year college, CW are more likely than Non-CW to have completed an award at exit.

Awarded Students: Type of Degree

Percentage Receiving Different Types of Awards
(Among Award Holders)



After Matching:

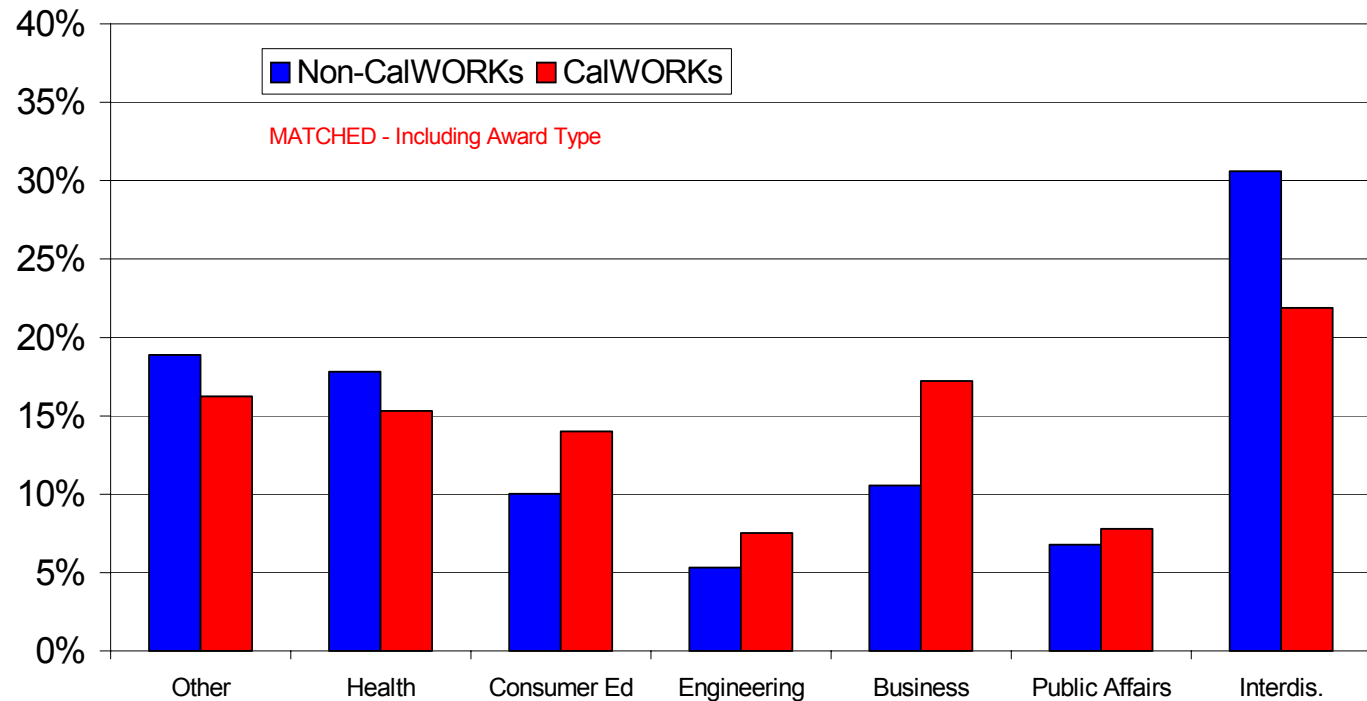
- CW students more likely to choose medium length certificates over the AA degree.

Awarded Students: Field of Study

After Matching:
(including award type –
Associate level, mid-
length cert, short/non-
credit cert)

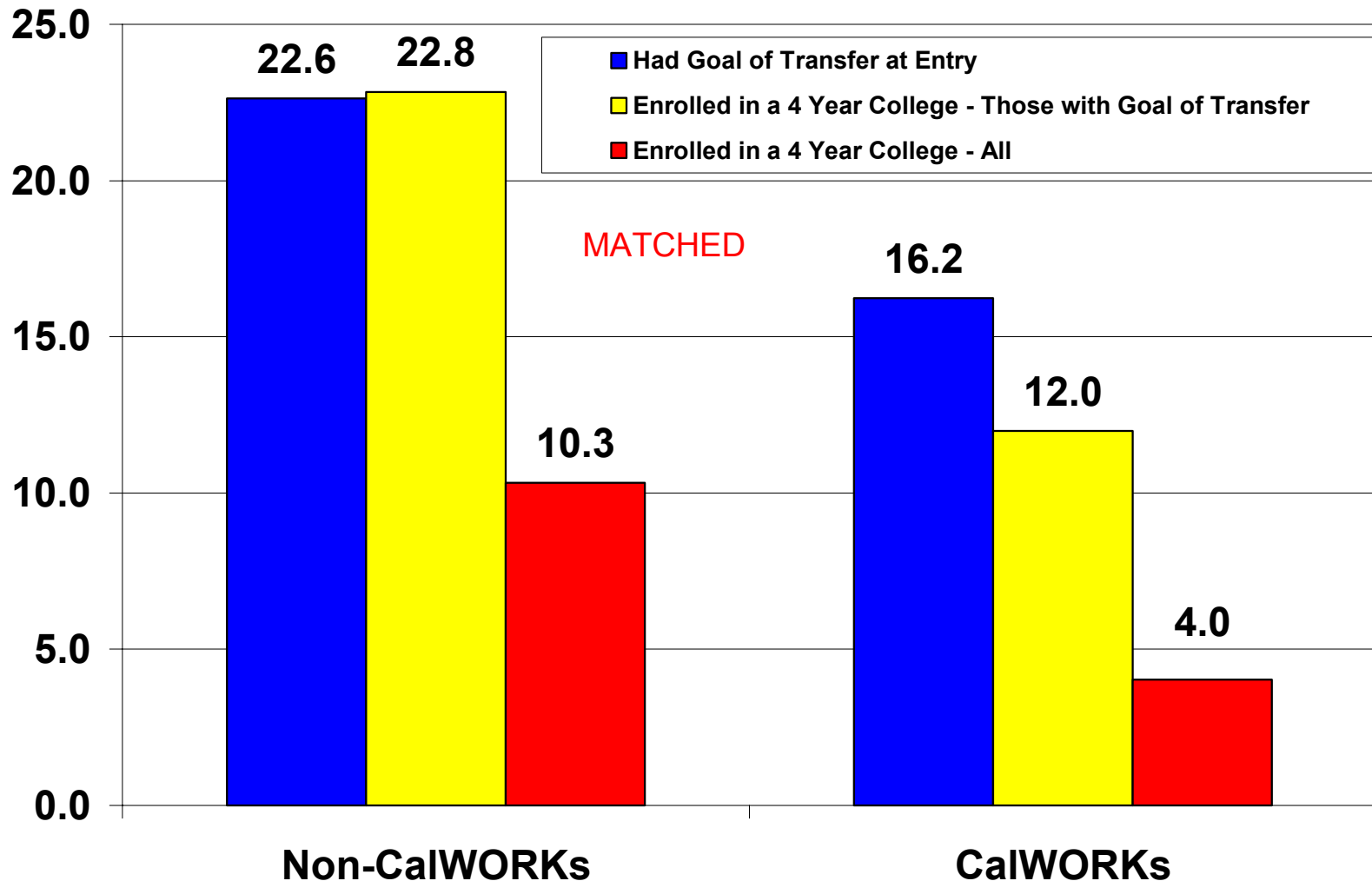
- CW more likely than Non-CW to be in Consumer Ed & Business.
- CW slightly fewer in Health.
- Fewer CW in Interdisciplinary Studies.

Percentage in Different Fields of Study
(Among Award Holders)



Enrollment in a Four-Year College

CW less likely than Non-CW have a goal of transfer.
CW less likely than Non-CW to enroll in a 4-year college
within two years of exit.



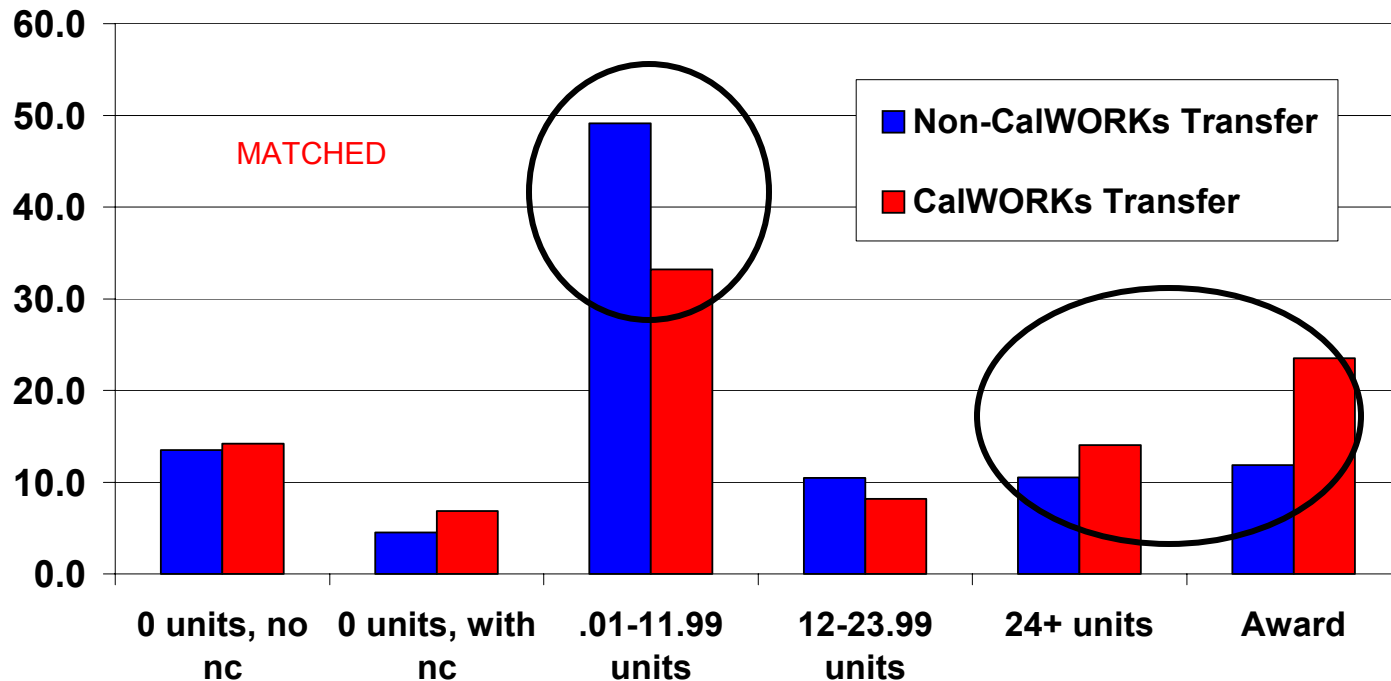
Enrollment in a Four-Year College

CW enroll in 4 year with higher educational attainment

CW & Non-CW similar on type of award prior to 4-year Enrollment

- Of students later enrolled in 4 year school, 38% of CW vs. 22% of Non-CW completed > 24 credits or an award at exit.
- AA degree and Interdisciplinary Studies most popular for both.

Educational Attainment Among Students
Enrolled in a 4-year college within 2 years of exit

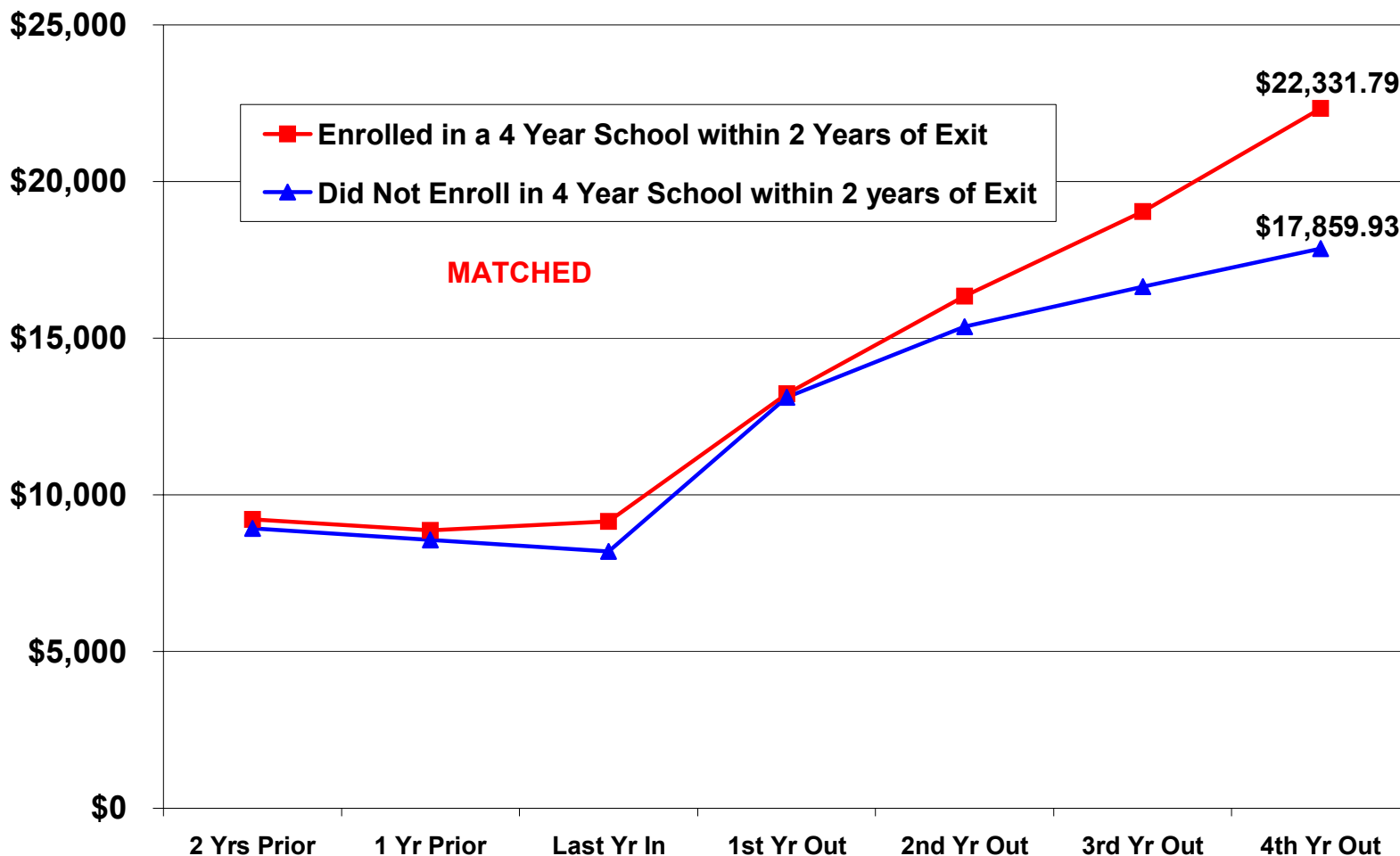


Enrollment in a Four-Year College

CW “Transfer” Students Obtain Higher Earnings

Earnings Among Employed

Non-“Transfer” students are matched to the characteristics of “Transfer” Students. Matching elements also include education received at the time of exit.



