

College Readiness and the Potentially Overlapping Outcomes of Community College Entrants

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Study Group

- 2003 IL high school graduating class cohort
 - Includes 115,677 public high school students
 - Took the ACT in spring of 2002
 - Graduated high school in spring of 2003
- Enrolled FT or PT in community college or another 2-year institution in the fall of 2003
($n = 26,513$)
- Study period-fall of 2003 to spring of 2010

Sources of Data

- **ACT**-Prairie State Achievement Examination and the Student Interest Profiler
- **National Student Clearinghouse**-covers 92% of all postsecondary enrollment
- **Illinois High School Report Card**-institutional characteristics of the high schools
- **IPEDS and IBHE**-sector of the postsecondary institutions

Methods

- Hybrid approach: pipeline and college cohort
- Descriptive statistics (SPSS)
 - Cross tabulations
 - Comparisons of means
 - Custom tables

Rationale for Study

- Current reporting requirements
 - No transfer student outcomes
 - No overlap
 - No controls for input (open enrollment)
- Pre-college and environmental factors
- Geography

ACT College Readiness Benchmarks

Test	College Course or Course Area	ACT Score
English	English Composition	18
Reading	Social Sciences	21
Mathematics	College Algebra	22
Science	Biology	24

Minimum ACT test scores required to have a high probability of success in credit-bearing courses

Why these courses?

- They are the first credit-bearing courses most commonly taken by freshman.

What is a high probability of success?

- 50 percent chance or better of earning a B or better; and
- 75 percent chance or better of earning at least a C.

