



Advancing the Global IT Industry

# CompTIA and Illinois Industry Certification Data Sharing Pilot Project

January, 2013 Presenters

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Advancing the Global IT Industry

# CompTIA and Illinois Industry Certification Data Sharing Pilot Collaborators

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Illinois Community College Board – Scott Parke, Karen Anderson,  
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Illinois Department of Commerce and Economic Opportunity –  
Jason Tyszko & Bob Sheets

Illinois State Board of Education – Mark Williams & Carol Brooks

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# Perkins 2006 Re-Authorization & Its Implications

- **New focus on:**
  - Accountability.
  - Industry Certifications.
    - Preparation for employment in high demand occupations.
    - Validation of demand-driven skill sets.
    - Embedding Industry Certifications into Programs of Study.
- **Creates need for data sharing.**
  - State Departments of Education.
  - Industry Certification Providers.

# Industry Certification Data Sharing

- **Critical Issues:**
  - Privacy issues — between certifying bodies & exam-takers.
  - Legal issues — sharing students’ performance data without their express permission.
  - Authorization issues — high school students who are minors require parents’ authorization/permission.
- **Challenges:**
  - States’ laws vary regarding age & “adult” status.
  - Level of states’ reporting requirements—aggregate or individual student level.
  - Capturing student data for accurate & unique identification.

# Data Sharing Pilot: Tackling the Legal Issues

- **FERPA – Provides exception for organizations conducting studies for or on behalf of an educational agency or institution provided:**
  - Stipulate by agreement that no personally identifiable information is disclosed outside of the purposes of the study, or of the organization.
  - All information be destroyed after conclusion of the study.
  - Receive an indemnity from the State relating to these disclosures.
- **Both parties signed agreement as described.**

# CompTIA's Shared Data Sets

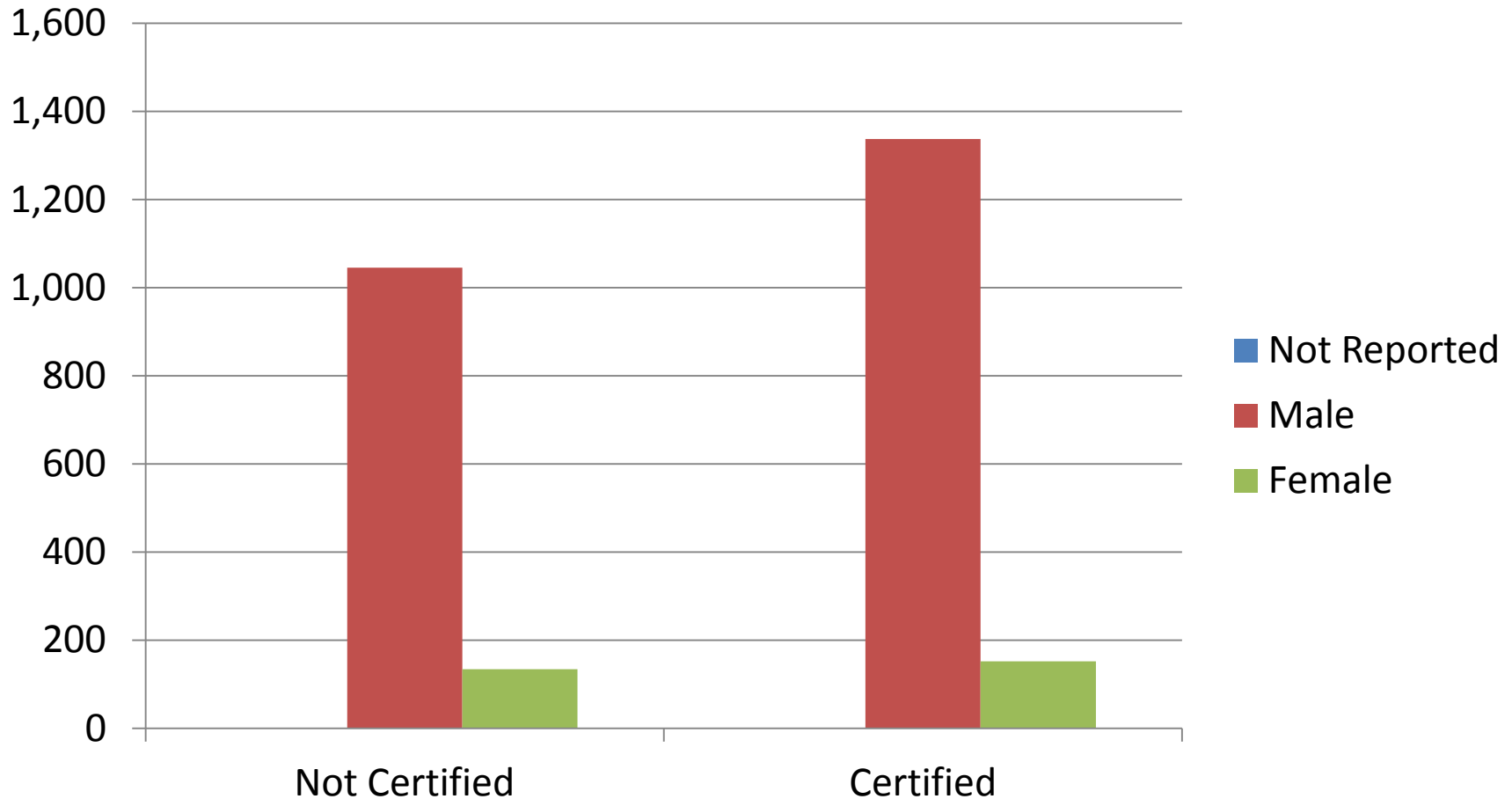
- **State of Illinois exam takers.**
- **Candidates who “opted in” to share information.**
- **Data elements:**
  - 1/1/2005 to 12/31/2010.
  - 3,412 records provided.
  - 1,825 Certified:
    - A+ (2 part) – 1,118.
    - Network+ - 376.
    - Security+ - 261.
    - Project+ - 55.
    - Misc – 14.
  - 1,587 Not Certified.