Report 1 - Educational Outcomes

Policy Implications

- ✓ Strengthen Individual Courses:
 - Students rely on coursework more than an award when entering the labor market.
 - Focus on getting students into coursework that will be most attractive to employers.

- ✓ Investigate Tracking of CW into Consumer Ed and Business
 - Even after matching, CW students are more likely to enter Consumer Education and Business fields than Non-CW students.
 - Perhaps take steps to encourage non-traditional field choices for CW students.

Report 1 - Educational Outcomes

Policy Implications (Cont.)

If Transfer is Considered to be a Desirable Outcome:

- After matching, CW students still lag behind Non-CW students in percentage desiring transfer and percentage enrolling in a four year school after exit.
- ✓ Improve Transfer Rates for CW Students by:
 - Educating students about transfer benefits and requirements.
 - Encouraging students to consider transfer as an option at time of entry.
- ✓ Evaluate Necessity of Obtaining an Award Prior to Transfer:
 - Prior award may delay transfer to a four-year program.
 - Do CW students need award-level coursework to become transfer-ready? Are pre-transfer awards beneficial for other reasons?

Report #2

Employment & Earnings Outcomes

CalWORKs Students Only

CalWORKs vs. Non-CalWORKs Students

CalWORKs Students Only

Summary of Key Findings – Employment & Earnings *Among CalWORKs Students*

- ✓ Impact of Non-Credit: Students with only non-credit coursework see a limited employment and earnings payoff over students who exited without completing any coursework.
- ✓ Impact of Short Certificate: Short certificates provide higher employment but similar earnings as credit coursework without an award.
- ✓ Impact of Medium Length Certificate: Medium length certificates yield equivalent employment rates as shorter certificates but produce substantially higher earnings.
- ✓ Impact of Associate Level Degree: The AS degree brings a substantially higher employment and earnings payoff than a 30-59 unit certificate.
- ✓ Impact of Field: The Health field has a substantially higher employment and earnings payoff than all other major fields of study.

Comparison with California Population

*California 1% Public Use Microdata from the 2000 Census

For women, age 22-50, with less than a BA in 1999:

- Employment Rate:

66%

- Mean Annual Earnings Among All:

\$16,312 in 2001 dollars

- Mean Annual Earnings Among Employed:

\$24,635 in 2001 dollars

- Annual Earnings, full time Minimum Wage:

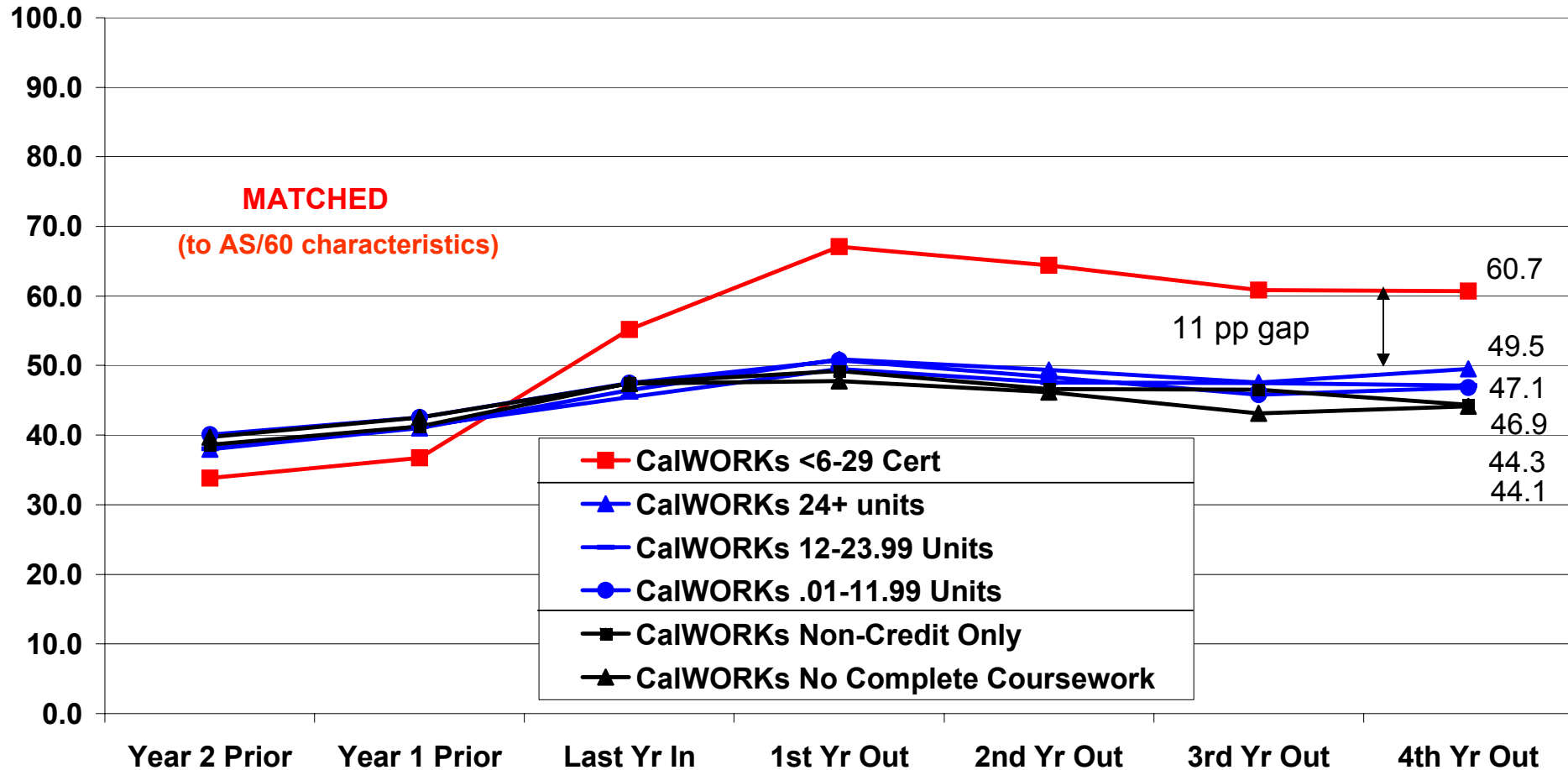
(\$5.15 per hour in 1999)

\$11,558 in 2001 dollars

Impact of Short Certificates & Non-Credit

Non-Credit similar employment rates as no completed coursework
Short certificates much better employment rates than credit-only

Employment Rates

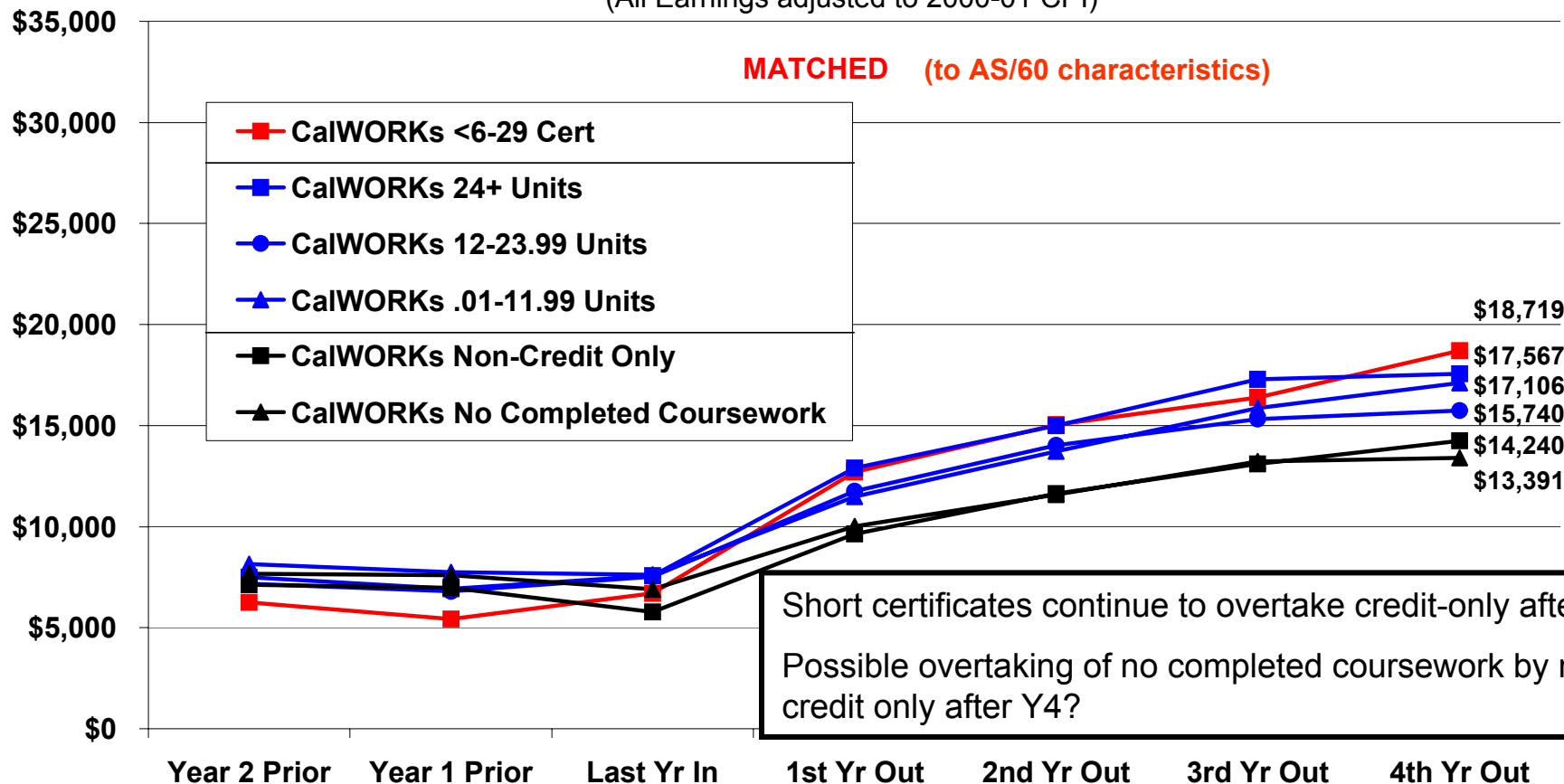


Impact of Short Certificates & Non-Credit

Non-credit slightly lower earnings than no completed coursework
Short certificates do not bring much higher earnings than credit-only

Mean Annual Earnings among Employed

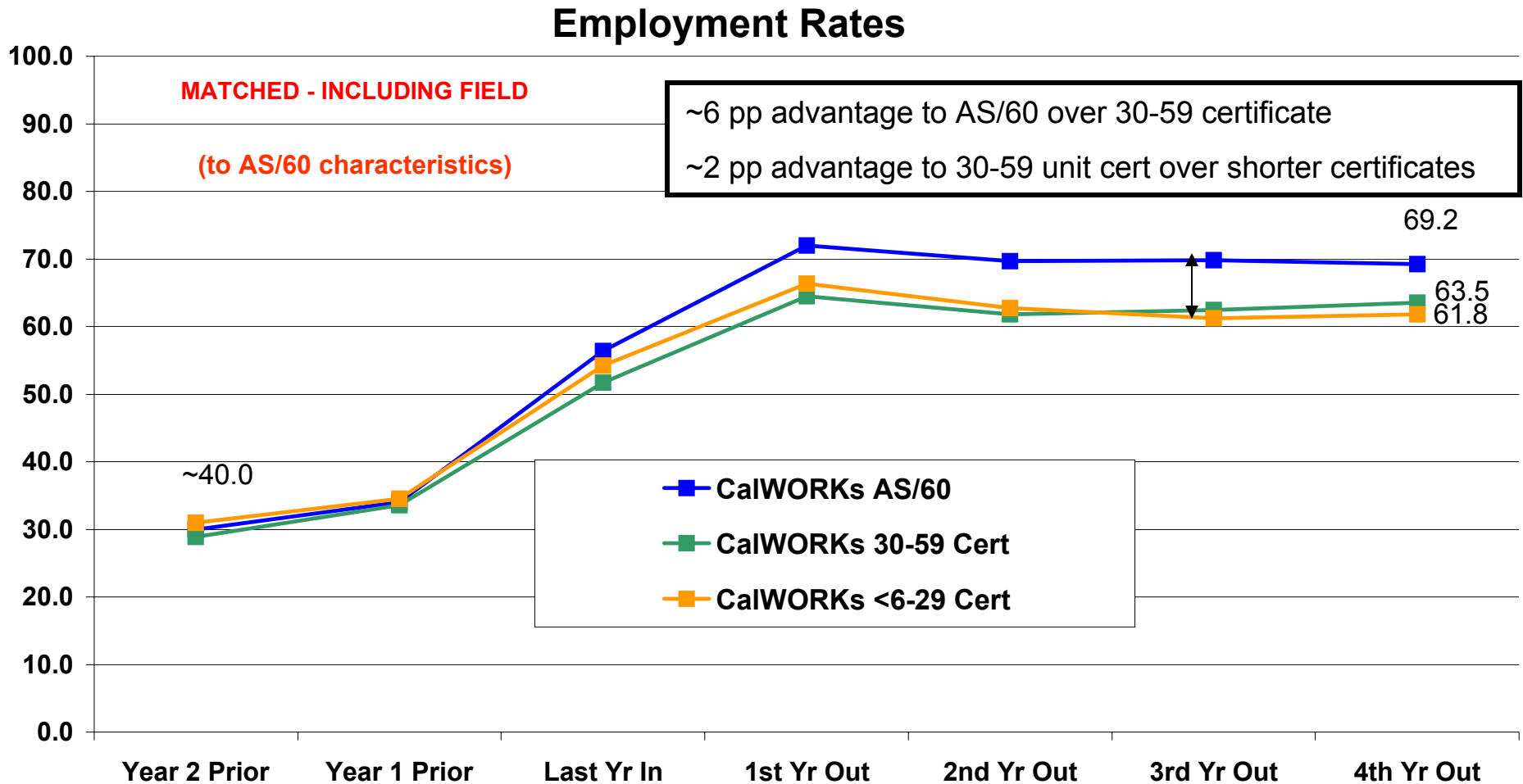
(All Earnings adjusted to 2000-01 CPI)