<http://www.act.org/research/policymakers/pdf/benchmarks.pdf>

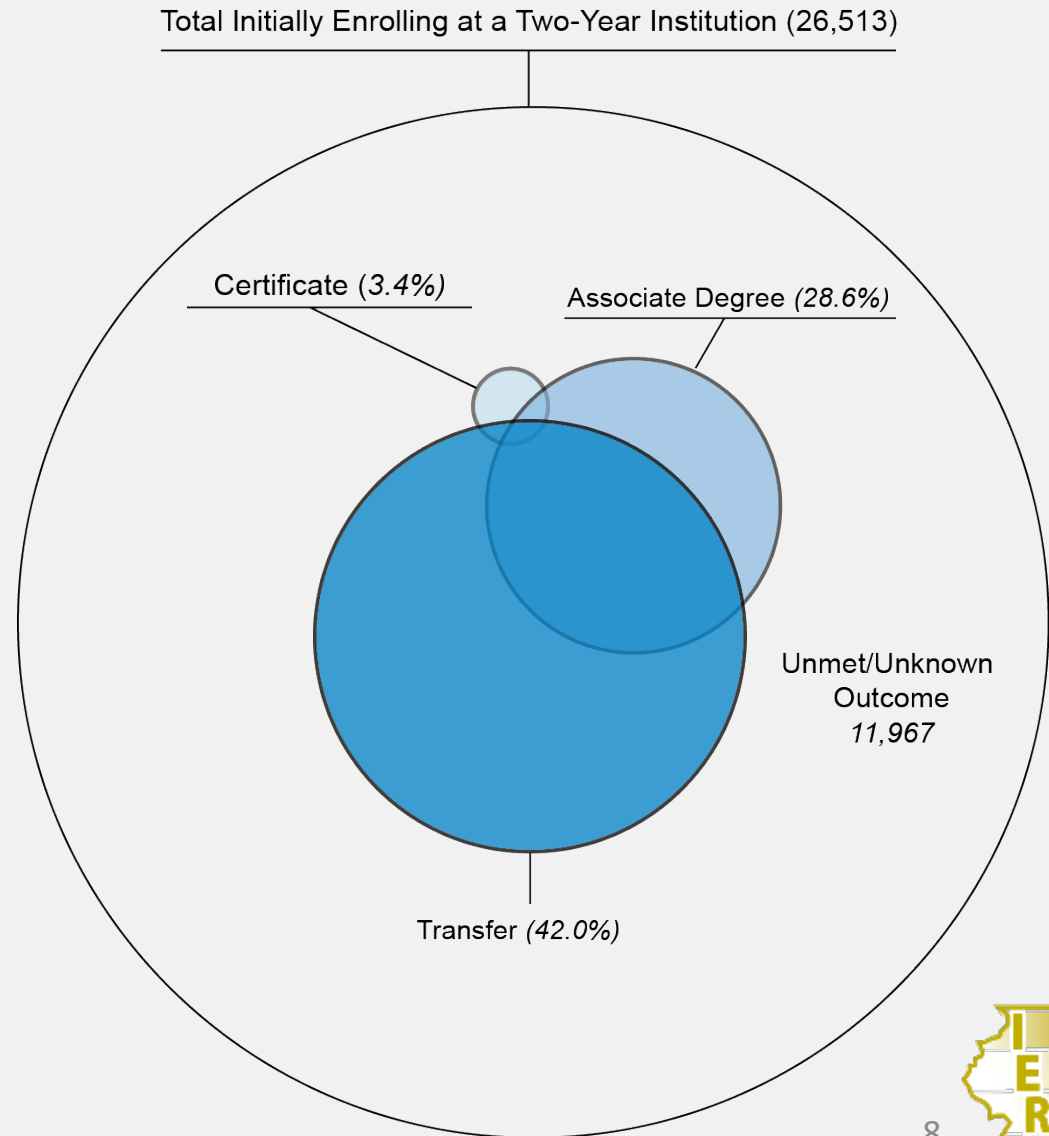


Research Questions

1. How do community college entrants perform in terms of associate degree completion, certificate attainment, and vertical transferring to four-year institutions across different levels of college readiness?
2. How does the association between college readiness and other factors relate to associate degree completion, certificate attainment, and vertical transferring to four-year institutions?
3. How does the association between college readiness and other factors relate to the overlap between community college credential completion and vertical transferring to four-year institutions?

Overlapping Outcomes

- Certificate
- Associate degree
- Vertical transfer to 4-year institution



How do CC Entrants Differ from the Overall Cohort on the ACT?

	2003 Cohort		CC Entrants	
	Mean	Standard Deviation	Mean	Standard Deviation
Composite	19.96	5.25	18.69	4.01
Math	20.05	5.47	18.61	4.15
English	19.29	6.26	17.91	5.02
Reading	20.07	6.17	18.79	5.22
Science	19.92	5.13	18.94	4.14

How do CC Entrants Differ in ACT Benchmarks?

- More CC entrants met 0 – 2 benchmarks

	Overall Cohort (N =115,677)		Community College Entrants (N=26,513)	
	Overall	Rate of Initial Community College Enrollment	N of Community College Entrants	Proportion of Community College Entrants
ACT Benchmarks Met	Total N	Overall Proportion of Class of 2003	N of Community College Entrants	Proportion of Community College Entrants
All Subjects	21,246	18.4%	2,204	8.3%
Three	14,742	12.7%	2,680	10.1%

How do CC Entrants perform in terms of the more specific benchmark patterns?

					Overall Cohort (N =115,677)			Community College Entrants (N=26,513)	
					Total N	Overall Proportion of Class of 2003	Rate of Initial Community College Enrollment	N of Community College Entrants	Proportion of Community College Entrants
ACT College Readiness Category									
Math	English	Reading	Science						
✓	✓	✓	✓	21,246	18.4%	10.4%	2,204	8.3%	
✓	✓	✓	⊗	10,743	9.3%	17.0%	1,828	6.9%	
✓	✓	⊗	✓	1,618	1.4%	18.0%	291	1.1%	
✓	⊗	✓	✓	146	0.1%	26.0%	38	0.1%	
⊗	✓	✓	✓	2,235	1.9%	23.4%	523	2.0%	
✓	✓	⊗	⊗	4,798	4.1%	22.3%	1,068	4.0%	
✓	⊗	✓	⊗	539	0.5%	32.1%	173	0.7%	
✓	⊗	⊗	✓	143	0.1%	25.9%	37	0.1%	
⊗	✓	✓	⊗	13,123	11.3%	27.0%	3,546	13.4%	
⊗	✓	⊗	✓	479	0.4%	25.9%	124	0.5%	
⊗	⊗	✓	✓	121	0.1%	24.8%	30	0.1%	
✓	⊗	⊗	⊗	1,706	1.5%	29.1%	497	1.9%	
⊗	✓	⊗	⊗	13,709	11.9%	30.2%	4,140	15.6%	
⊗	⊗	✓	⊗	3,633	3.1%	29.6%	1,077	4.1%	
⊗	⊗	⊗	✓	182	0.2%	24.7%	45	0.2%	
⊗	⊗	⊗	⊗	41,256	35.7%	26.4%	10,892	41.1%	