# Data Matching Protocol

- **Limited test taker identifying variables available in data set:**
- **First Name, Last Name.**
- **Geographic coding – Zip Code.**
- **Preferred approach – First Name, Last Name, SSN, Date of Birth, Geographic Code(s), and Gender.**
- **Illinois Community College Board:**
  - All credit students from fiscal years 2006-2010 (A1).
  - 48 colleges with approximately 750,000 records per year.
- **CompTIA:**
  - 1/1/2005 to 12/31/2010.
  - 3,412 records provided.

# CompTIA Overall Certification Results

## Gender of Tested Students in the Illinois Community College System

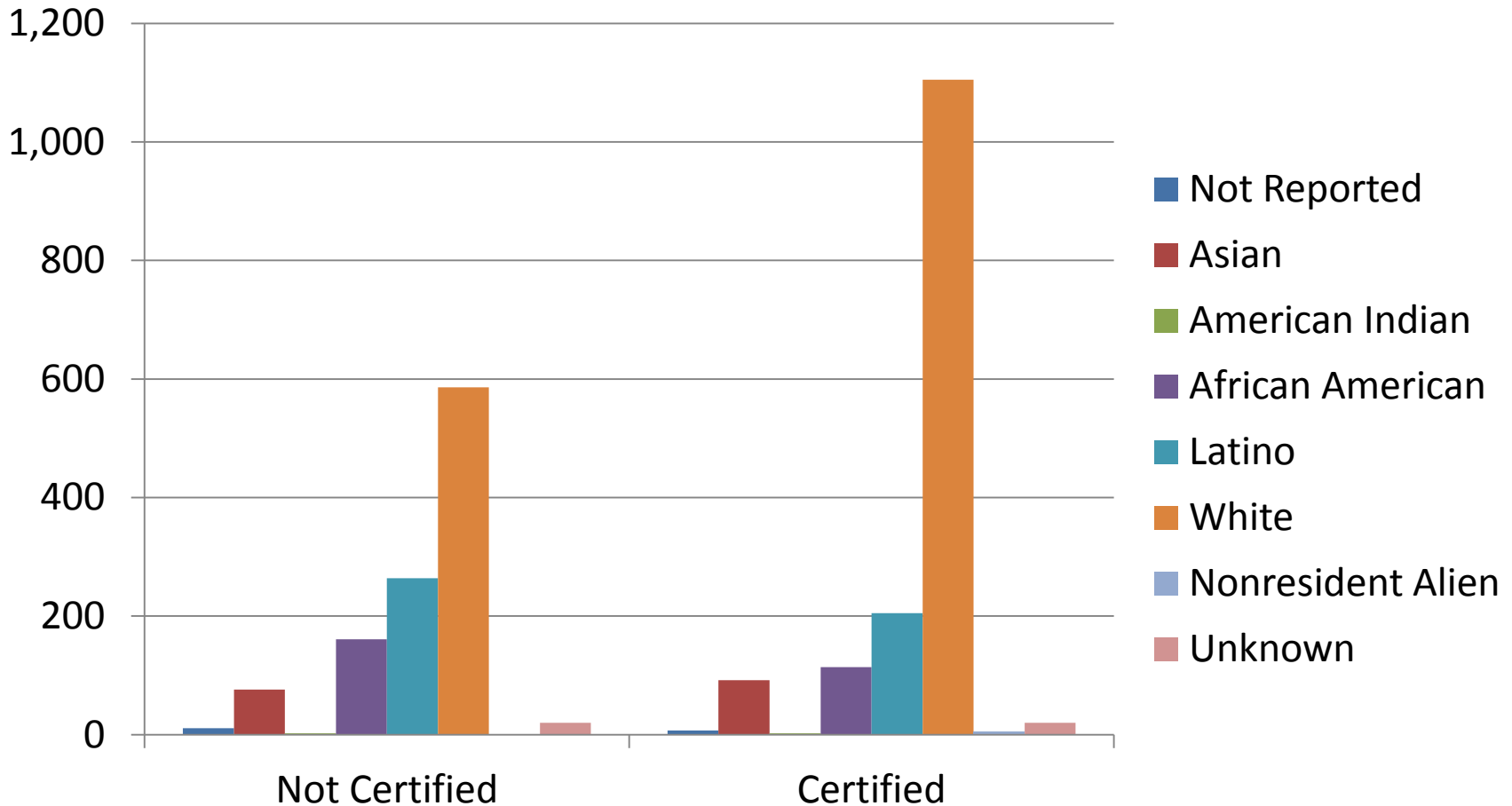


Source of Data: CompTIA and Illinois Community College Board (A1) 2006-2010



# Comp TIA Overall Certification Results

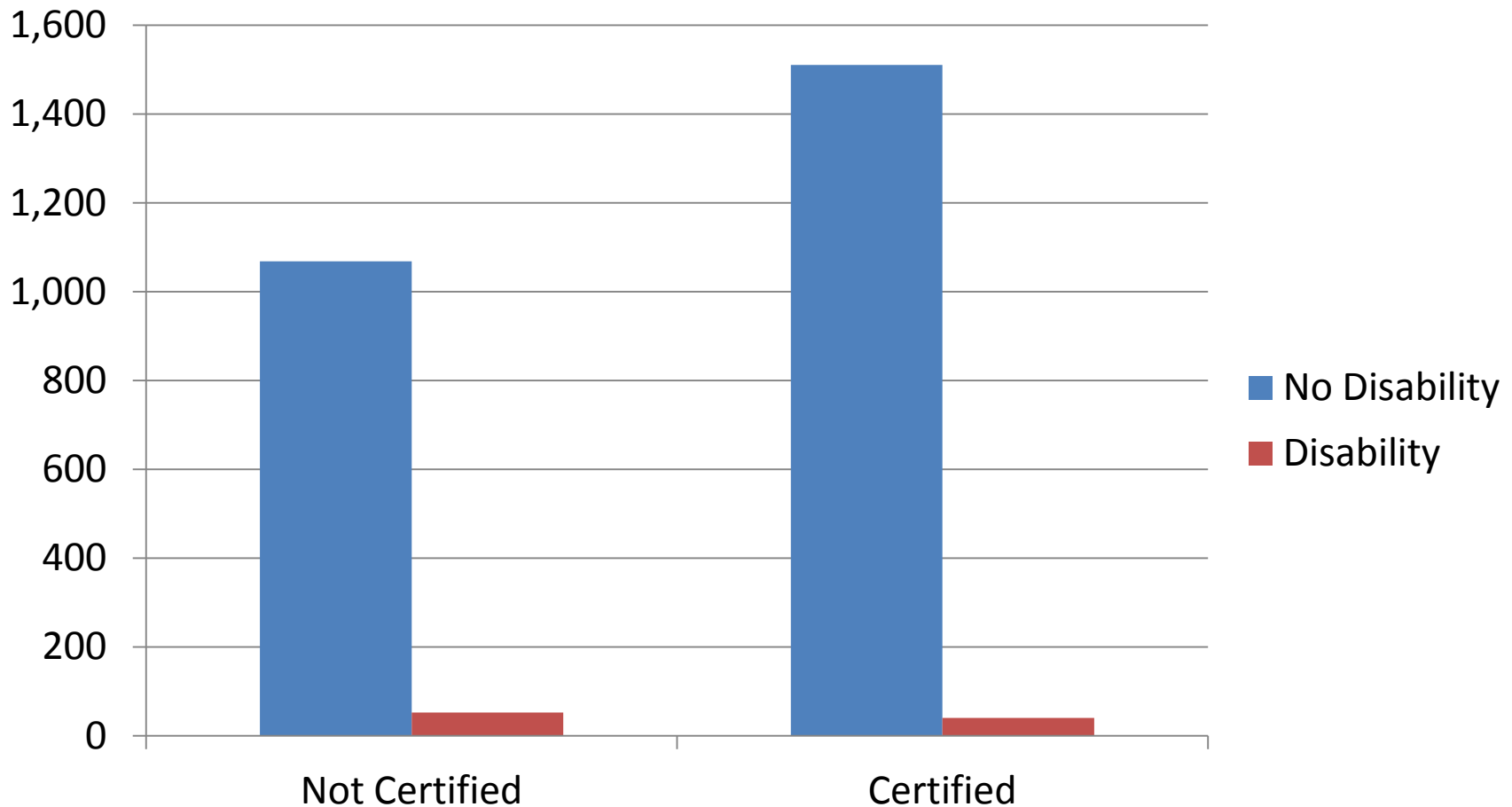
## Race/Ethnicity of Tested Students in the Illinois Community College System



