

# National Research Center for Career and Technical Education

## **Simulated Career Preparation Areas and Synthetic Programs of Study: Developing Outcome Measures for the High School and Postsecondary Experiences of CTE Students**

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# What is the story?

- Interest in *Career Preparation Areas* (CPS)
- CPS very much like *Programs of Study* (POS) in Perkins IV
- What can we say about POS?

# Programs of Study—defined

- New in Perkins
- Elements of other models
  - Tech Prep
  - Career Pathways
- Perkins: 4 criteria
  - Secondary to postsecondary
  - Aligned content, rigorous academics
  - Dual enrollment opportunities
  - Lead to credential, or degree (postsecondary)

# POS in practice

- Different understanding of what they are
  - Across states
  - Within districts (administrators and teachers)
- Different levels of implementation (SC)
- Role of guidance counselor

# Current studies on POS

- Studies conducted by the NRCCTE: unique in this area
  - Longitudinal in nature
  - Now in its fourth year
  - Secondary component
  - Others have looked at the secondary-postsecondary articulation exclusively

# How do POS look like?

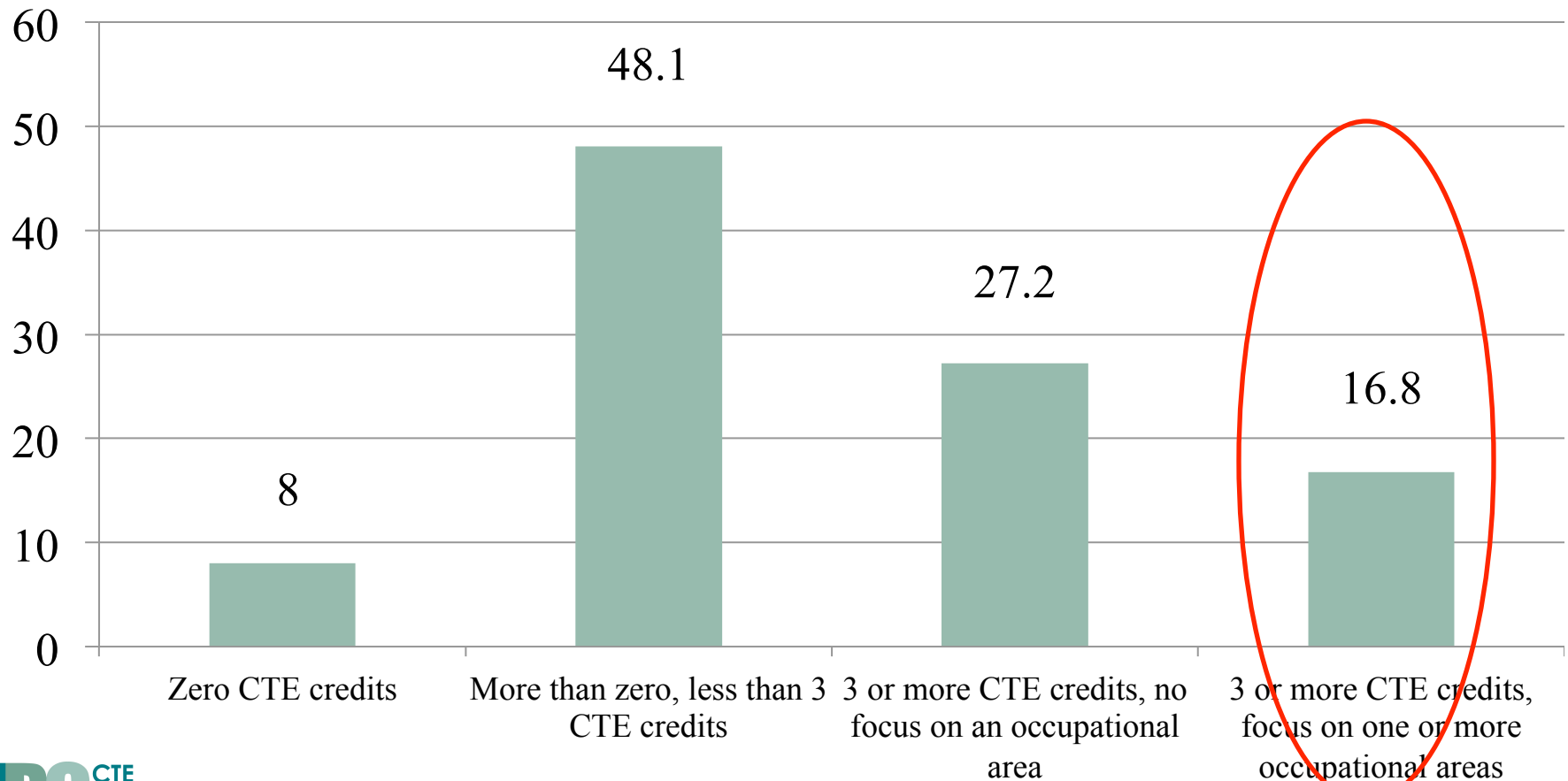
- A post-hoc reconstruction approach
  - “Simulated” or “Synthetic” POS
- Use of a national dataset
  - Educational Longitudinal Study of 2002
  - Only complete and current national dataset
  - Initial information on postsecondary experiences
- Students with secondary experience pre-Perkins IV era