Impact of Medium Length Certificates & Associate

Associate Level Degrees Somewhat Higher Rates than Certificates

Medium Length Certificates Fairly Equal to Short Certificates

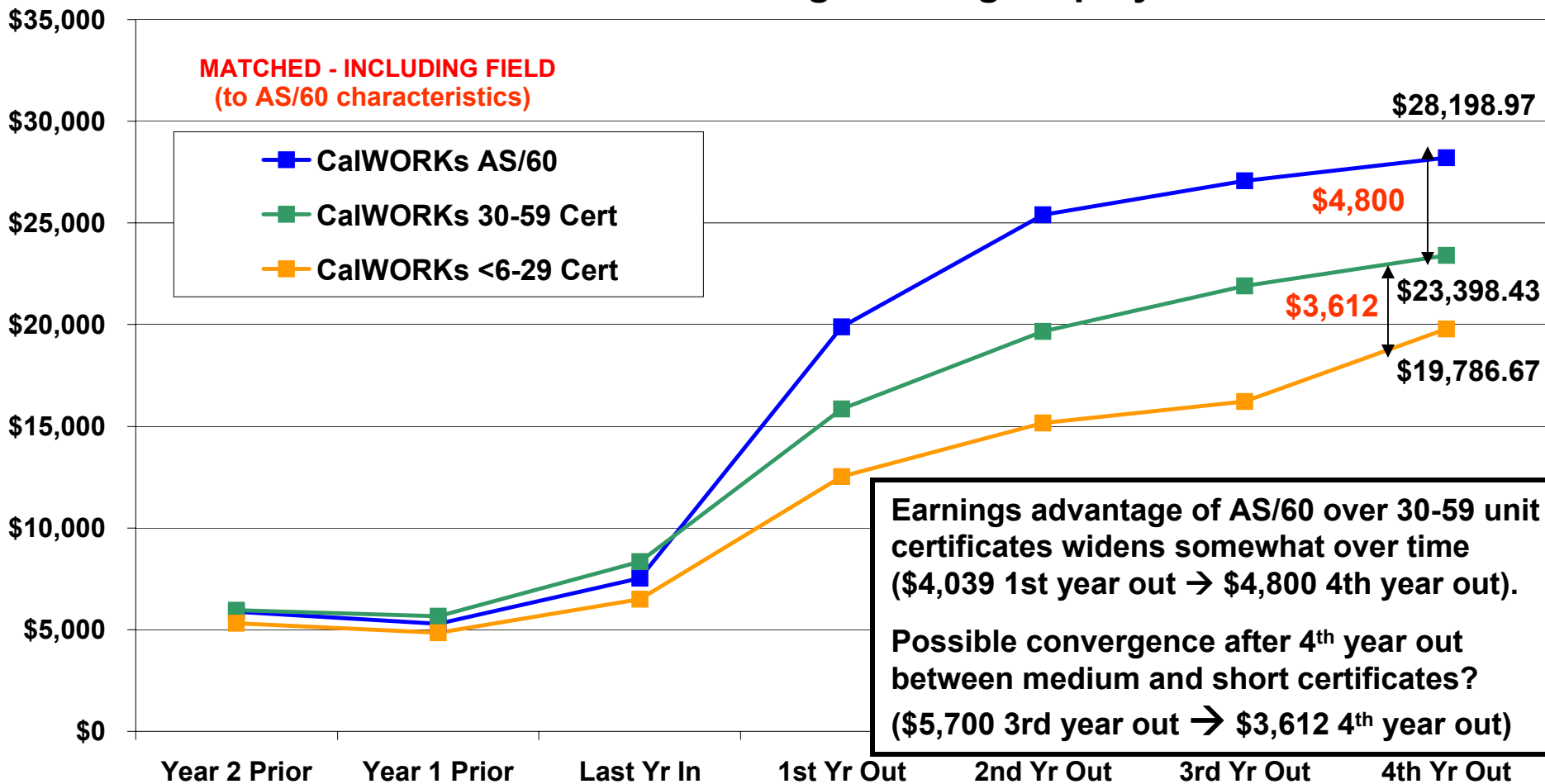


Impact of Medium Length Certificates & Associate

Associate Degrees Considerably Larger Payoff than 30-59 Certificates

Medium Length Certificates Larger Payoff than Short Certificates

Mean Annual Earnings Among Employed



(All Earnings adjusted to 2000-01 CPI)

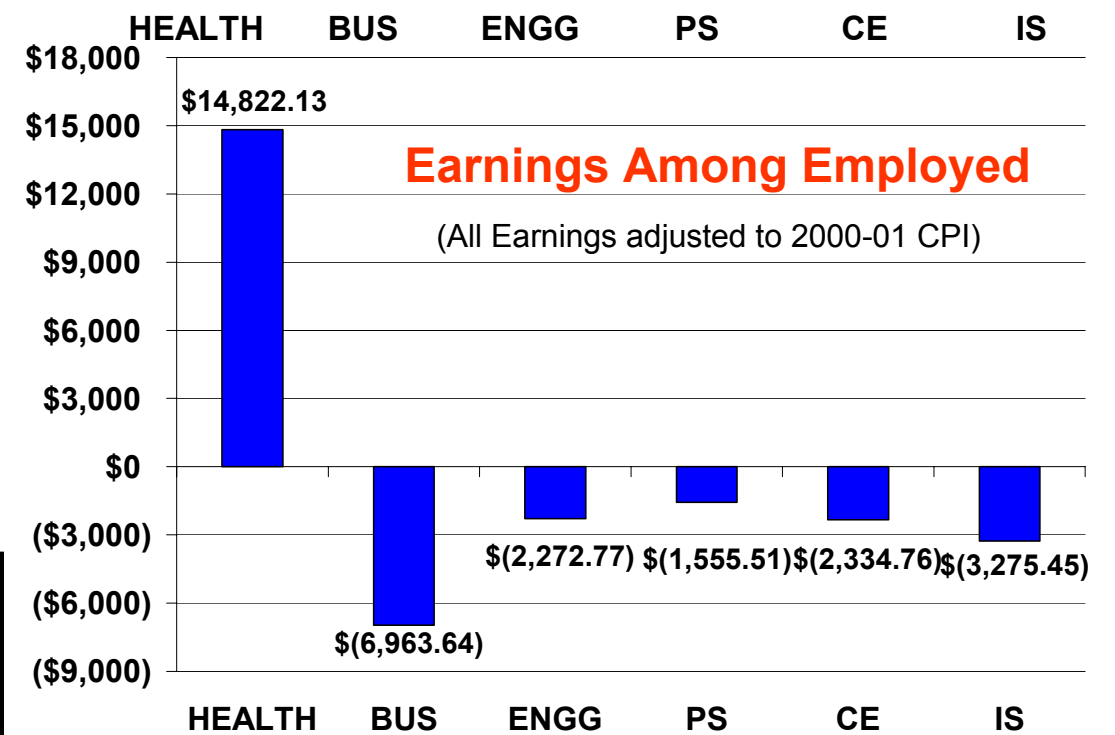
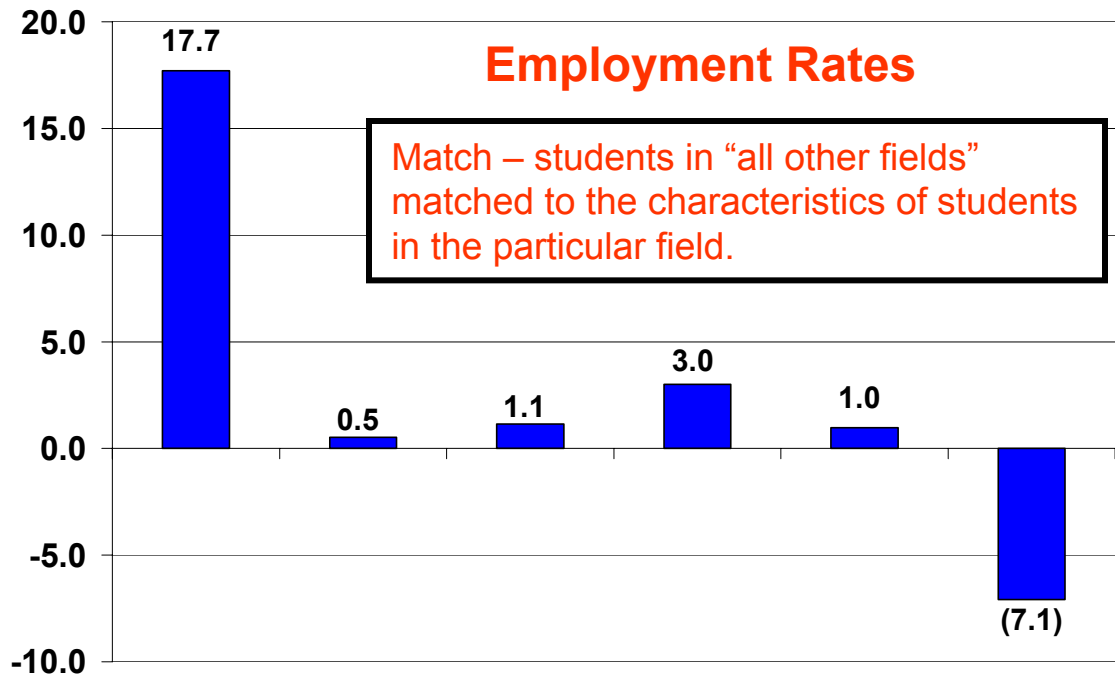
Payoff to Fields

Percentage Point Difference
in 4YO Employment &
Earnings Between a Particular
Field and Average of
“All Other Fields”



	EMPLMT	EARNINGS
HEALTH	way above average	way above average
PS	above average	below average
ENGG	same	below average
CE	same	below average
BUS	same	way below average
IS	way below average	way below average

*****Public Service, Business,
Earnings Out of Line with
Employment?**



Report 2 – Employment & Earnings Outcomes

Policy Implications - CalWORKs Students Only

- ✓ Non-Credit Coursework is Not Enough:
 - Non-Credit does not lead directly to increased employment and earnings.
 - But may provide basic skills training and a base for credit coursework.

- ✓ Obtain Short Certificates Over Credit-Only:
 - Short-term certificates improve likelihood of employment more than credit coursework without award, even after match.
 - Awards with at least 30-59 unit requirements significantly increase earnings potential.

- ✓ Obtain Associate Level Degrees over 30-59 Certs:
 - AS degrees or 60+ unit certificates have higher payoffs.
 - Encourage students to stretch for an AS degree or 60+ unit certificate.

- ✓ Encourage Health Fields, Higher Wage Job Placement:
 - Students with awards in Health fields see higher payoffs in post-college employment than students exiting with awards in other fields of study.
 - Improve job placement efforts in other fields to support higher wages rather than easy job placement (e.g. Business has average employment but low wages).

CalWORKs Vs. Non-CalWORKs

Students

Summary of Key Findings – Employment & Earnings

CalWORKs vs. Non-CalWORKs

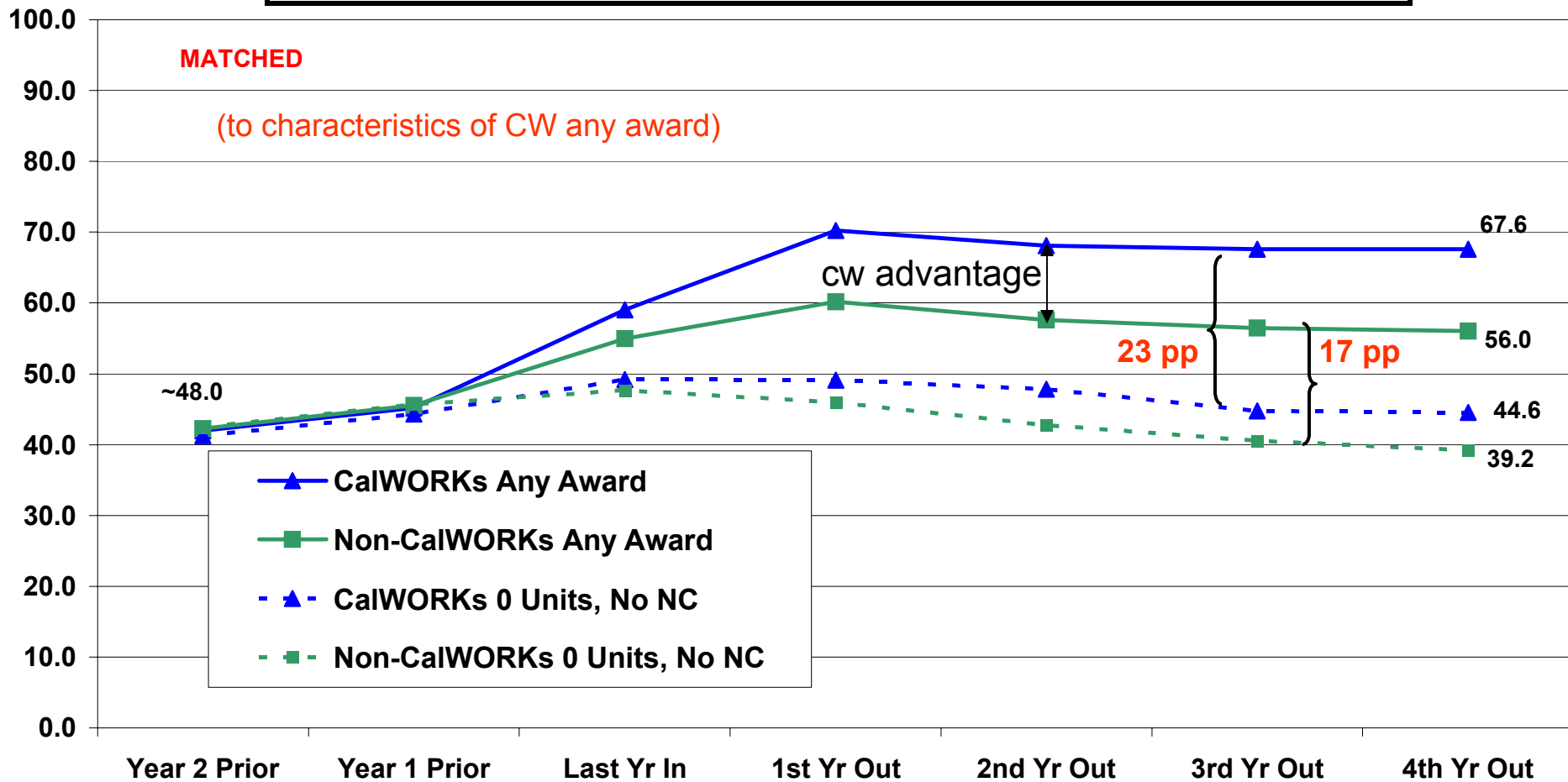
- ✓ Employment: CW students have higher employment rates than Non-CW students across all fields of study.
- ✓ Earnings Among Employed: Employed CW students have substantially lower earnings than employed Non-CW students across all fields of study, even after matching background.
- ✓ Earnings Among All: Among all students (employed and unemployed) earnings of CW converge with or surpass Non-CW in all fields with exception of Public Service.
- ✓ Impact of Any Award: CW students see a higher employment and earnings payoff to receiving any award than Non-CW.
- ✓ Impact of Associate: CW students see a higher employment and earnings payoff to receiving an Associate degree than Non-CW.