Source of Data: CompTIA and Illinois Community College Board (A1) 2006-2010

# CompTIA Overall Certification Results

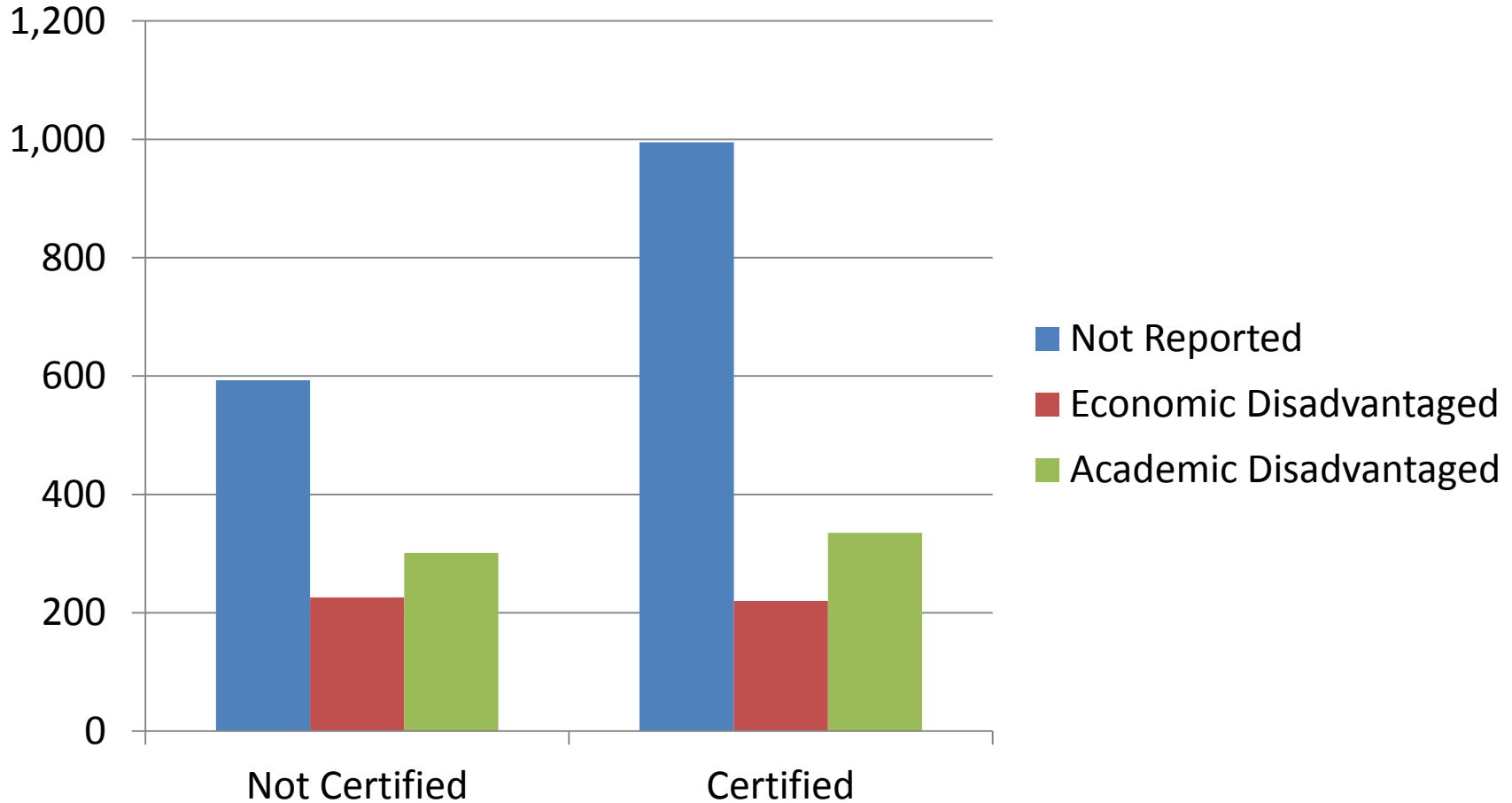
## Disability Status of Tested Students in the Illinois Community College System