Community College Enrollment —Gender and Race

	Overall Cohort (N=115,677)			Community College Entrants (N=26,513)	
		Overall Proportion of Class of 2003 (N=115,677)	Rate of Initial Community College Enrollment (N=115,677)	Community College Entrants N	Proportion of Community College Entrants (N=26,513)
Gender					
Male	55,820	48.3%	22.1%	12,322	46.5%
Female	59,217	51.2%	23.7%	14,064	53.0%
Missing	640	0.6%	19.7%	126	0.5%
Race/Ethnicity					
African American	11,979	10.4%	17.2%	2,056	7.8%
American Indian	540	0.5%	22.6%	122	0.5%
White	67,949	58.7%	25.0%	17,009	64.2%
Latino/a	9,643	8.3%	20.3%	1,961	7.4%
Asian	4,652	4.0%	19.2%	892	3.4%
Other	4,140	3.6%	25.0%	1,034	3.9%
Prefer not to Respond	16,774	14.5%	20.5%	3,439	13.0%

Community College Enrollment – Family Income, Financial Aid, and Work During College

Overall Cohort				Community College Entrants	
Expecting to Work During College	Overall Cohort (N=115,677)			Community College Entrants (N=26,513)	
	Total N	Overall Proportion of Class of 2003 (N=115,677)	Rate of Initial Community College Enrollment (N=115,677)	Community College Entrants N	Proportion of Community College Entrants (N=26,513)
Yes	66,045	57.1%	24.6%	16,225	61.2%
No	21,903	18.9%	21.8%	4,785	18.0%
Missing	27,729	24.0%	19.8%	5,503	20.8%



Community College Enrollment – Region

Region	Overall Cohort (N=115,677)			Community College Entrants (N=26,513)	
	Total N	Overall Proportion of Class of 2003 (N=115,677)	Rate of Initial Community College Enrollment (N=115,677)	Community College Entrants N	Proportion of Community College Entrants (N=26,513)
Chicago	16,174	14.0%	13.0%	2,101	7.9%
Northeast	56,965	49.3%	21.2%	12,073	45.5%
Northwest	10,719	9.3%	28.9%	3,103	11.7%
West Central	8,728	7.6%	25.8%	2,254	8.5%
East Central	8,527	7.4%	29.4%	2,503	9.4%
Southwest	9,760	8.4%	26.8%	2,616	9.9%
Southeast	4,652	4.0%	40.0%	1,863	7.0%
Missing	152	0.1%	0.0%	0	0.0%



How does College Readiness Relate to CC Outcome Attainment?

- 74.9% of those that met all benchmarks attained a CC outcome
- 42.4% of those that did not meet any benchmarks attained a CC outcome

ACT College Readiness			Community College Outcome Attainment*				
	Community College Entrants (N)	% of All Community College Entrants	Outcome Attained	Associate	Certificate	Transfer to 4-Year	Outcome Unknown/Unmet
ACT Benchmarks Met							
All Subjects	2,204	8.3%	74.9%	42.3%	3.8%	63.8%	25.1%
Three Subjects	2,680	10.1%	70.1%	39.4%	4.3%	58.5%	29.9%
Two Subjects	4,978	18.8%	63.2%	34.4%	6.1%	50.8%	36.8%
One Subject	5,759	21.7%	56.5%	28.9%	6.3%	42.6%	43.5%
None	10,892	41.1%	42.4%	20.4%	6.2%	29.2%	57.6%