Impact of Any Award Over No Coursework – Employment

Awarded CW higher employment rates than Non-CW

****Awards mean more for CW than Non-CW in terms of Employment****

*****Employment Payoff 6 Percentage Points Greater for CW**

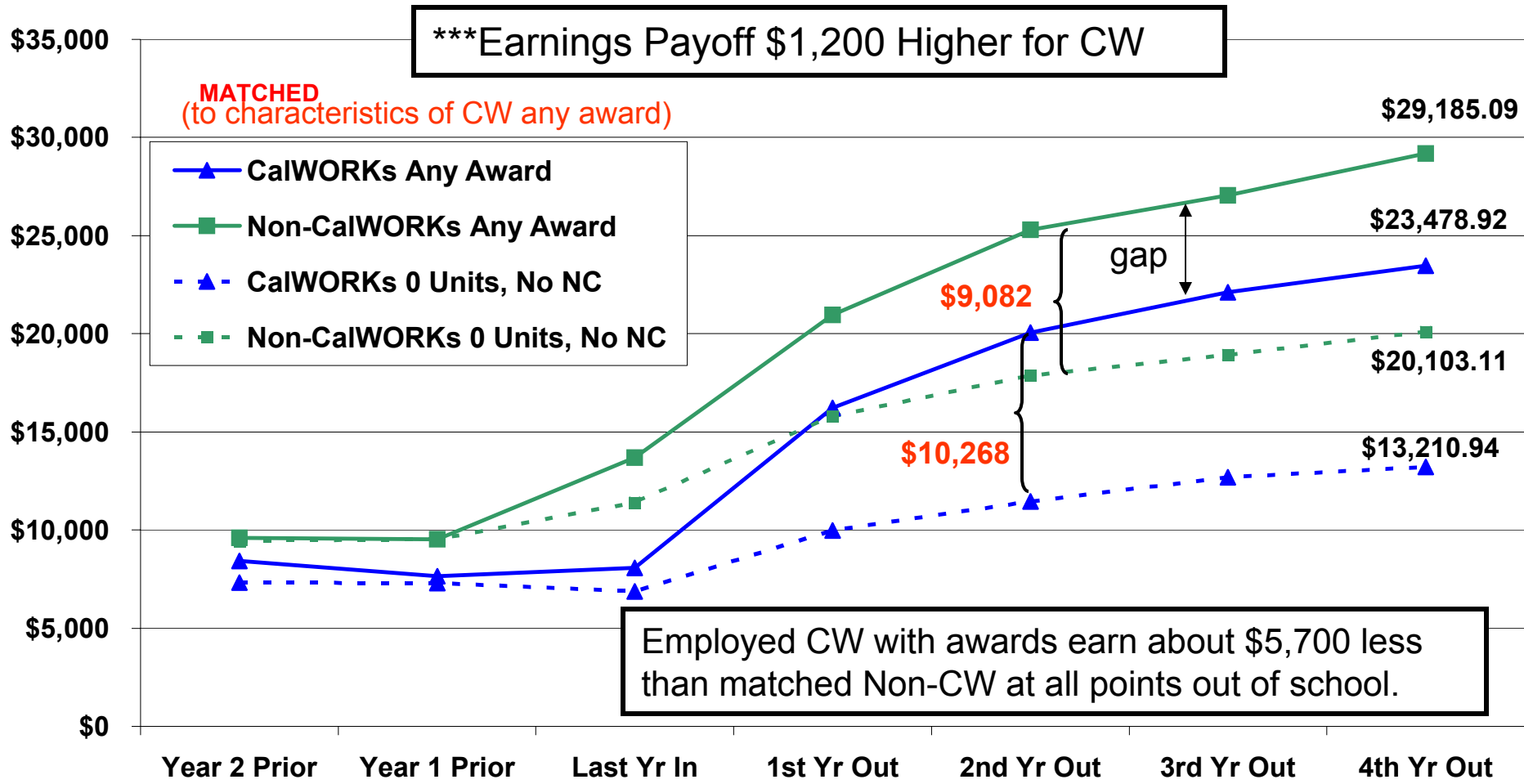


Impact of Any Award Over No Coursework

- Earnings Among Employed -

Among Employed, Earnings Gap Persists 4 years Out

*** Awards mean more for CW than Non-CW in terms of Earnings ***



(All Earnings adjusted to 2000-01 CPI)

Impact of Any Award Over No Coursework

- Earnings Among All -

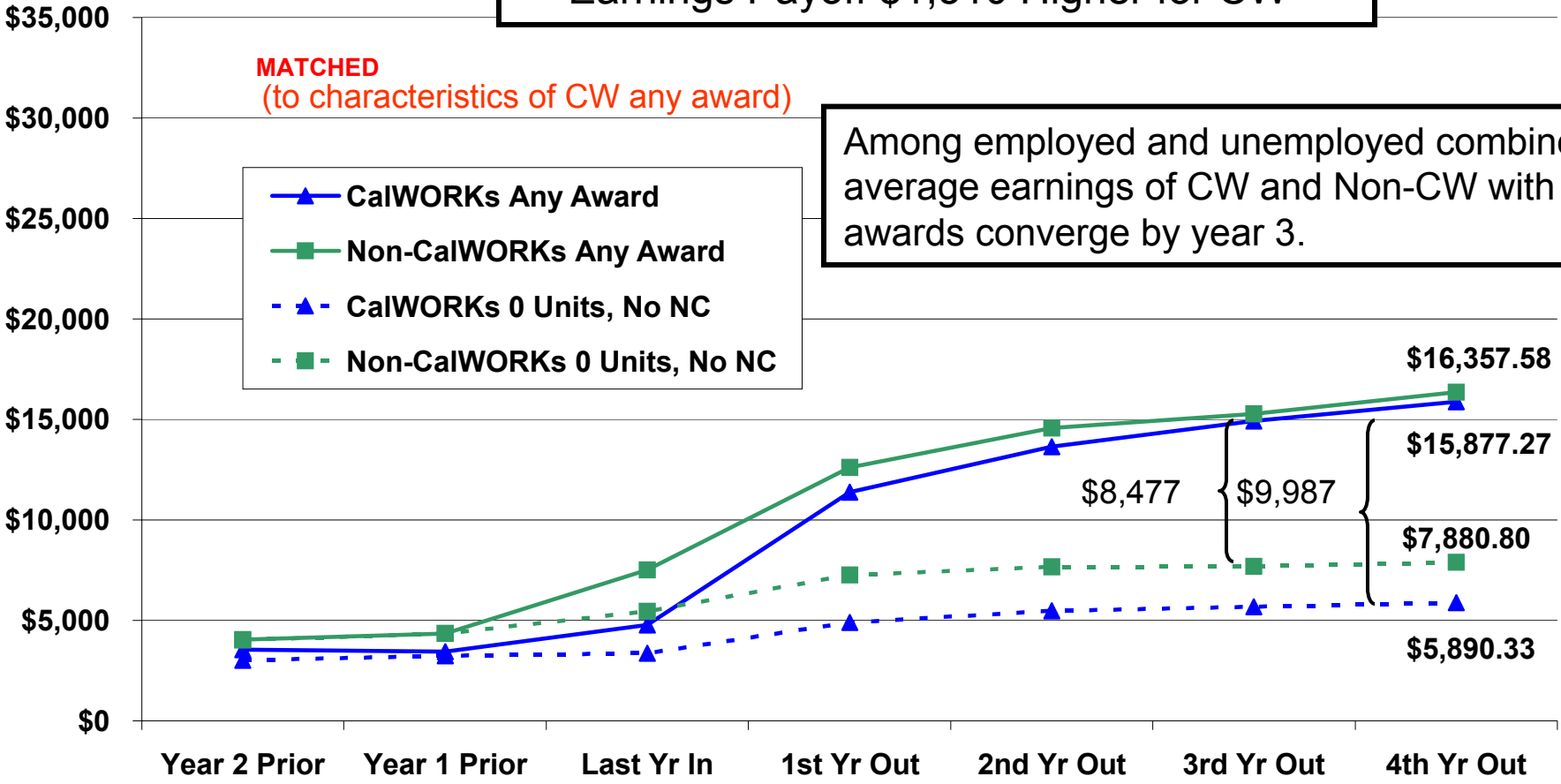
Among all, earnings converge

*** Awards mean more for CW than Non-CW in terms of Earnings ***

***Earnings Payoff \$1,510 Higher for CW

MATCHED
(to characteristics of CW any award)

Among employed and unemployed combined, average earnings of CW and Non-CW with awards converge by year 3.



(All Earnings adjusted to 2000-01 CPI)

Impact of Associate Degree over a Certificate

- Compared receiving an Associate level award (AA, AS or 60+ certificate) to receiving a Certificate (6-59 units in length) for both CW and Non-CW students.
- Students in all groups matched to the characteristics of CalWORKs students with Associate level degrees.
- Employment Payoff to Associate Degree Higher for CW: Employment Payoff to an Associate degree over a Certificate is twice as large for CW as Non-CW (9 vs. 4 pp by the 4th year out).
- Earnings Payoff to Associate Degree Higher for CW: Among Employed students, the earnings payoff to an Associate degree is also twice as large for CW students as Non-CW students by the fourth year out (\$5,204 vs. \$2,542). Similar results among all students (employed and unemployed combined).

Payoff to Fields - Employment

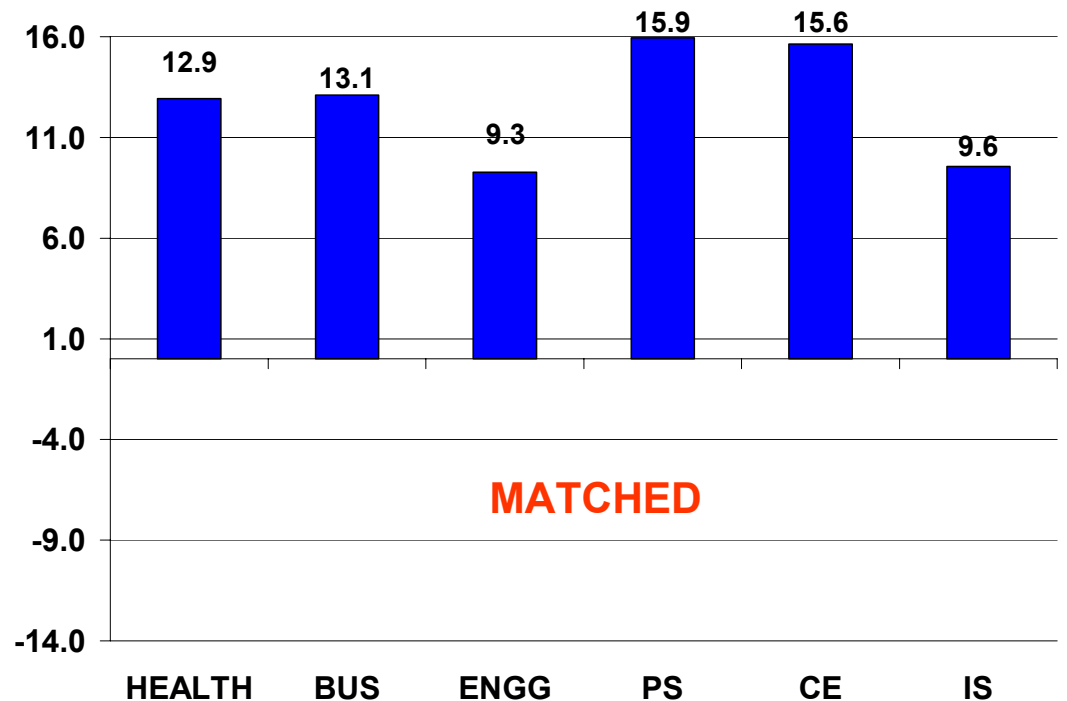
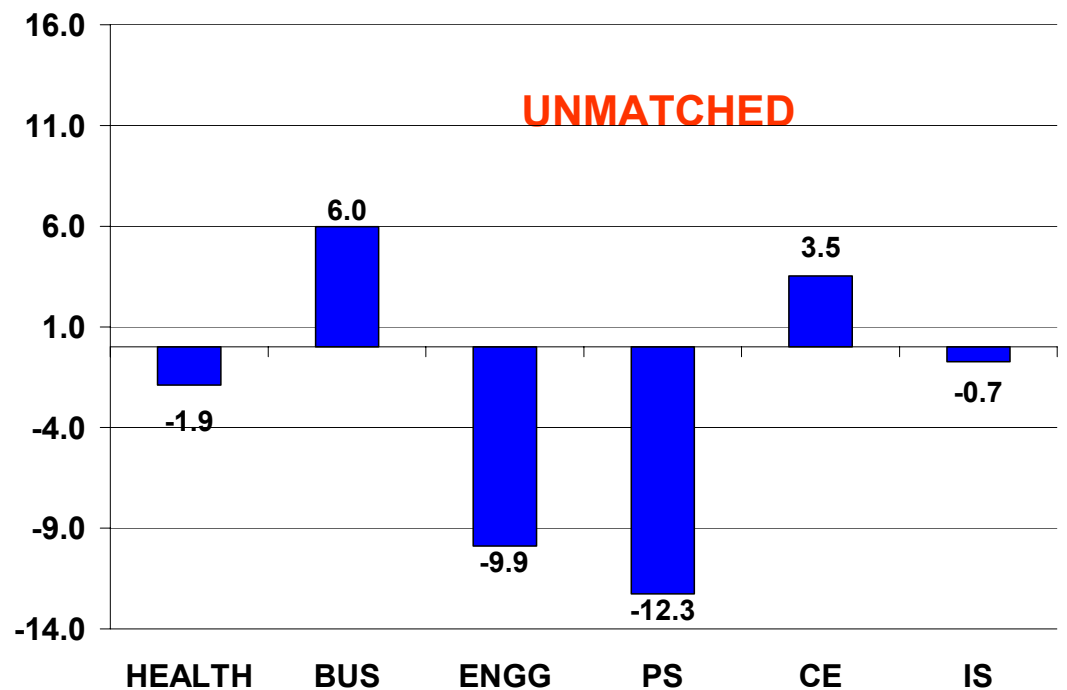
Percentage Point Difference in
4YO Employment Between
CW and Non-CW

Unmatched Results

- CW at par with Non-CW in all fields but Engineering and Public Service.

Matched Results

- CW Surpass Non-CW in all Fields. Approx. 9-16 percentage points higher across fields.
- Advantage relatively steady from Year 1 to Year 4 out of college.