Source of Data: CompTIA and Illinois Community College Board (A1) 2006-2010

# CompTIA Overall Certification Results

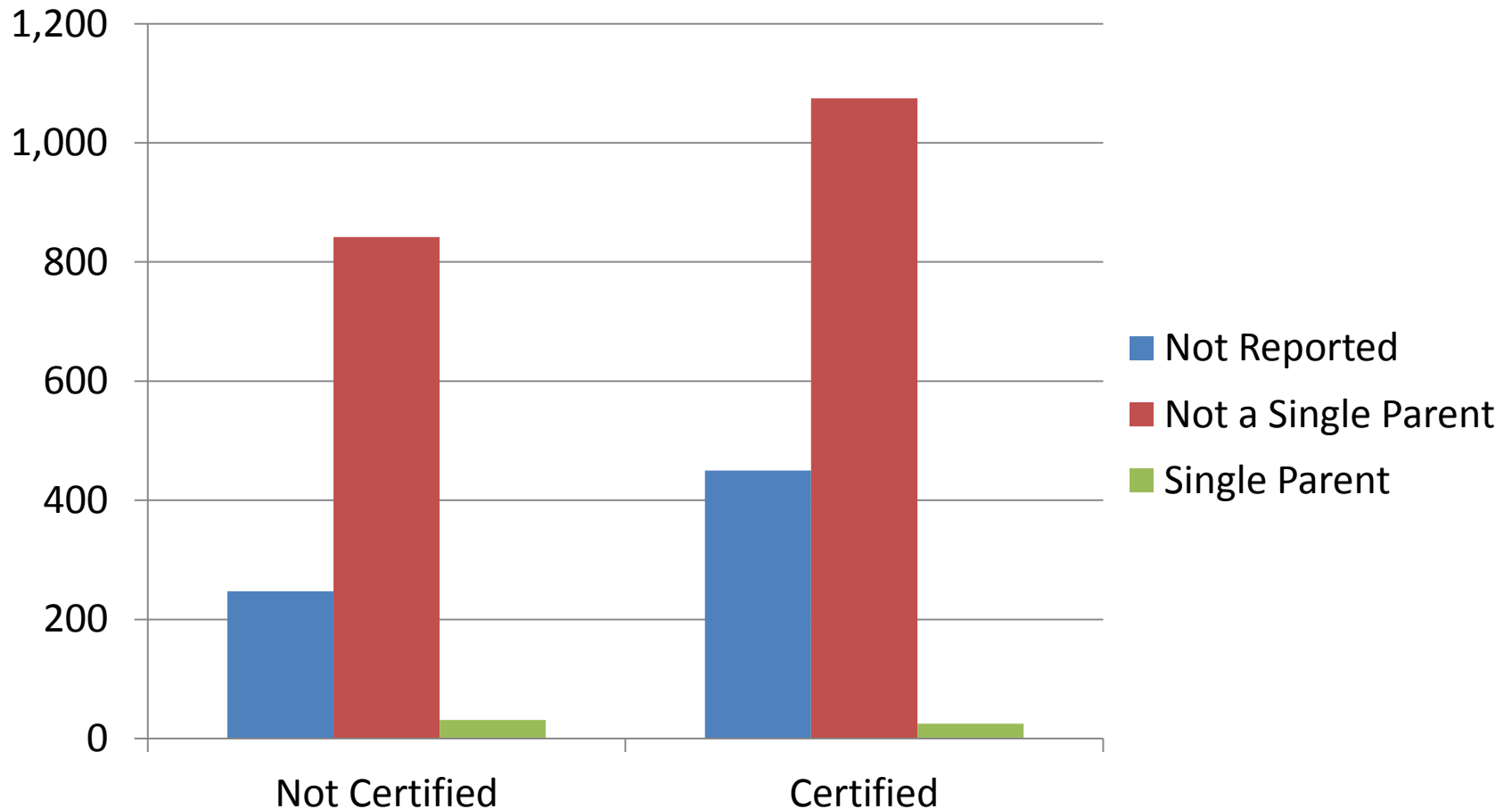
## Disadvantaged Status of Tested Students in the Illinois Community College System