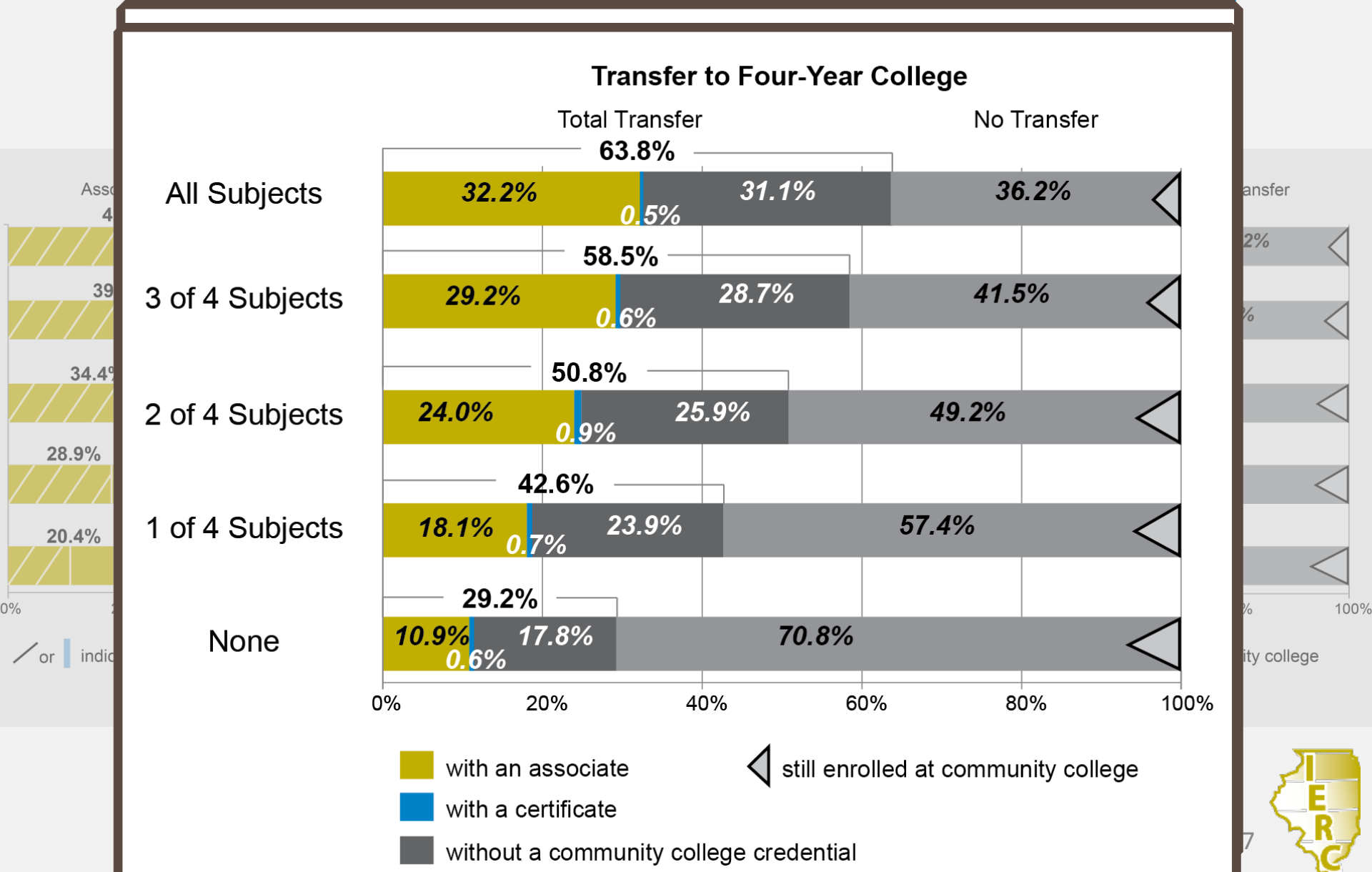
* Not mutually exclusive



Community College Outcome Attainment by College Readiness Benchmark Pattern

ACT College Readiness					Highest Credential			Vertical Transfer Status		
Outcome Attained					Associate	Certificate	No Credential	Overall Transfer	Earned Credential and Transferred	Transferred without Credential
ACT College Readiness Category										
Math ≥22	English ≥18	Reading ≥21	Science ≥24							
✓	✓	✓	✓	74.9%	42.3%	1.5%	56.2%	63.8%	32.7%	31.1%
✓	✓	✓	⊖	71.7%	42.0%	2.1%	55.9%	59.8%	32.2%	27.6%
✓	✓	⊖	✓	65.6%	35.1%	1.4%	63.6%	55.0%	25.8%	29.2%
⊖	✓	✓	✓	67.7%	33.3%	1.9%	64.8%	56.0%	23.5%	32.5%
✓	✓	⊖	⊖	68.4%	38.2%	2.4%	59.4%	56.9%	29.1%	27.8%
⊖	⊖	✓	✓	66.7%	33.3%	6.7%	60.0%	53.3%	26.7%	26.7%
✓	⊖	⊖	⊖	64.8%	32.2%	4.4%	63.4%	49.7%	21.5%	28.2%
⊖	✓	⊖	⊖	57.1%	29.6%	3.7%	66.6%	43.3%	19.5%	23.7%
⊖	⊖	✓	⊖	50.6%	24.5%	3.6%	71.9%	37.1%	14.7%	22.5%
⊖	⊖	⊖	⊖	42.4%	20.4%	4.2%	75.4%	29.2%	11.5%	17.8%