Payoff to Fields - Earnings

Difference in 4YO Earnings Between CW and Non-CW

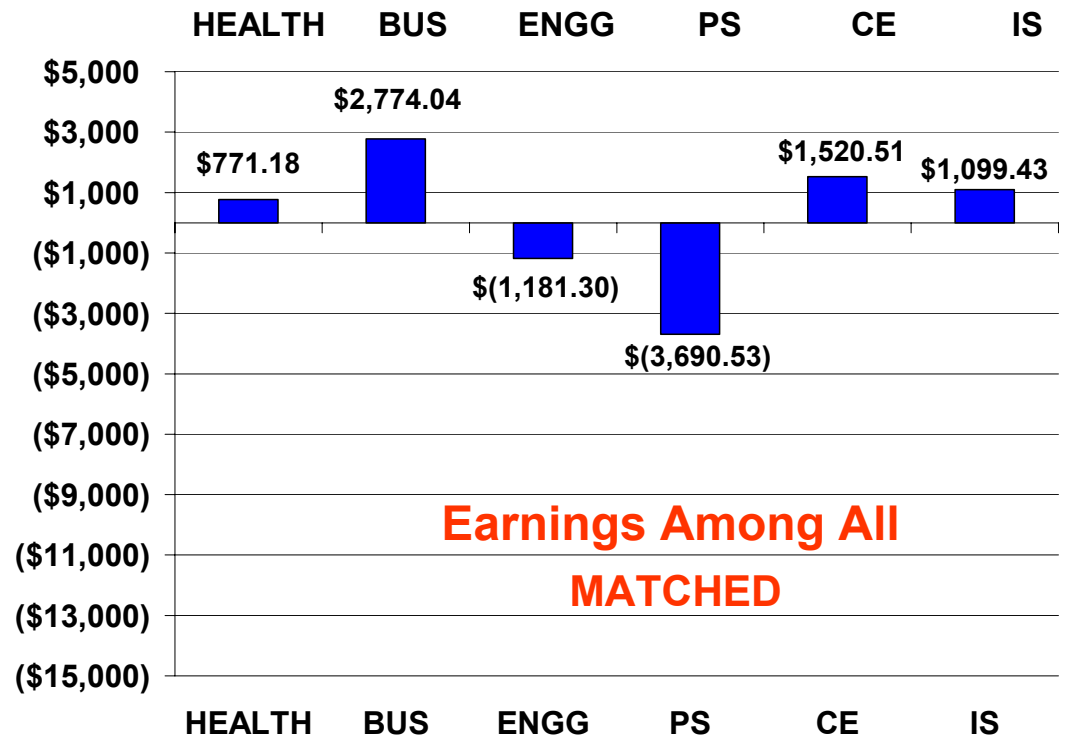
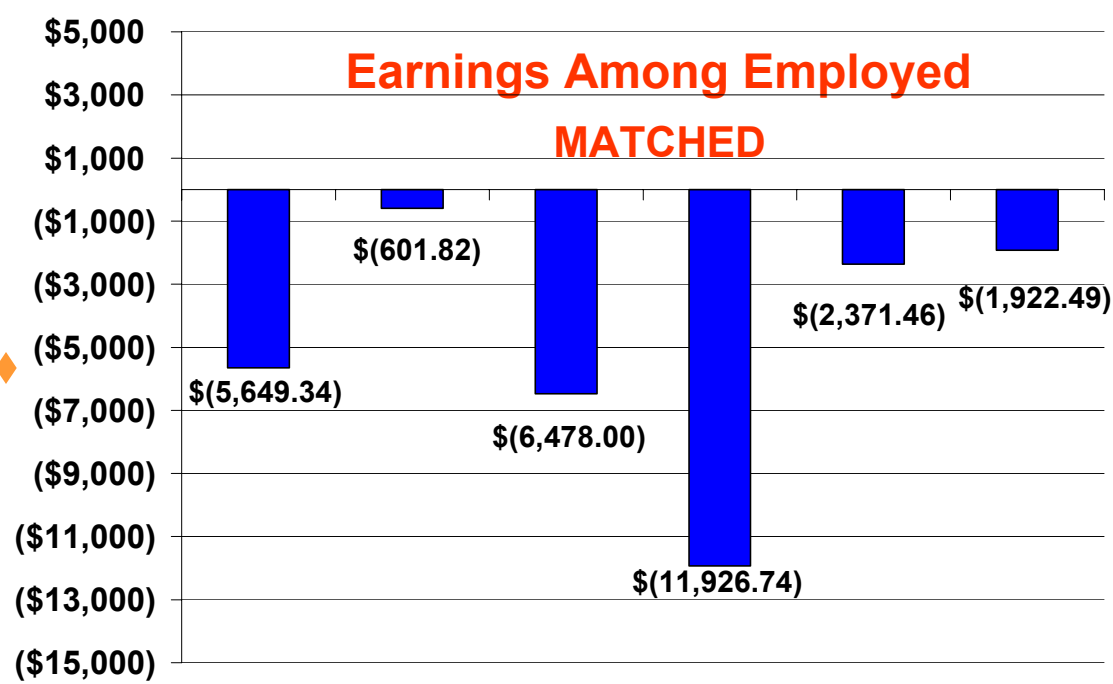
(All Earnings adjusted to 2000-01 CPI)

Among Employed

- After matching on background and award type, earnings gap between employed CW and Non-CW students decreases dramatically yet persists for all fields, especially Health, Engineering, Pub. Service.

Among All

- Earnings Gap Remains Substantial Only in Public Service Field.
- Likely cause is the large disparity in earnings between employed CW and Non-CW grads in Public Service.



Report 2 – Employment & Earnings Outcomes

Policy Implications - CalWORKs Vs. Non-CalWORKs

- ✓ Encourage Associate over Certificate:
 - CW students benefit more from Associate-level awards than the general population attending college.
 - Encourage longer term programs for CW recipients over shorter programs.

- ✓ Evaluate CW Job Placement Rates in Non-Traditional Fields:
 - CW grads may be employed at lower rates in non-traditional fields.
 - Investigate how to achieve job placement parity with Non-CW.

- ✓ Evaluate CW Job Placement to Improve Earnings:
 - Employed CW students have lower earnings than Employed Non-CW peers.
 - Investigate the earnings disparity in Health, Engineering and Public Service in particular.
 - Examine how job placement programs might help achieve parity.

Report #3

Financial Aid Utilization and Impact

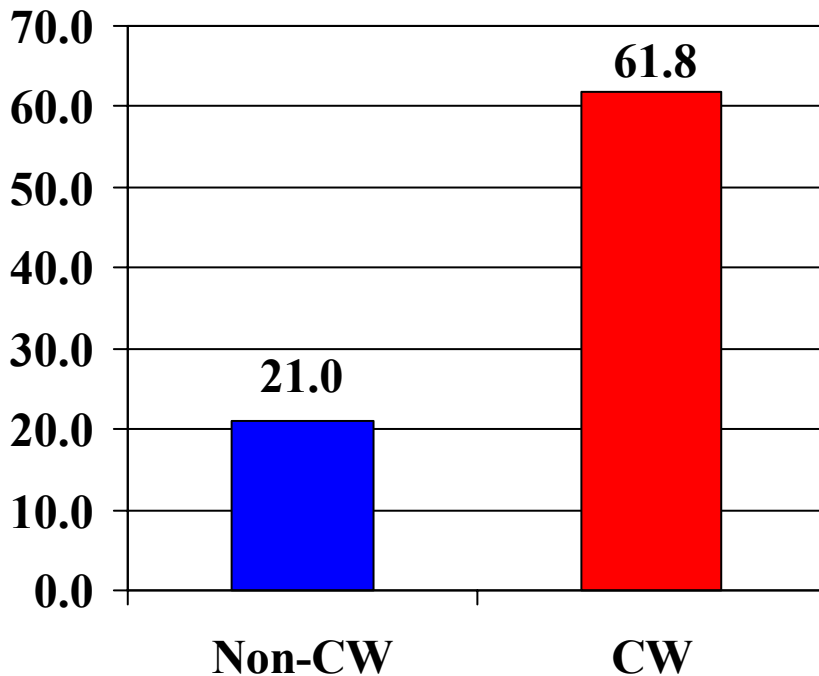
Financial Aid Utilization

Summary of Key Findings – Financial Aid *Utilization*

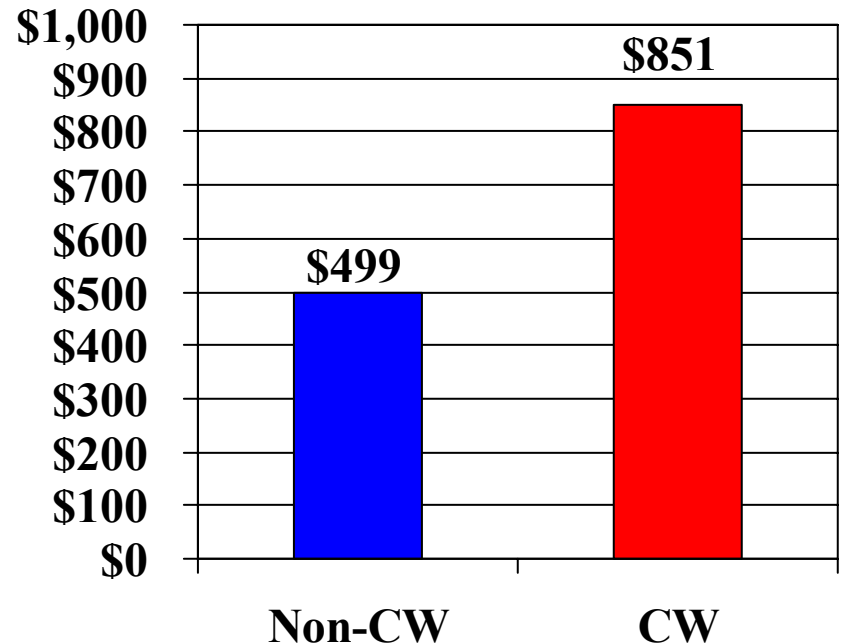
- ✓ Overall Rates and Amounts: CW students are more likely to receive financial aid and higher amounts of aid than Non-CW students, even after matching on background (including earnings prior to entry).
- ✓ Demographic Differences: Among the CW population, men and Hispanics may have lower uptake than women and non-Hispanic Whites.
- ✓ Amount of Credit: Higher credit students are more likely to receive financial aid than lower credit students, even after matching on background characteristics and time in school.
- ✓ Credit Status:
 - ❖ Non-credit students are less likely to receive financial aid than students who take at least some credit coursework.
 - ❖ Students who earn a mix of credit and non-credit coursework receive higher financial aid awards than credit-only students.

Rates and Amounts of Financial Aid

After matching, CW still much more likely than Non-CW to receive FA and receive higher awards



Percentage receiving Financial Aid at some point during enrollment

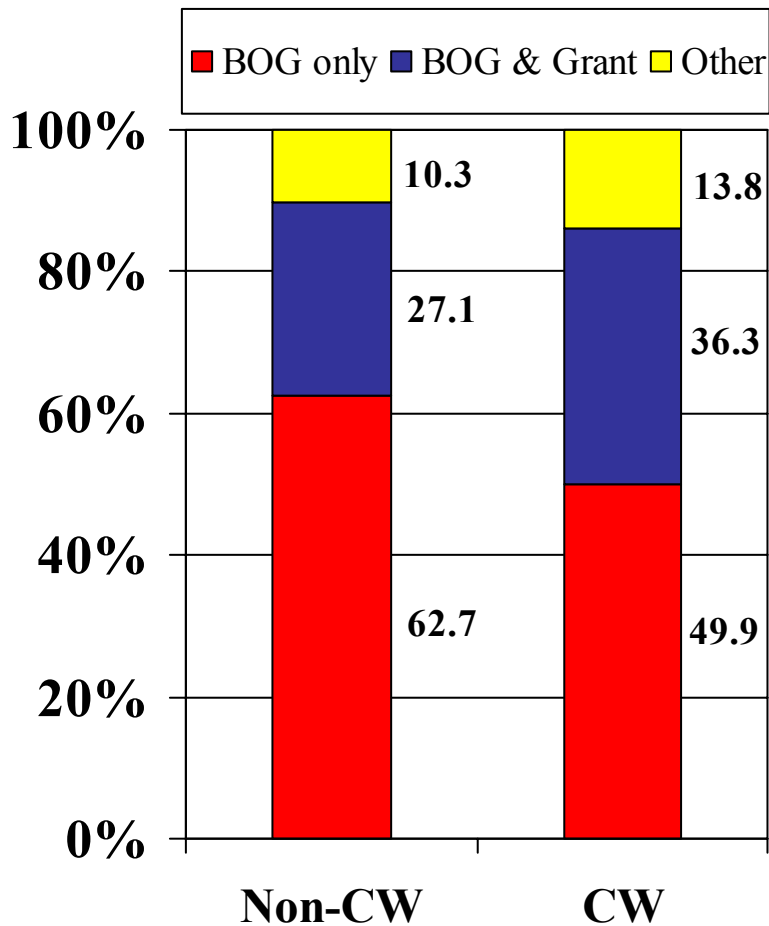


Average Amount of Financial Aid per Term Enrolled

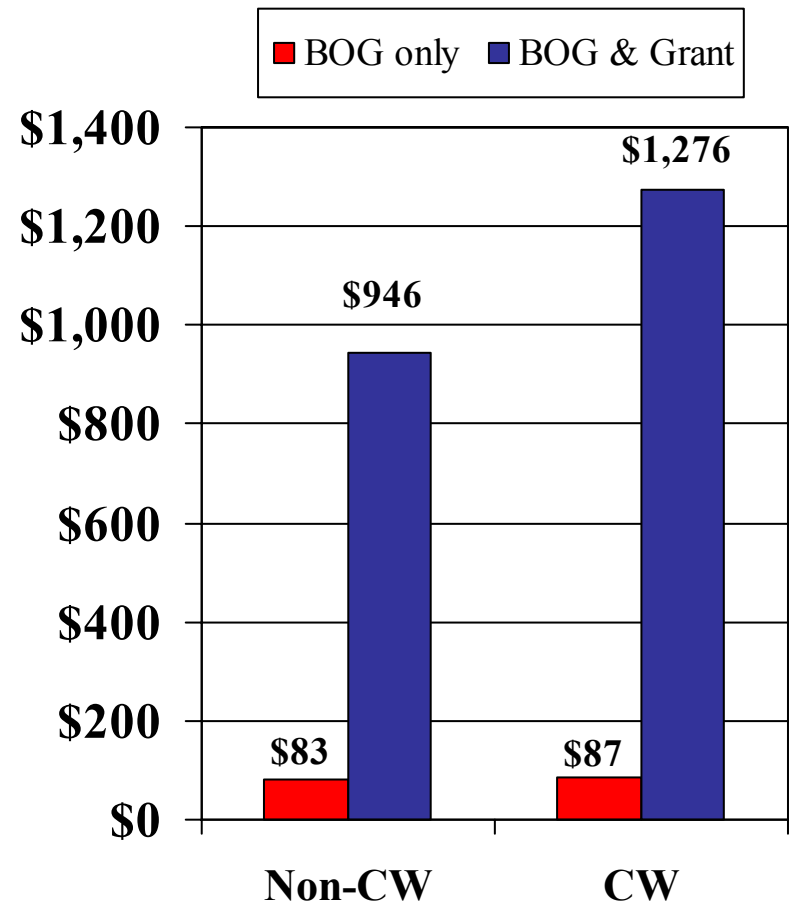
Rates and Amounts of Financial Aid

by Type of Financial Aid

CW more likely than Non-CW to get combination of BOG plus other awards. CW have similar BOG amount to NCW but higher grants.