Source of Data: CompTIA and Illinois Community College Board (A1) 2006-2010

# CompTIA Overall Certification Results

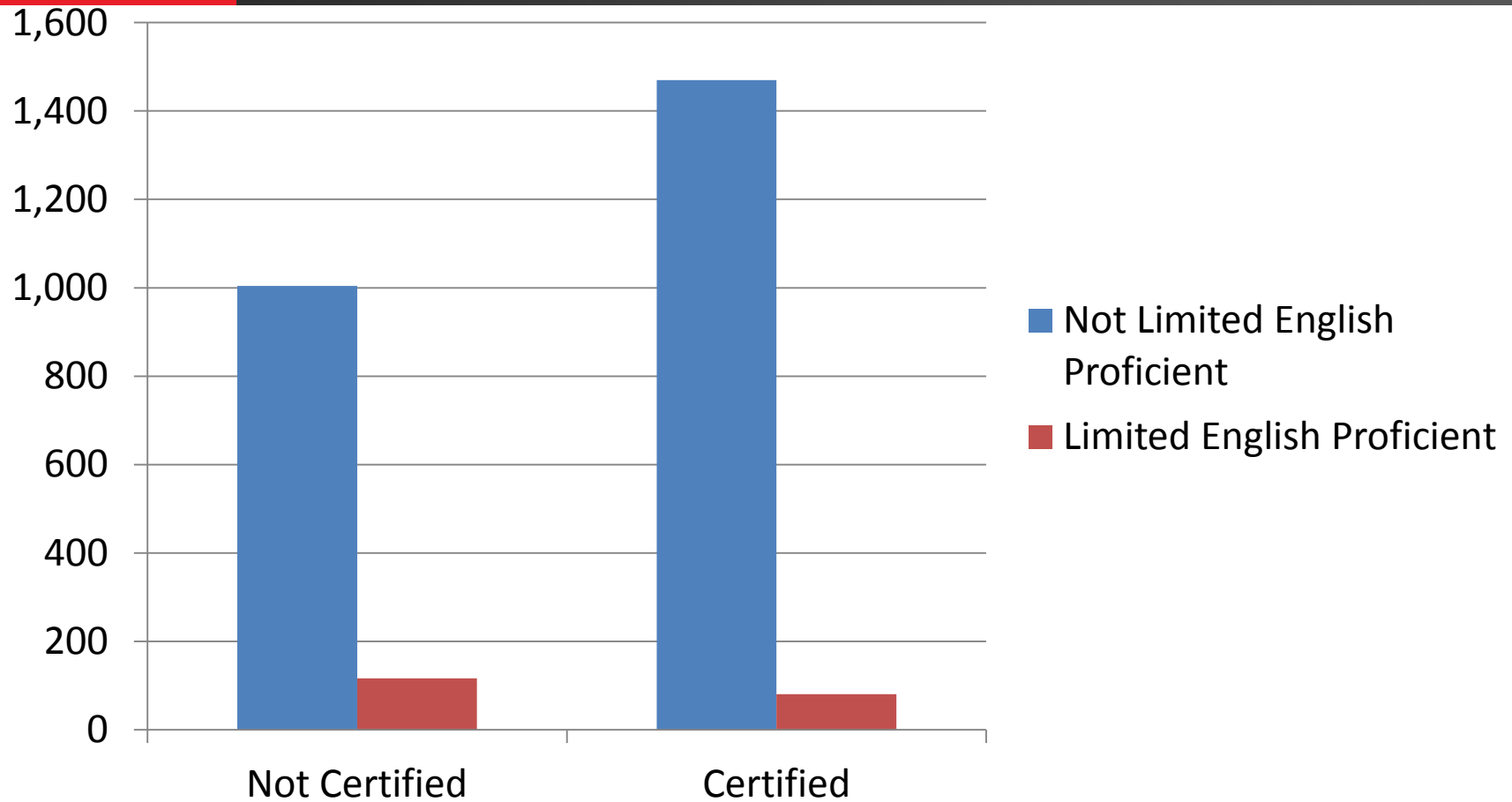
## Single Parent Status of Tested Students in the Illinois Community College System