Outcomes by the Number of College



CC Outcomes by Gender and College Readiness

Community College Credential Status

Vertical Transfer Status

Gender		N	Overall Outcome Attainment	Earned Credential	No Credential	Overall Transfer	Earned Credential and Transferred	Transfer without Credential
Male	All Four	1,336	71.6%	38.3%	61.7%	62.0%	28.7%	33.3%
	3 of 4	1,343	65.5%	35.9%	64.1%	55.4%	25.8%	29.6%
	2 of 4	2,120	58.6%	31.5%	68.5%	47.8%	21.7%	27.1%
	1 of 4	2,531	52.9%	27.3%	72.7%	41.2%	15.6%	25.6%
	None	4,992	39.2%	21.8%	78.3%	27.3%	9.8%	17.5%
Female	All Four	865	79.9%	52.3%	47.7%	66.3%	38.7%	27.6%
	3 of 4	1,323	74.6%	47.0%	53.0%	61.4%	33.8%	27.6%
	2 of 4	2,831	66.7%	41.6%	58.4%	52.4%	27.3%	25.1%
	1 of 4	3,201	59.4%	36.8%	63.2%	43.8%	21.2%	22.6%
	None	5,844	45.1%	27.1%	72.9%	30.9%	12.9%	18.0%

CC Outcomes by Race/Ethnicity and College Readiness

			Community College Credential Status			Vertical Transfer Status		
Race/Ethnicity		N	Overall Outcome Attainment	Earned Credential	No Credential	Overall Transfer	Earned Credential and Transferred	Transfer without Credential
White and Asian	All Four	1,853	75.3%	45.3%	54.7%	63.8%	33.8%	30.0%
	3 of 4	2,151	72.1%	43.7%	56.3%	59.5%	31.1%	28.4%
	2 of 4	3,885	64.2%	39.0%	61.0%	51.2%	25.9%	25.3%
	1 of 4	4,114	58.1%	34.9%	65.1%	43.6%	20.4%	23.2%
	None	5,898	46.5%	29.0%	71.0%	30.9%	13.4%	17.4%
Traditionally Underserved Students	All Four	52	71.2%	28.8%	71.2%	63.5%	21.2%	42.3%
	3 of 4	143	62.9%	30.1%	69.9%	54.5%	21.7%	32.9%
	2 of 4	407	57.5%	27.5%	72.5%	47.4%	17.4%	30.0%
	1 of 4	728	53.3%	27.5%	72.5%	40.8%	15.0%	25.8%
	None	2,809	36.5%	17.8%	82.2%	27.1%	8.4%	18.7%

CC Outcomes by Family Income and College Readiness

Community College
Credential Status

Vertical Transfer
Status

Community College Credential Status						Vertical Transfer Status		
Income Level		N	Overall Outcome Attainment	Earned Credential	No Credential	Overall Transfer	Earned Credential and Transferred	Transfer without Credential
High Quartile \$80k+	All Four	393	76.1%	37.2%	62.8%	67.2%	28.2%	38.9%
	3 of 4	428	73.1%	37.6%	62.4%	65.0%	29.4%	35.5%
	2 of 4	607	66.4%	31.6%	68.4%	58.6%	23.9%	34.8%
	1 of 4	715	58.3%	28.4%	71.6%	48.7%	18.7%	29.9%
	None	842	47.6%	24.8%	75.2%	37.9%	15.1%	22.8%
Mid-high \$50k-<\$80k	All Four	540	75.9%	43.1%	56.9%	65.4%	32.6%	32.8%
	3 of 4	608	72.7%	46.1%	53.9%	59.2%	32.6%	26.6%
	2 of 4	1,042	64.5%	39.4%	60.6%	51.9%	26.9%	25.0%
	1 of 4	1,113	59.2%	36.2%	63.8%	43.9%	20.9%	23.0%
	None	1,488	46.2%	29.4%	70.6%	29.6%	12.8%	16.9%
Low Quartile \$30k-<\$50k	2 of 4	700	55.3%	33.3%	66.7%	42.6%	20.6%	22.0%
	1 of 4	954	50.9%	28.8%	71.2%	36.4%	14.3%	22.1%
	None	2,725	38.6%	22.1%	77.9%	26.1%	9.6%	16.5%