Percentage Receiving FA



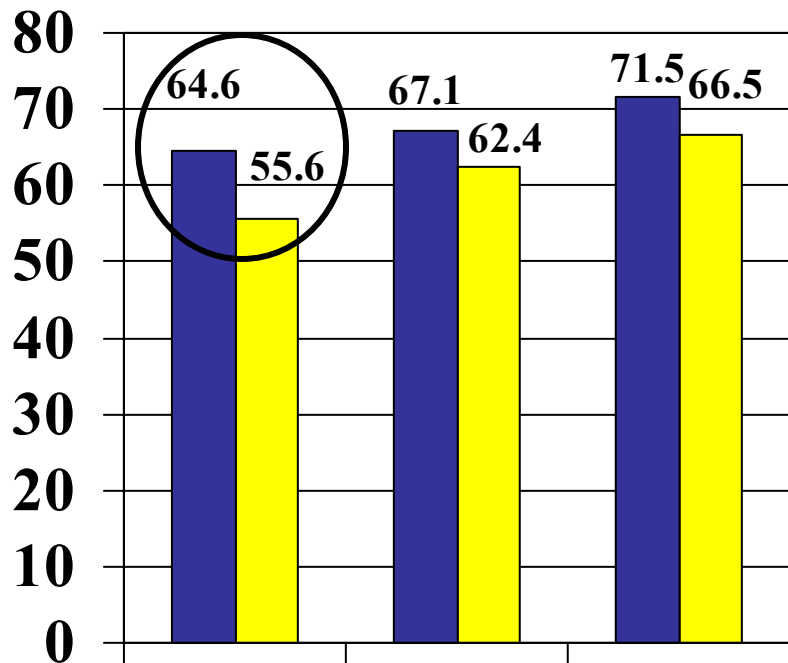
Average Amount of FA Per Term

Financial Aid by Demographics

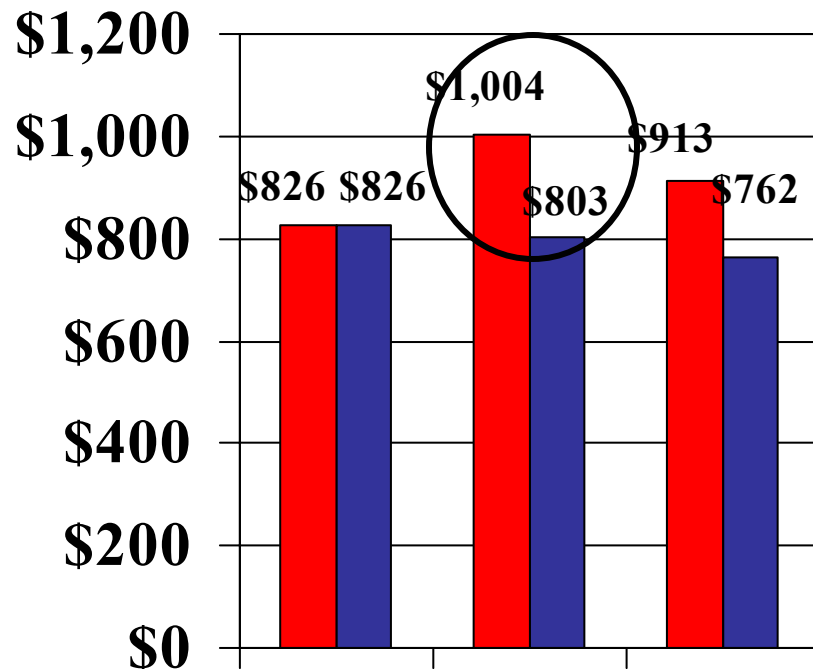
After match on all other demographics,

CW women more likely to get FA than CW men,

CW Hispanics receive lower amounts of aid than CW Whites



W/M W/H HS/No
HS
Percent Receiving FA



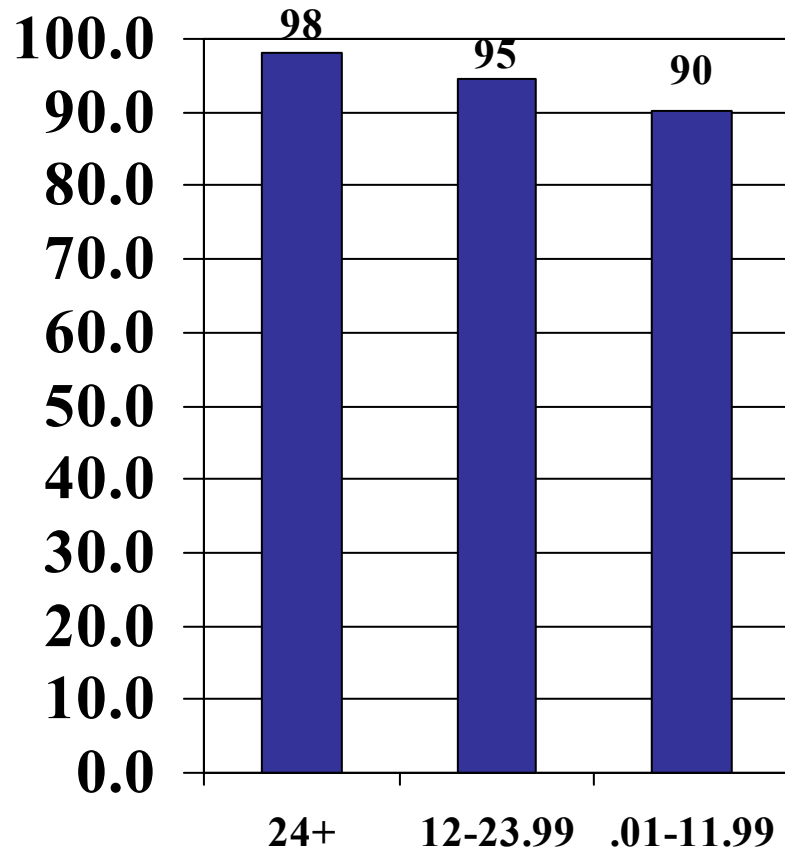
W/M W/H HS/No
HS
Amount of FA per Term

(W/M=Women/Men, W/H=White/Hispanic,

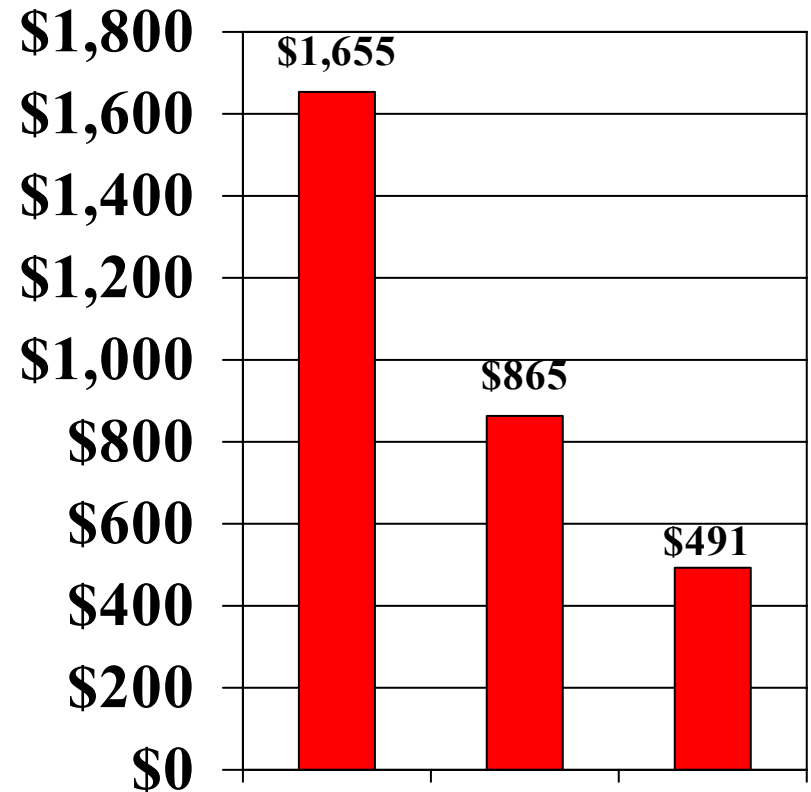
HS/No HS=High school at entry/No High School at entry)

Financial Aid by Credits at Exit

After match, there is still a positive correlation between receiving FA, amount of FA and number of credits earned



Percent Receiving FA



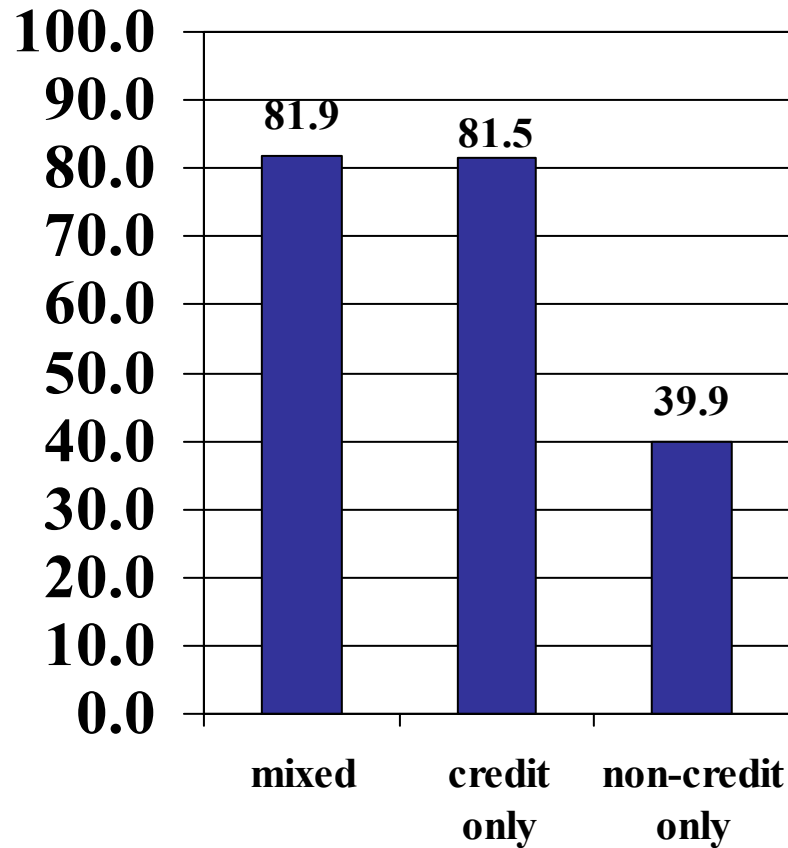
Amount of FA per Term

Match includes number of terms spent in school

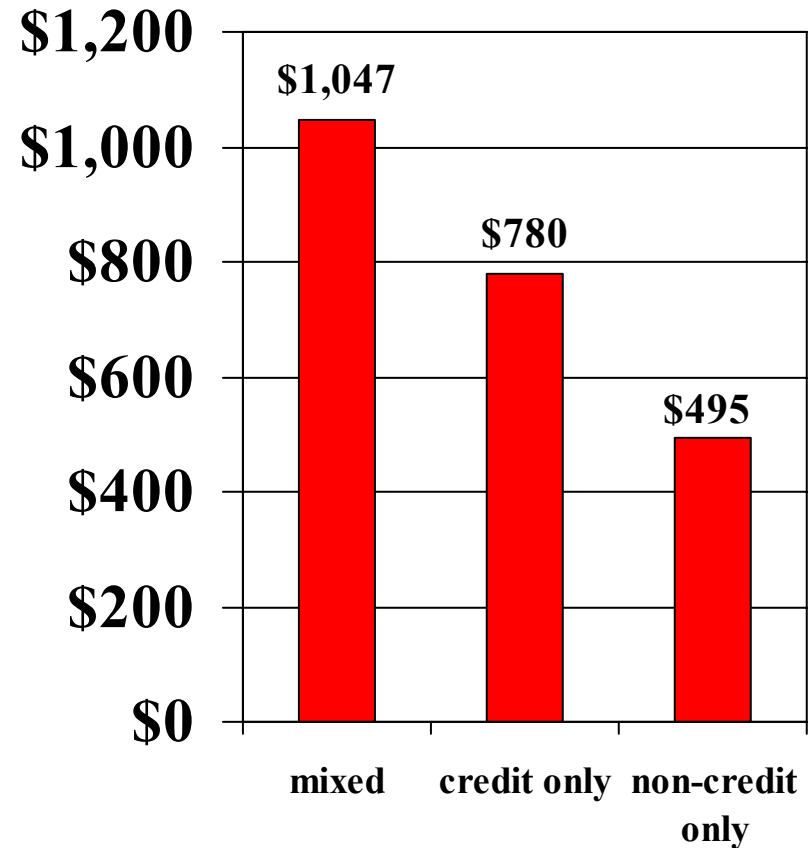
Financial Aid by Credit Status

Mixed Students Receive Higher FA Awards than Credit-Only

Non-Credit Students Less Likely to Receive FA and
Receive Lower Amounts of FA than Mixed Credit Group



Percent Receiving FA



Amount of FA per Term

Match includes number of terms spent in school

Report 3 – Financial Aid Utilization & Impact

Policy Implications – Financial Aid Utilization

- ✓ Financial Aid Programs Reach Many CW Students:
 - CW students receive more financial aid than matched non-CW students.
- ✓ Pay Closer Attention to CW Men & Hispanics:
 - Men receive awards less frequently, and Hispanics receive fewer aid dollars overall.
 - Investigate how to better achieve financial aid parity for these two groups.
- ✓ Increase Financial Aid Eligibility & Outreach for Part-Time Students:
 - CW students exiting with fewer credits receive less financial aid.
 - Investigate whether this is related to part-time status.
 - Examine how to increase eligibility and award amounts for part-time students.
 - Increase financial aid outreach to part-time students.
- ✓ Increase Financial Aid Eligibility for Non-Credit Students:
 - Non-credit students have lower financial aid uptake and amounts.
 - Investigate and eliminate possible eligibility biases against students who take non-credit coursework.

Financial Aid Impact

Summary of Key Findings – Financial Aid

Impact

✓ Financial Aid and Academic Award Completion:

- Students with financial aid are more likely to complete awards. The higher the average financial aid award, the more likely an award is completed.
- Among award holders, students with any financial aid are more likely to complete an Associate over a Certificate. Among award holders, students with higher average financial aid awards are more likely to complete an Associate over Certificate.

✓ Work Study and Economic Outcomes:

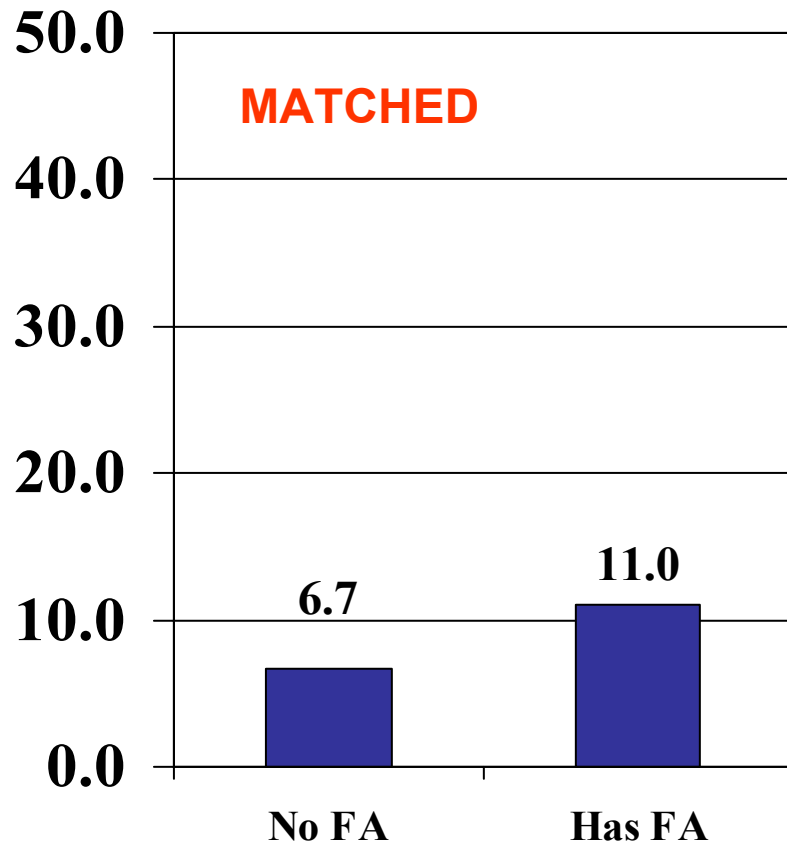
- Working while in school in general pays off: Education held constant, CW students who work while in school have higher employment and earnings outcomes than CW students who do not work while in school.
- Among CW students who work while in school, there is no clear association between receiving work study and obtaining higher post-college employment rates and earnings.