Source of Data: CompTIA and Illinois Community College Board (A1) 2006-2010

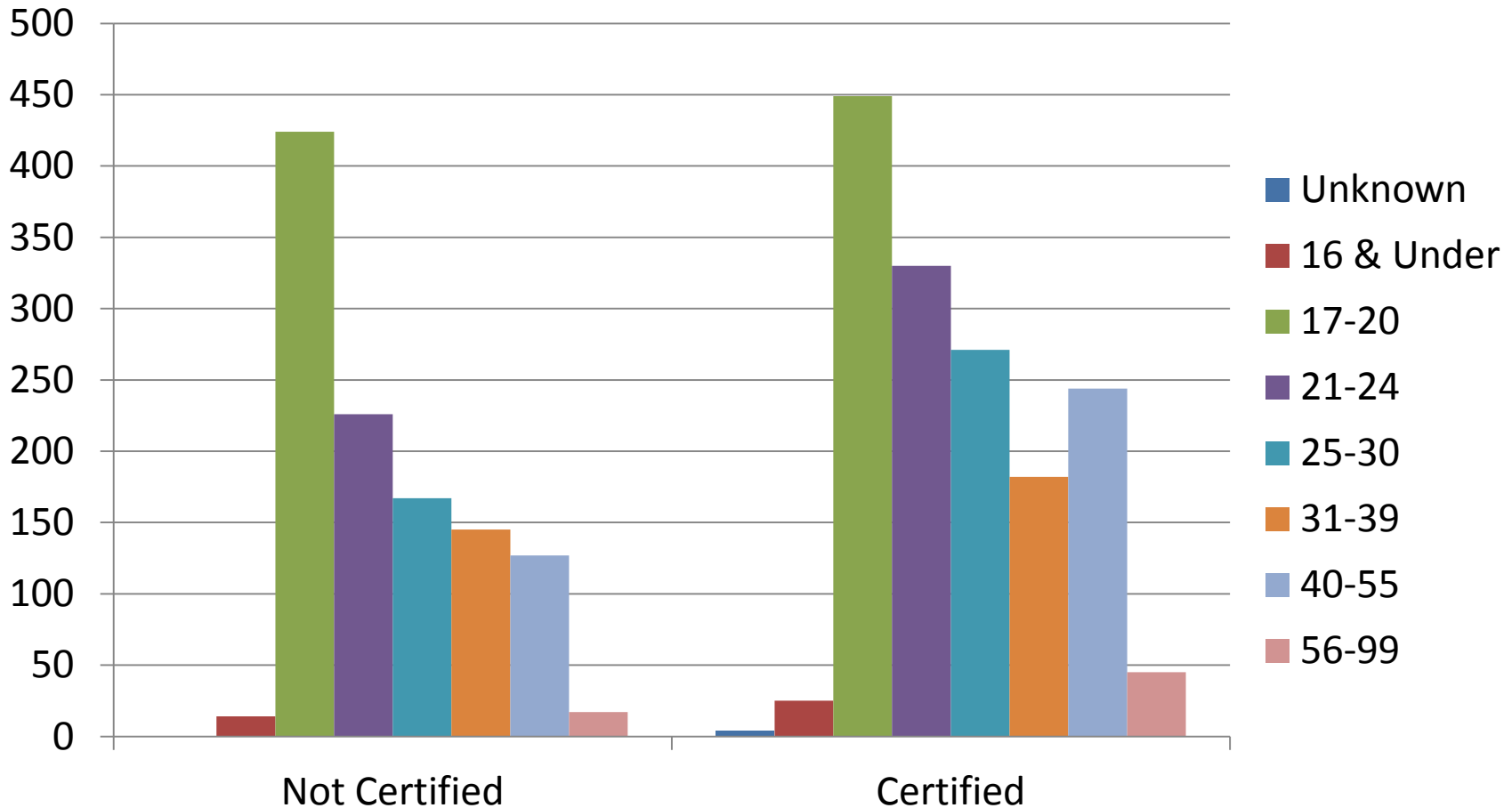
# CompTIA Overall Certification Results

## Limited English Proficient Status of Tested Students in the IL Community College System



Source of Data: CompTIA and Illinois Community College Board (A1) 2006-2010

# CompTIA Overall Certification Results Age by Range of Tested Students in the Illinois Community College System



Source of Data: CompTIA and Illinois Community College Board (A1) 2006-2010

# CompTIA Overall Certification Results

## Top 10 Majors of Tested Students in the Illinois Community College System

### NOT CERTIFIED

Program	2-digit CIP	N
Liberal Arts & Sciences, General Studies & Humanities	24	445
Computer & Information Sciences & Support Services	11	153
Basic Skills & Developmental Education	32	132
Multi/Interdisciplinary Studies	30	86
Mechanics & Repair Technologies	47	86
Business, Management, Marketing, & Related Supportive Services	52	61
Engineering Technologies & Engineering-Related Fields	15	36
Homeland Security, Law Enforcement, Firefighting & Related Protective Services	43	26
Engineering	14	22
Health Professions & Related Programs	51	22

### CERTIFIED

Program	2-digit CIP	N
Liberal Arts & Sciences, General Studies & Humanities	24	492
Computer & Information Sciences & Support Services	11	292
Mechanics & Repair Technologies	47	159
Multi/Interdisciplinary Studies	30	157
Basic Skills & Developmental Education	32	136
Business, Management, Marketing, & Related Supportive Services	52	88
Engineering Technologies & Engineering-Related Fields	15	76
Personal Awareness & Self-Improvement	37	34
Homeland Security, Law Enforcement, Firefighting & Related Protective Services	43	32
Health Professions & Related Programs	51	27

# CompTIA Overall Certification Results

## Top 10 Majors of Tested Students in the Illinois Community College System

### NOT CERTIFIED

Program	4-digit CIP	N
Liberal Arts & Sciences, General Studies & Humanities	2401	445
Basic Skills & Developmental Education	3201	132
Biological & Physical Sciences	3001	86
Electrical/Electronics Maintenance Repair Technologies	4701	73
Computer Systems Networking & Telecommunications	1109	46
Computer Programming	1102	31
Business, Management, Marketing, & Related Supportive Services, Other	5299	26
Computer & Information Sciences, General	1101	23
Engineering, General	1401	22
Information Sciences/Studies	1104	20

### CERTIFIED

Program	4-digit CIP	N
Liberal Arts & Sciences, General Studies & Humanities	2401	492
Biological & Physical Sciences	3001	157
Electrical/Electronics Maintenance Repair Technologies	4701	146
Basic Skills & Developmental Education	3201	136
Computer Systems Networking & Telecommunications	1109	111
Computer Programming	1102	55
Computer/Information Technology Administration & Management	1110	55
Business, Management, Marketing, & Related Supportive Services, Other	5299	43
Engineering Technologies, Other	1599	37
Personal Awareness & Self-Improvement	3701	34



# CompTIA Overall Certification Results

## Top 10 Majors of Tested Students in the Illinois Community College System

### NOT CERTIFIED

Program	6-digit CIP	N
Liberal Arts & Sciences/ Liberal Studies	240101	238
Pre-baccalaureate/ Transfer Course Enrollees	240104	109
General Studies	240102	98
Biological & Physical Sciences	300101	86
Computer Installation & Repair Technology	470104	62
Computer Systems Networking & Telecommunications	110901	46
Beginning ESL	320140	38
Computer Programming, General	110201	26
Business, Management, Marketing, & Related Supportive Services, Other	529999	26
Information Technology	110103	23

### CERTIFIED

Program	6-digit CIP	N
Liberal Arts & Sciences/ Liberal Studies	240101	242
Pre-baccalaureate/ Transfer Course Enrollees	240104	164
Biological & Physical Sciences	300101	157
Computer Installation & Repair Technology	470104	139
Computer Systems Networking & Telecommunications	110901	111
General Studies	240102	86
Business, Management, Marketing, & Related Supportive Services, Other	529999	43
Beginning ESL	320140	37
Engineering Technology & Engineering Related Fields, Other	159999	37
Computer Programming, General	110201	35

# Employment & Median Earnings

Outcomes tracked using Unemployment Insurance Wage Records and Student Identifiers acquired from ICCB education records.