CC Outcomes by the Expectation for Financial Aid and College Readiness

			Community College Credential Status			Vertical Transfer Status		
Expected to Receive Financial Aid		N	Overall Outcome Attainment	Earned Credential	No Credential	Overall Transfer	Earned Credential and Transferred	Transfer without Credential
Yes	All Four	1,561	75.3%	43.9%	56.1%	63.2%	31.8%	31.4%
	3 of 4	1,826	69.2%	41.6%	58.4%	57.7%	30.1%	27.6%
	2 of 4	3,294	62.2%	37.0%	63.0%	49.8%	24.6%	25.3%
	1 of 4	3,539	55.9%	31.7%	68.3%	42.2%	17.9%	24.2%
	None	6,518	42.7%	24.9%	75.1%	29.3%	11.5%	17.8%
No	All Four	292	69.9%	40.4%	59.6%	59.9%	30.5%	29.5%
	3 of 4	354	70.6%	43.2%	56.8%	55.9%	28.5%	27.4%
	2 of 4	755	62.1%	37.5%	62.5%	48.2%	23.6%	24.6%
	1 of 4	1,030	54.2%	32.4%	67.6%	39.6%	17.9%	21.7%
	None	1,817	40.6%	24.1%	75.9%	26.8%	10.3%	16.5%

CC Outcomes by the Expectation to Work during College and College Readiness

			Community College Credential Status			Vertical Transfer Status		
Expected to Work While Enrolled		N	Overall Outcome Attainment	Earned Credential	No Credential	Overall Transfer	Earned Credential and Transferred	Transfer without Credential
Yes	All Four	1,357	73.6%	40.6%	57.8%	62.0%	30.6%	31.5%
	3 of 4	1,626	67.3%	37.6%	60.5%	56.2%	28.5%	27.7%
	2 of 4	3,067	61.5%	33.0%	63.6%	48.8%	23.7%	25.1%
	1 of 4	3,475	54.6%	26.9%	69.2%	41.4%	17.6%	23.9%
	None	6,700	41.4%	19.8%	76.0%	28.5%	11.1%	17.3%
No	All Four	494	76.1%	44.7%	53.4%	64.2%	34.6%	29.6%
	3 of 4	548	75.4%	46.9%	50.9%	60.6%	34.3%	26.3%
	2 of 4	989	64.6%	36.9%	60.7%	51.8%	26.5%	25.3%
	1 of 4	1,093	58.0%	31.7%	64.9%	42.0%	19.1%	22.9%
	None	1,661	45.5%	23.7%	72.7%	29.7%	11.5%	18.2%