✓ Work Study and Educational Attainment: Work Study students have higher educational attainment than students who work while in school but do not receive work study.

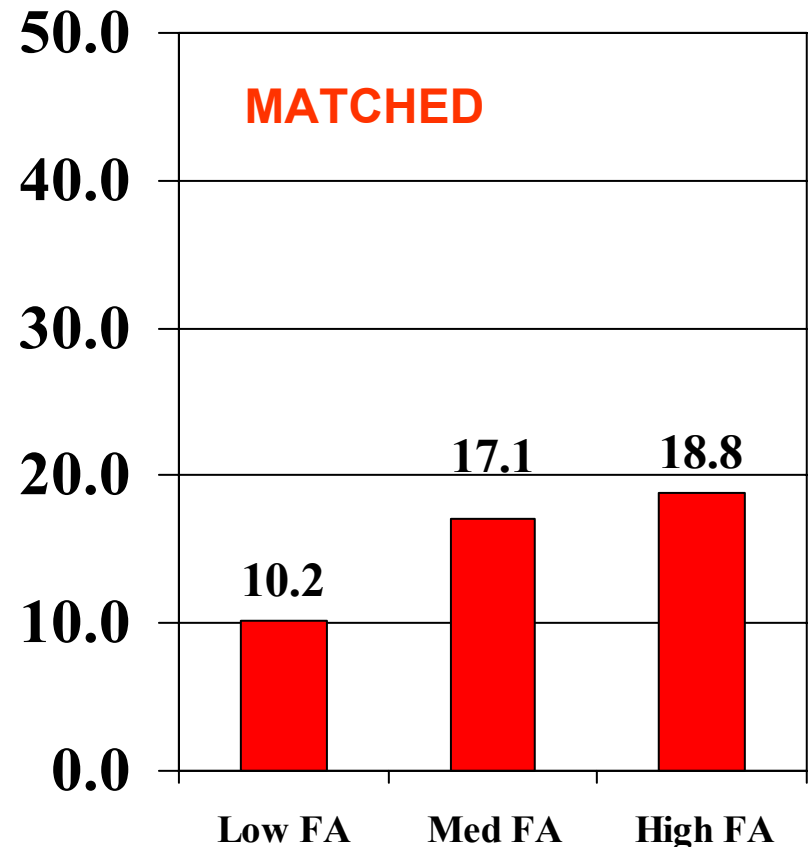
Percentage with Any Academic Award by FA

Students with FA somewhat more likely to complete awards

The higher the FA award, more likely award completed



Percent with any Academic Award



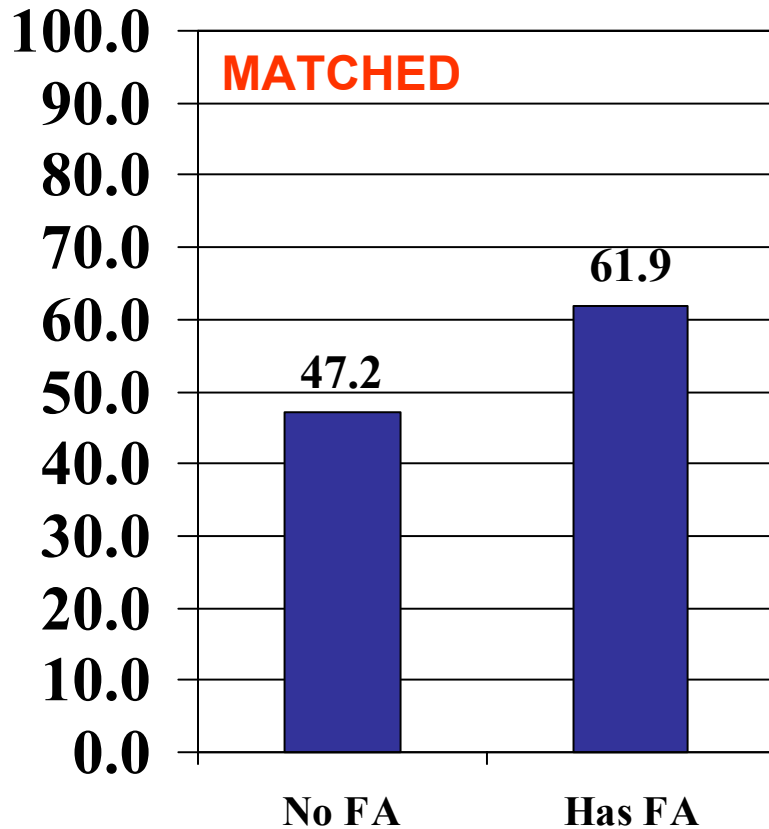
Percent with any Academic Award

These statistically significant associations hold after accounting for important intervening factors such as educational goal at entry, time spent in school, and credits earned.

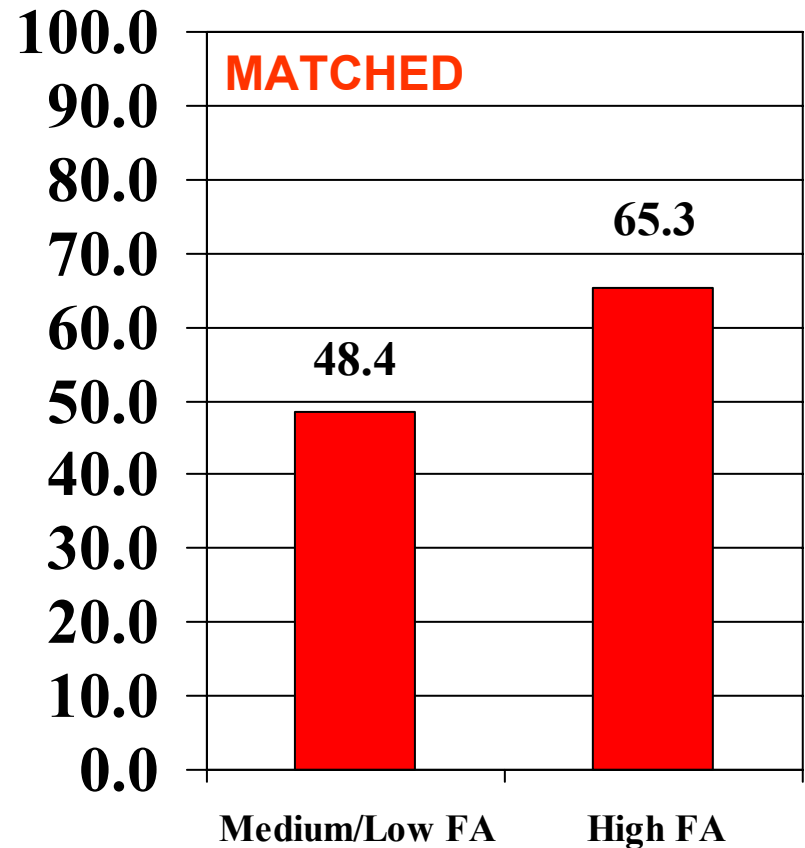
Percentage with Associate Level Award by FA (Among those that earned academic awards)

Students with some FA more likely to complete Associate over Certificate

Students with high FA more likely than those with med/low FA to complete Associate



Percent with Associate Level Award



Percent with Associate Level Award

These associations hold after accounting for important intervening factors such as educational goal at entry, time spent in school, and credits earned.

Does Work/School Mix Pay for CW?

CW Educational and Economic Outcomes by In-School Employment

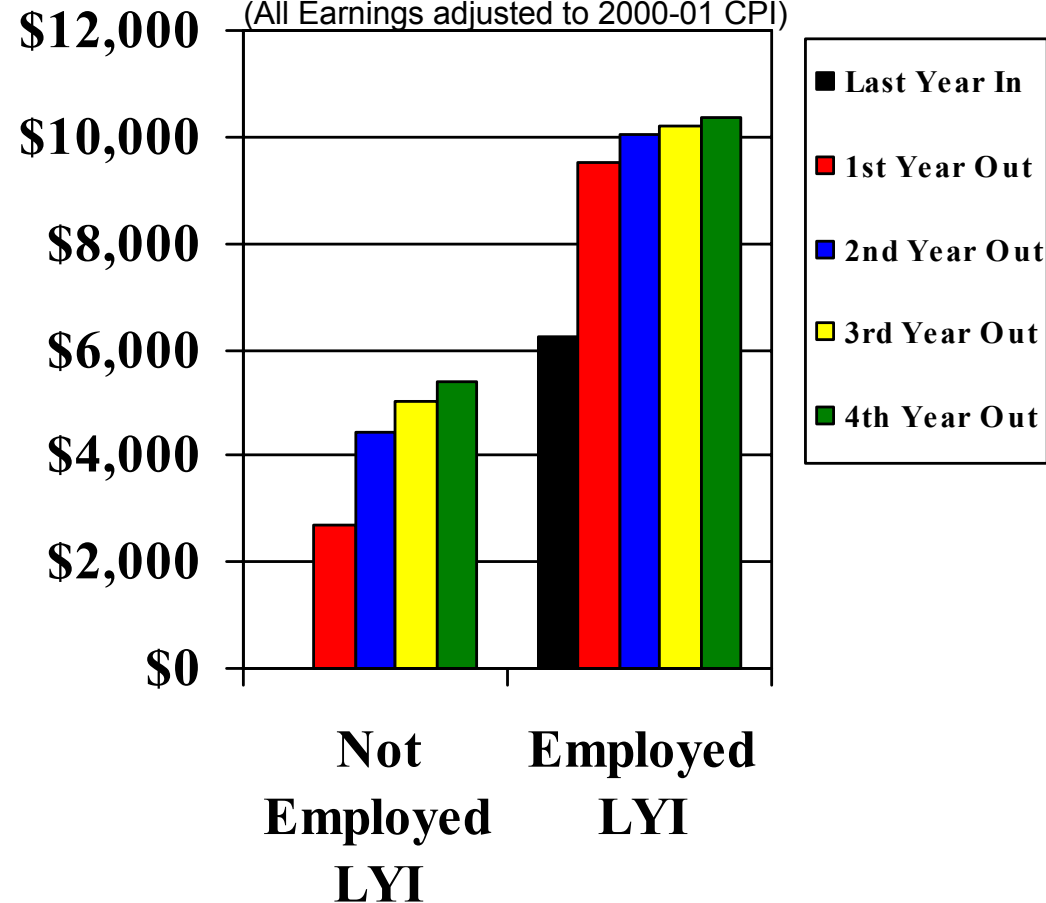
Matching on education, working CW students earn more after exit.

However working CW students have lower educational attainment overall.

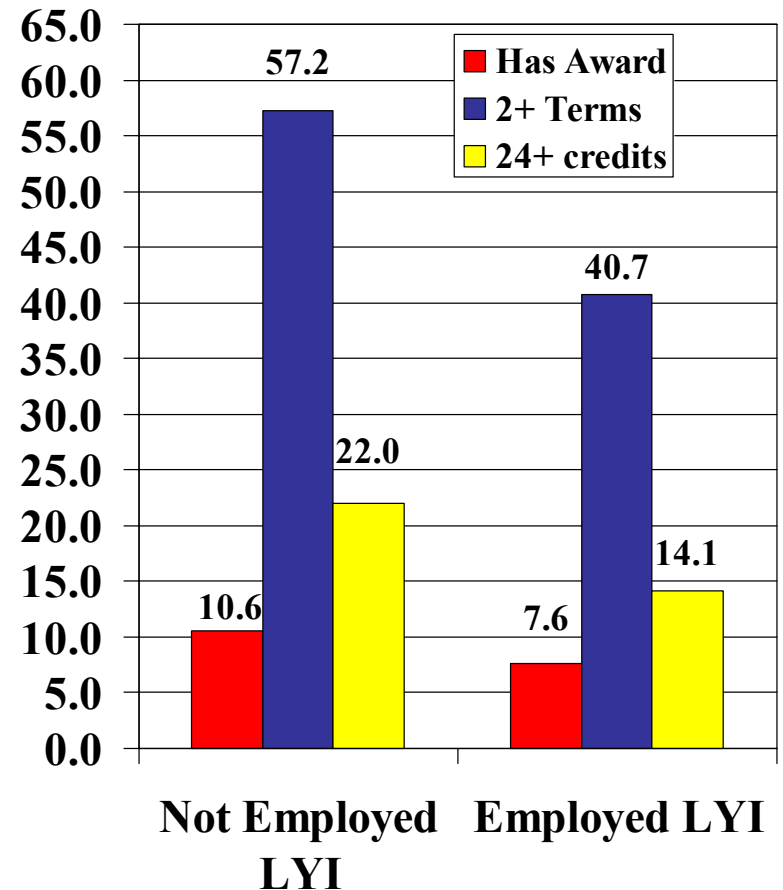
Post-College Earnings

Among All CW Students

(All Earnings adjusted to 2000-01 CPI)



Educational Attainment



Does Work/School Mix Pay for Non-CW?