Certified: 814 IDs	Not Certified: 574 IDs
Exam Quarter Employment	
Certified: 58% Employed	Not Certified: 55% Employed

Exam Quarter Median Earnings	
Certified: \$4,371/Quarter	Not Certified: \$3,284/Quarter
Exam quarter Median Earnings were <b><u>\$1,087 higher for certified students.</u></b>	

# Employment & Average Earnings

Certified: 814 IDs	Not Certified: 574 IDs
Exam Quarter Employment	
Certified: \$6,713/Quarter	Not Certified: \$5,149/Quarter
Exam quarter Average Earnings were <b><u>\$1,534 higher for certified students.</u></b>	

# Employment & Median Earnings: 3<sup>rd</sup> Post Exam Quarter Results

**Certified: 814 IDs**

**Not Certified: 574 IDs**

## 3<sup>rd</sup> Post Exam Quarter Employment

Certified: 61% Employed

Not Certified: 57% Employed

## 3<sup>rd</sup> Post Exam Median Earning

Certified: \$5,302/Quarter

Not Certified: \$3,603/Quarter

3<sup>rd</sup> post exam Median Earnings were **\$1,699 greater for certified students.**

# Employment & Average Earnings: 3<sup>rd</sup> Post Exam Quarter Results

Certified: 814 SSNs	Not Certified: 574 SSNs
3 <sup>rd</sup> Post Exam <u>Average</u> Earnings	
Certified: \$7,537/Quarter	Not Certified: \$5,288/Quarter
3 <sup>rd</sup> Post Exam Average Earnings were <b><u>\$2,249 greater for certified students.</u></b>	

Average Earnings Gains: 3 <sup>rd</sup> Post Exam vs. Exam Quarter	
Certified: +12.3%	Not Certified: +2.7%

# Recap of Employment and Earnings Across Observation Periods

- **Certified students had slightly higher employment rates.**
- **Certified students had substantially higher earnings.**
  - About 1/3 higher in the exam quarter.
  - Almost 1 ½ times higher by the 3<sup>rd</sup> post exam quarter.
- **Certified students had better outcomes to begin with and the gap was widening with the passage of time.**

# Opportunities to Explore Employment and Earnings in Greater Depth Exist

- **Control for the characteristics of the certified vs. not certified students.**
- **Look at employment and earnings for sub-populations.**
- **Lengthen the observation period to see if the advantage for certified students continues or increases further.**
- **Look at the marketplace value of specific certifications.**
- **The earnings findings of the pilot should encourage additional interest in the initiative from certifying organizations as certified students demonstrated very positive workforce outcomes.**

# Win-Win -- CompTIA

- **Proof of Concept.**
  - Overcoming legal obstacles.
- **Additional information about the characteristics of both test takers and those who are certified.**
  - Demographics.
  - Special populations.
  - Major program areas.
  - Employment and earnings.
  - Statewide and by provider.
- **Collaborating to identify potential strategies for enhancing match rates.**



# Win-Win – Community Colleges

- **Opportunity to collaborate with a recognized industry leader.**
- **Quality independent 3<sup>rd</sup> party assessment of skill attainment.**
- **Ability to compare characteristics, employment and earnings of test takers and those certified.**
- **Broad comparative passage rate counts available for non-community college providers.**
- **Replication of the project would allow community colleges to gauge progress over time.**
- **Matching protocol optimized using available data.**

# Potential Enhancements to Matching

- Approach should be minimally intrusive.
- Goal: Avoid alienating customers while enhancing the quality of the administrative data match.
- Preferred Approach: First Name, Last Name, SSN, Date of Birth, Geographic Code(s), and Gender.
- Currently Available: First Name, Last Name, and Geographic Code.
- Minimally Intrusive Additional Data Elements: Date of Birth (MM\DD\YYYY) and Gender.

# Making Further Progress

- **Partners formed Certification Data Exchange Project & Advisory Group.** [https://www.acteonline.org/certification\\_data\\_exchange\\_project/](https://www.acteonline.org/certification_data_exchange_project/)
- **Created Multi-year Roadmap to develop a National Third Party Certification Data Exchange Clearinghouse.**
- **Raising awareness and gaining consensus on need.**
- **Conducting Expanded Pilot Project – additional states – with key industry partners. Developing more use cases.**
- **Collaborating with partners to establish and refine standards and guidelines for industry data matching.**
- **Need to engage major testing vendors for target industries.**
- **Establish sustainable clearinghouse (e.g. NSC, FEDES).**



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