# Method

- Used CTE concentrators in specific occupations
- Looked into postsecondary
- Compared to other groups
- Looked into outcomes and other information

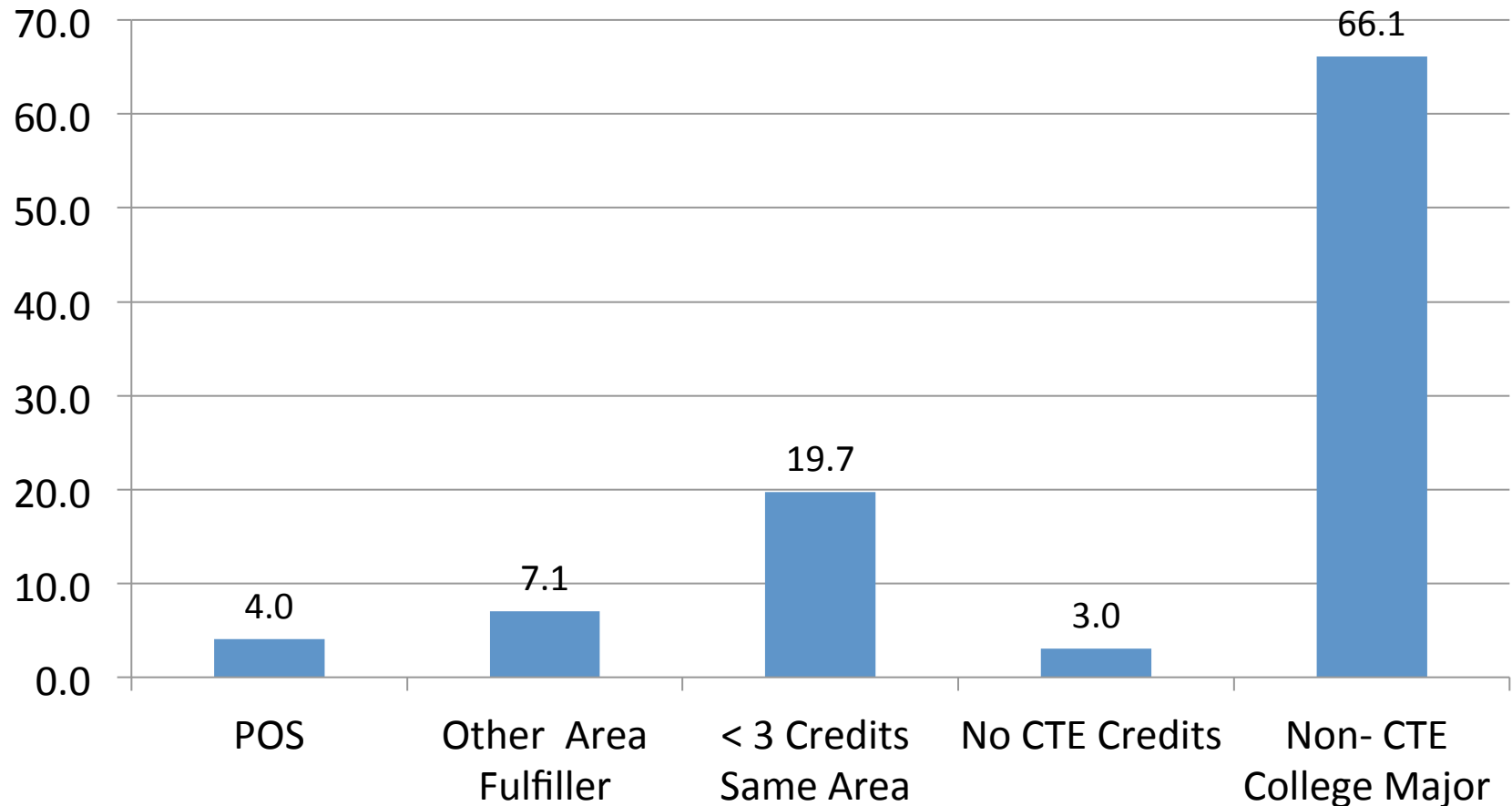
# Typology: Four Basic Categories

## NRCCTE Typology (Percentages)



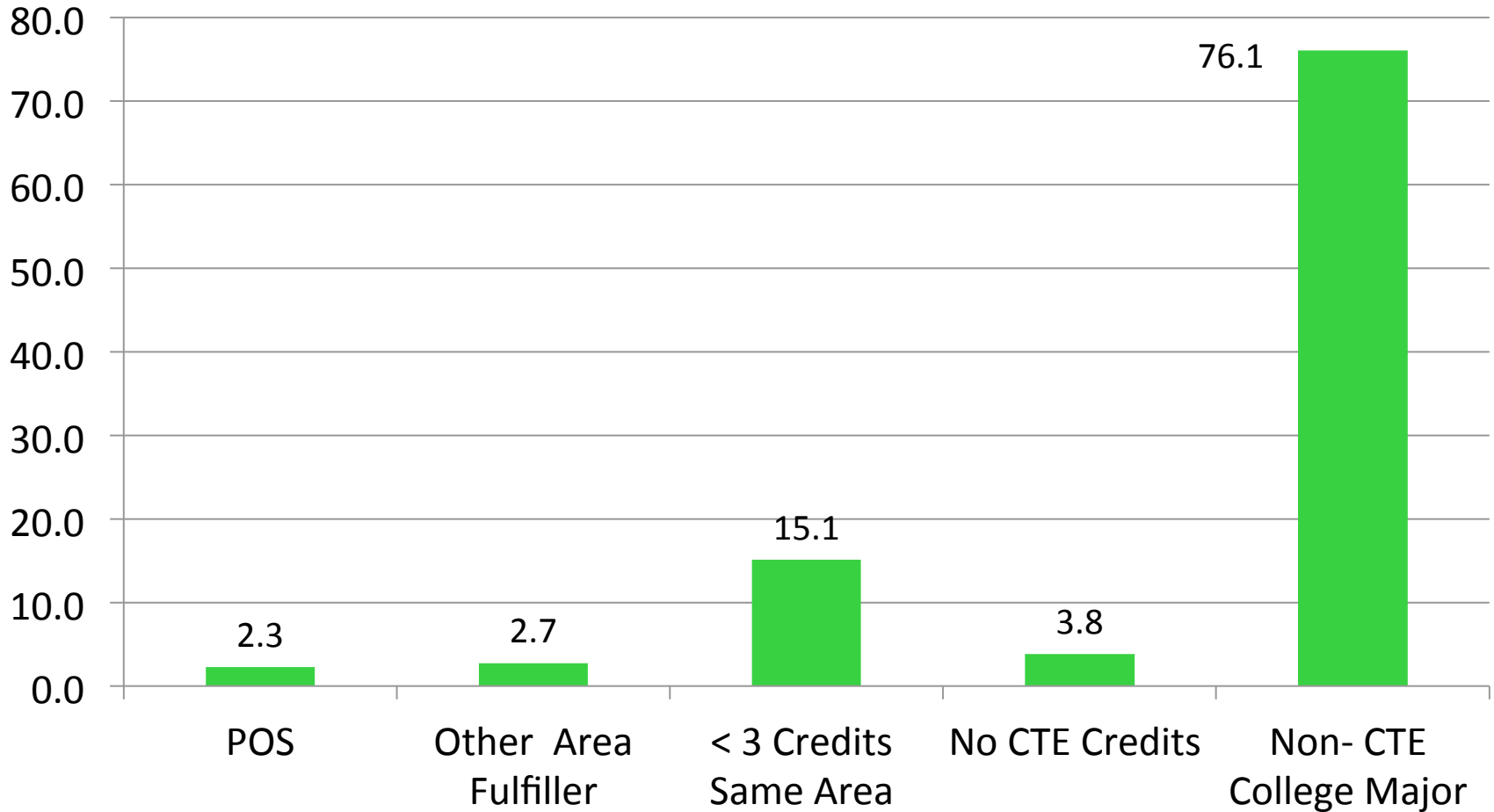


# Simulated POS—2-year college



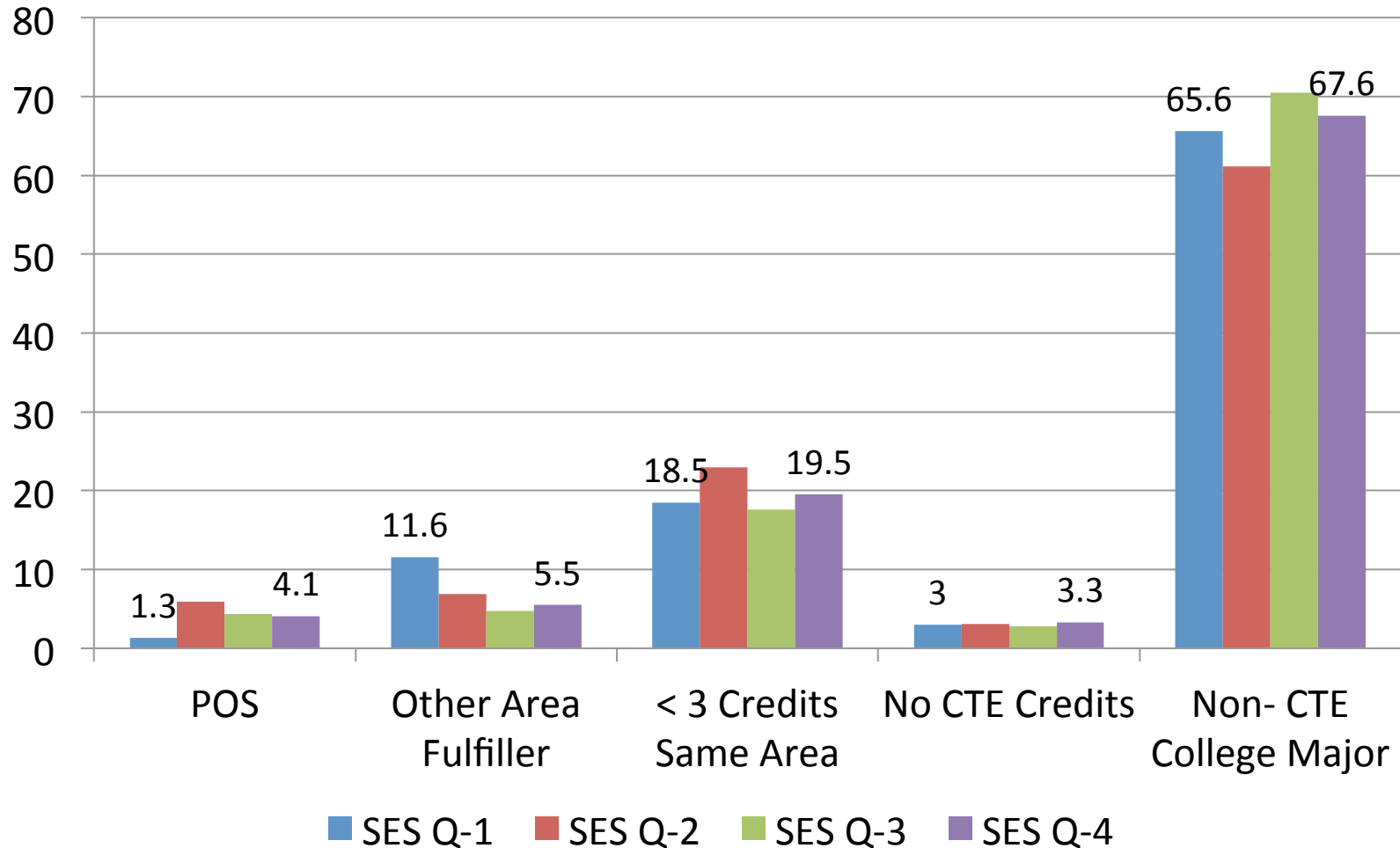
*N*=326,144

# Simulated POS—4-year college

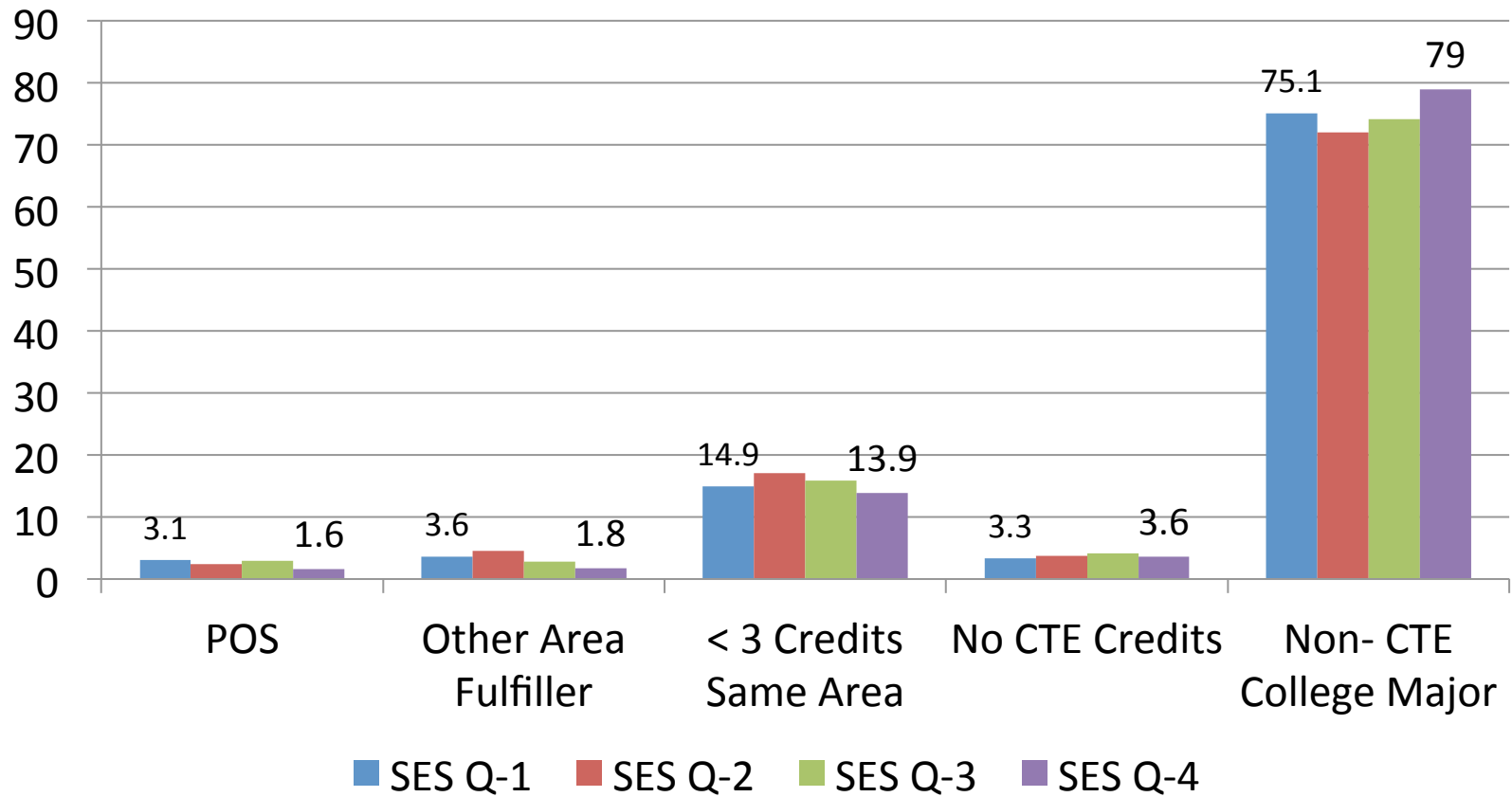


N=1,019,469