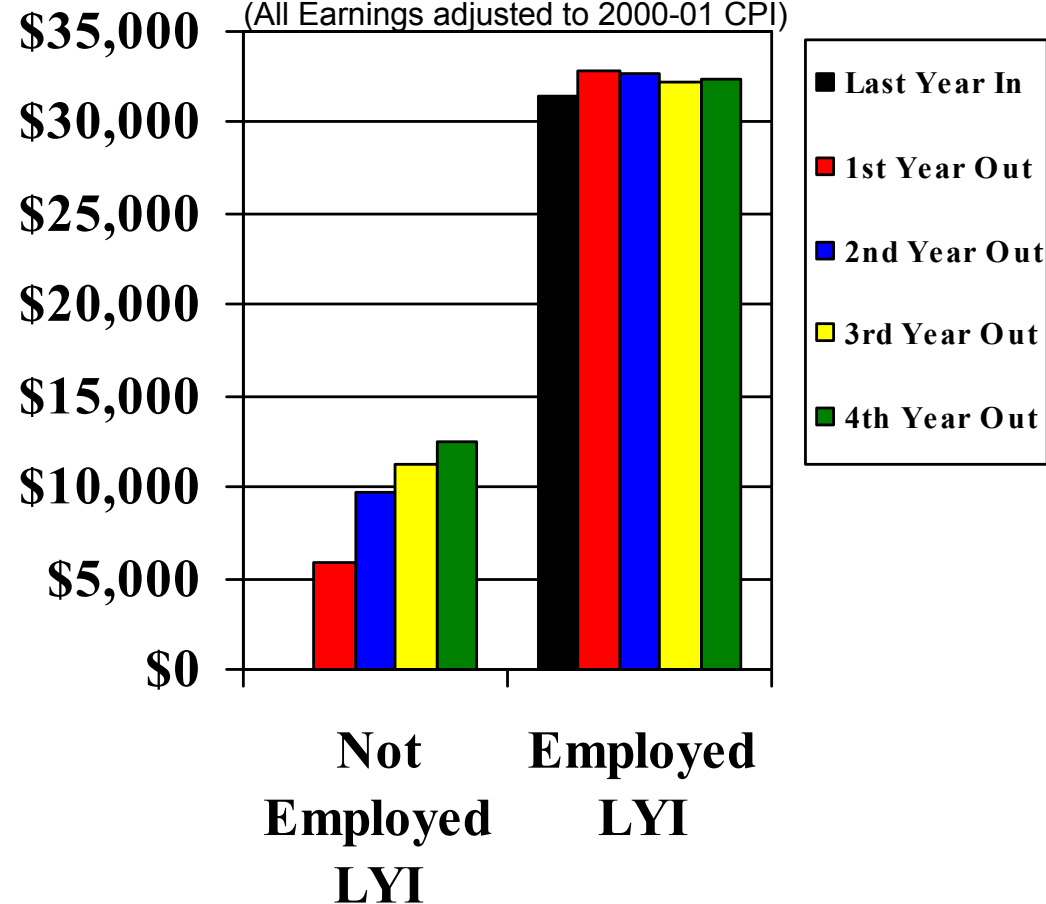
Educational and Economic Outcomes by In-School Employment

Similar Results for the Non-CW Population as for CW

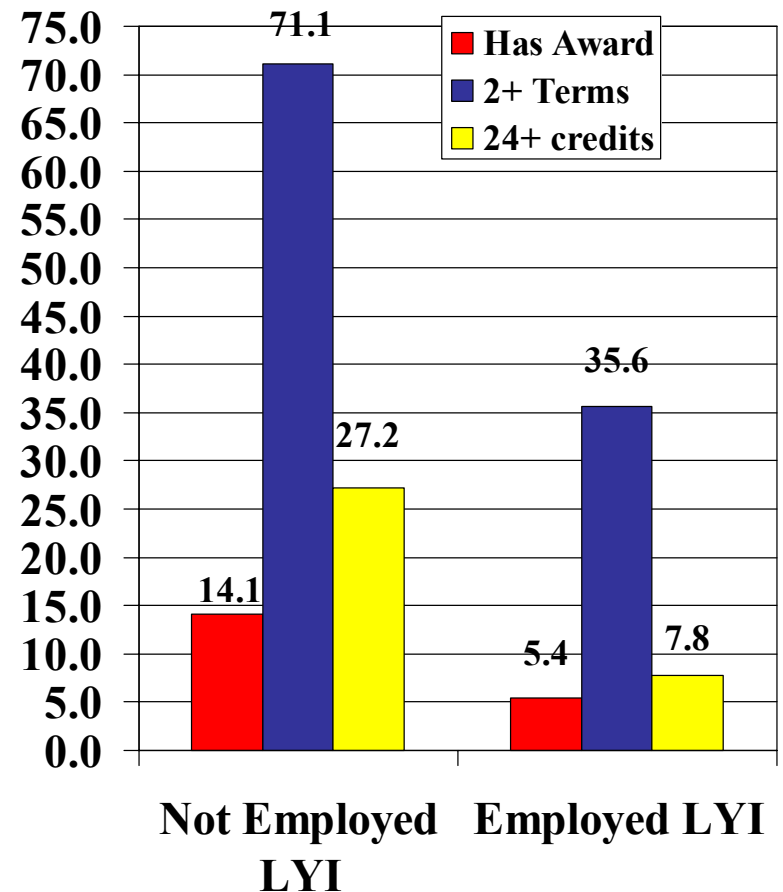
Post-College Earnings

Among All NCW Students

(All Earnings adjusted to 2000-01 CPI)



Educational Attainment



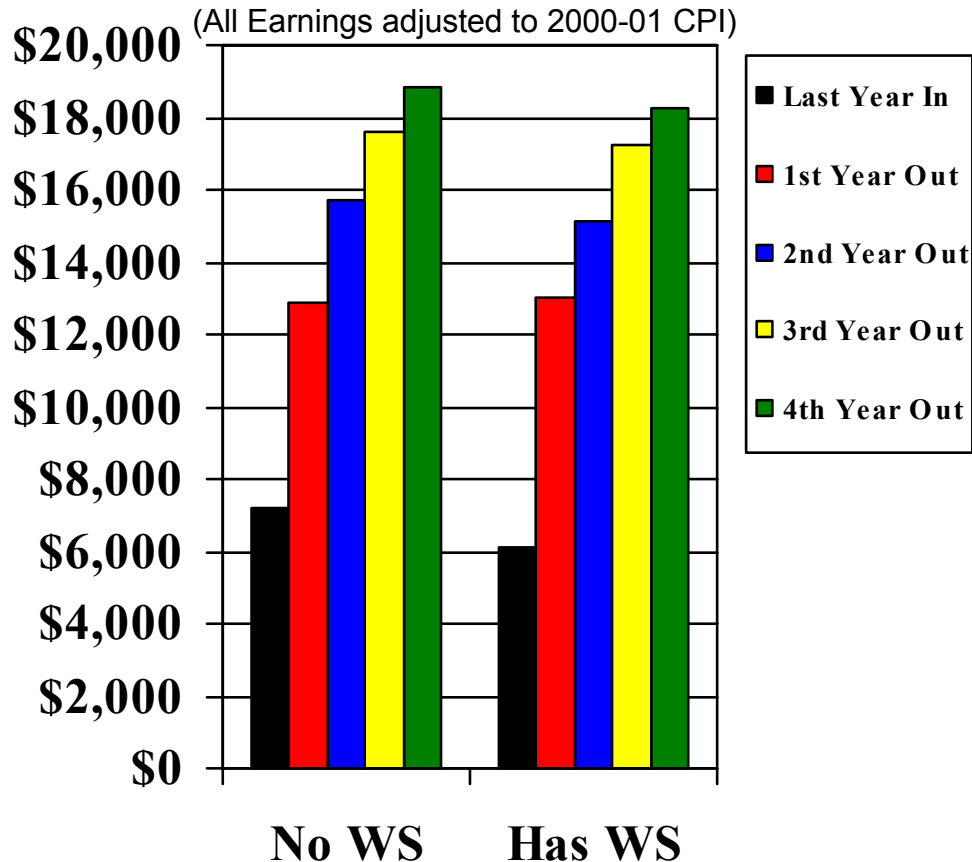
Does Work Study Help Employed CW Students?

Educational and Economic Outcomes by Work Study Status

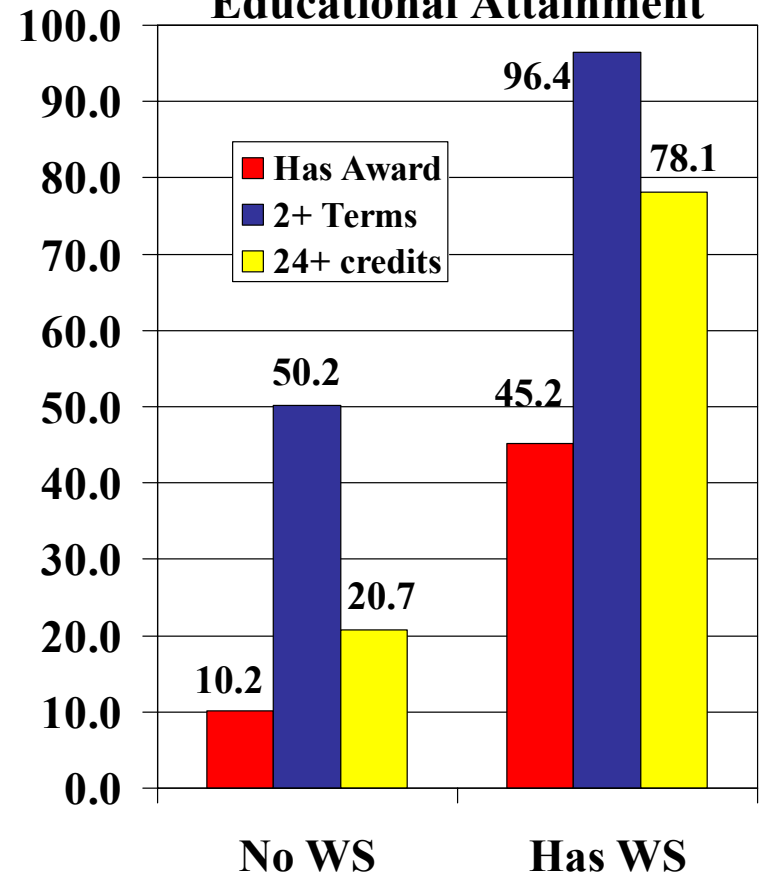
If education equal, Work Study in itself no large effect on earnings. However, WS students have higher educational attainment overall.

CW students that receive WS spend more terms in college, have a higher number credits completed, and are more likely to earn awards than CW students who are employed but that do not receive WS.

Post-College Earnings Among Employed



Educational Attainment



Does Work Study Help Employed NCW Students?

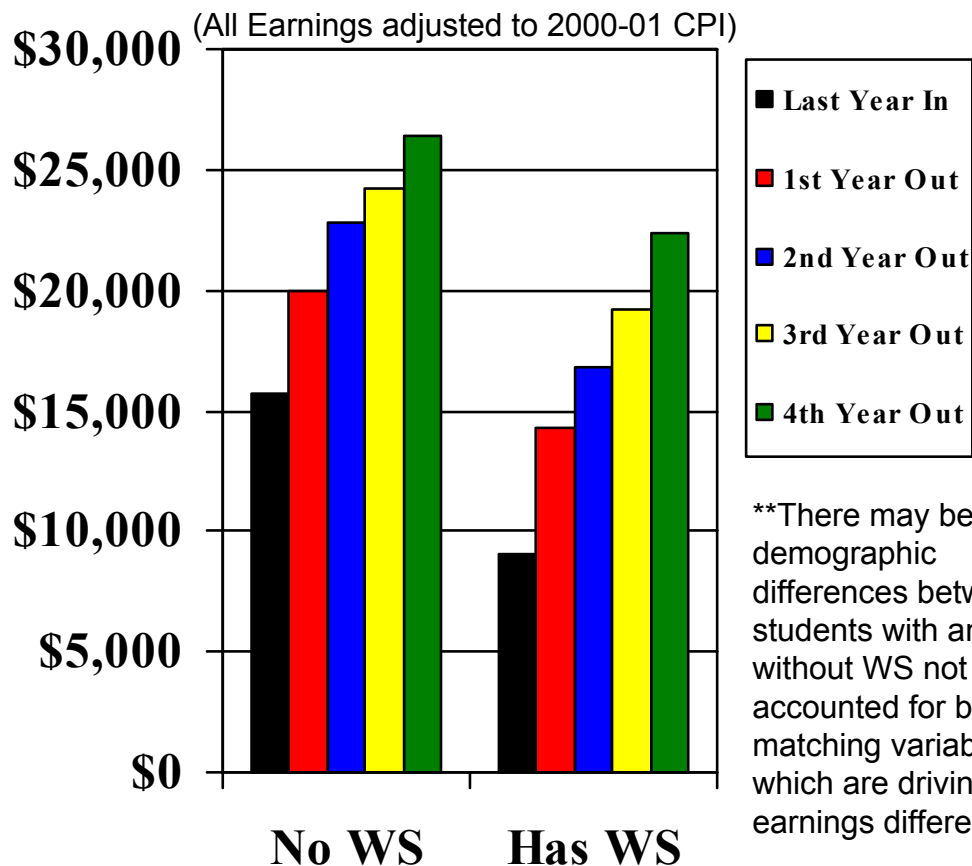
Educational and Economic Outcomes by Work Study Status

If education equal, WS has apparent negative effect on earnings.

WS students have higher educational attainment overall.

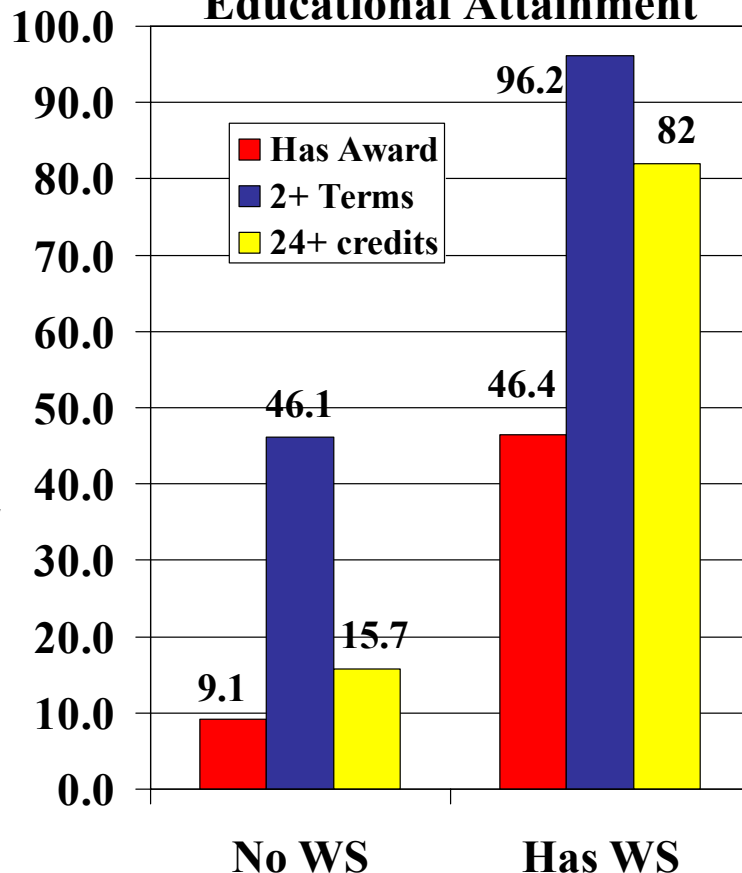
NCW students that receive WS spend more terms in college, have a higher number credits completed, and are more likely to earn awards than NCW students who are employed but that do not receive WS.

Post-College Earnings Among Employed



**There may be other demographic differences between students with and without WS not accounted for by matching variables which are driving the earnings differences.

Educational Attainment



Report 3 – Financial Aid Utilization & Impact

Policy Implications –Financial Aid Impact

✓ Encourage Financial Aid Application:

- Students who receive aid are more likely to get longer awards.
- Educate CW students about benefits of financial aid.
- Support CW students through the application process.
- Look at interaction between financial aid and CalWORKs grant – make sure financial aid won't impact eligibility for CalWORKs.
- Aim for 100% participation.

✓ Increase Work Study Funding and Participation:

- Work Study is associated with greater coursework and award completion.
- Provide more Work Study opportunities to CW students!

Future Research



- Use longer time period to see whether trends we are seeing continue.
- Add more cohorts to enlarge sample size to accommodate more detailed analysis.
- Try to get a sample of CalWORKs non-community college students to compare outcomes of CalWORKs students to.
- Explore doing a systematic CalWORKs program evaluation using new CalWORKs MIS data elements.
- Try to identify differences in regions or colleges.

Thank-You!

**Much thanks to the generous staff at the California Community Colleges
Chancellor's Office who have helped make this research project possible:**

Linda Michalowski & Sarah Tyson

Sonia Ortiz-Mercado

Patricia Servin-Lemus

Debbie Velasquez & Melony Ripke

Myrna Huffman & Tonia Lu

Willard Hom & Alice van Ommeren

Chuck Wiseley

Ed Connolly

Judy Reichle & Patrick Conklin

CalWORKs Advisory Committee & the CalWORKs Association