# Simulated POS—2-year college; SES



# Simulated POS—4-year college; SES



# Odds of College Enrollment: Propensity Score Matched Sample

	2-year college	4-year college
Female	1.230	1.018
Black	0.912	2.620***
Hispanic	1.465*	0.629*
Asian	1.206	1.250
Other	0.888	1.554
SES	0.874	2.694***
High School GPA	0.806*	5.709***
CTE Concentrator	1.185	0.699**

# POS-2-year college major (1)

HS Concentration(s)	College Major Area
	Agriculture (n= 302)
Public service	100.0
	Construction and Architecture (n= 3,592)
Manufacturing	59.9
Computer science	6.3
Culinary arts	12.2
Business Management	8.6
Agriculture	13.0
	Business (n= 5,669)
Engineering technologies	25.7
Manufacturing	5.5
Computer science	10.1
Culinary arts	11.7
Consumer service	16.4
Communication	28.6
Construction and Architecture	1.9

# POS-2-year college major (2)

HS Concentration(s)	College Major Area
	<b>Computer Science (n= 1,210)</b>
Culinary arts	6.9
Consumer services	26.3
Communication	16.2
	<b>Health science (n= 9,368)</b>
Marketing	10.0
Manufacturing	4.7
Computer science	4.6
Consumer services	30.6
Business Management	21.1
Communication	3.1
Communication + Consumer services	3.3
Construction and Architecture	4.9
Agriculture	15.3
Agriculture + Communication	2.3

# POS-4-year college major (1)

High School Area(s) of Concentration	College Major Area
	Agriculture (n= 3,004)
Agriculture	84.2
Agriculture + Computer science	10.9
Agriculture + Consumer service	4.9
	Business (n= 6,723)
Business management	30.3
Marketing	54.6
Business management + Marketing	3.3
Business finance	11.8
	Communication (n= 2,651)
Communication	91.7
Communication + Health science	8.3
	Computer Science (n= 4,416)
Computer Science	100.0
	Health science (n= 5,034)
Health science	100.0



# POS-4-year college major (2)

High School Area(s) of Concentration	College Major Area
	Computer Science (n= 3,079)
Engineering technologies	1.6
Marketing	8.7
Manufacturing	16.4
Business Management	24.2
Communication	35.4
Construction and Architecture	6.2
Agriculture	7.4
	Health science (n= 8,846)
Engineering technologies	4.1
Marketing	5.1
Manufacturing	1.0
Computer science	1.2
Consumer services	17.3
Business Management	23.2
Communication	9.9
Communication + Manufacturing	0.6
Construction and Architecture	9.3
Agriculture	28.3

# Correspondence

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