CC Outcomes by Region and College Readiness

Community College

Vertical Transfer

Community College

Vertical Transfer

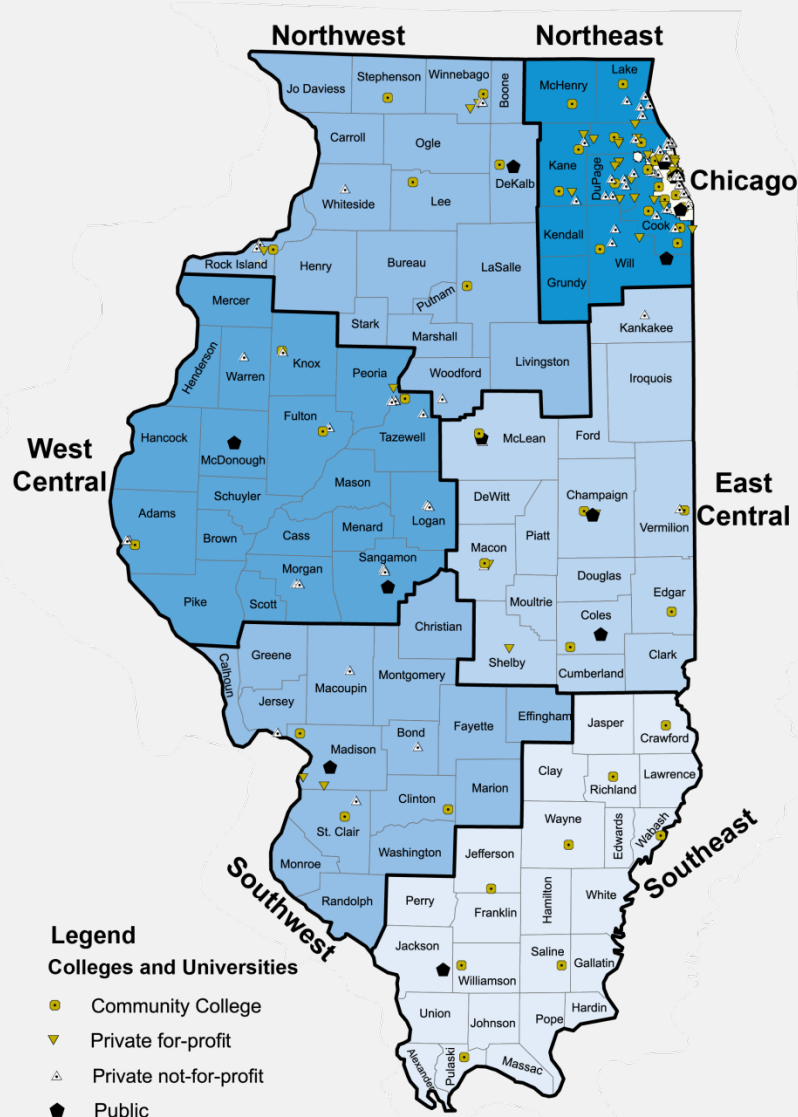
				Community College Credential Status		Vertical Transfer Status		
Region		Community College Entrants N	Outcome Attained	Earned Credential	No Credential	Overall Transfer	Earned Credential and Transferred	Transfer without Credential
Southeast	All Four	138	87.7%	58.7%	41.3%	68.9%	39.9%	29.0%
	3 of 4	208	80.8%	53.8%	46.2%	68.7%	41.8%	26.9%
	2 of 4	396	70.2%	46.2%	53.8%	56.3%	32.3%	24.0%
	1 of 4	402	65.4%	48.5%	51.5%	48.2%	31.3%	16.9%
	None	719	47.3%	34.4%	65.6%	30.0%	17.1%	12.9%

East Central	None	840	44.0%	27.4%	72.6%	28.8%	12.1%	16.7%
	All Four	222	73.9%	48.6%	51.4%	62.6%	37.4%	25.2%
	3 of 4	315	66.3%	40.6%	59.4%	56.8%	31.1%	25.7%
	2 of 4	537	59.0%	38.4%	61.6%	44.4%	23.7%	20.7%
	1 of 4	562	51.8%	33.3%	66.7%	36.7%	18.2%	18.5%
Southwest	None	867	38.6%	25.4%	74.6%	24.3%	11.0%	13.3%
	All Four	192	81.3%	54.2%	45.8%	64.6%	37.5%	27.1%
	3 of 4	246	75.2%	52.0%	48.0%	57.8%	34.6%	23.2%
	2 of 4	534	68.0%	48.7%	51.3%	49.6%	30.3%	19.3%
	1 of 4	602	60.1%	41.4%	58.6%	39.4%	20.6%	18.8%
Southeast	None	1,042	45.3%	32.7%	67.3%	25.1%	12.5%	12.6%
	All Four	138	87.7%	58.7%	41.3%	68.9%	39.9%	29.0%
	3 of 4	208	80.8%	53.8%	46.2%	68.7%	41.8%	26.9%
	2 of 4	396	70.2%	46.2%	53.8%	56.3%	32.3%	24.0%
	1 of 4	402	65.4%	48.5%	51.5%	48.2%	31.3%	16.9%
	None	719	47.3%	34.4%	65.6%	30.0%	17.1%	12.9%

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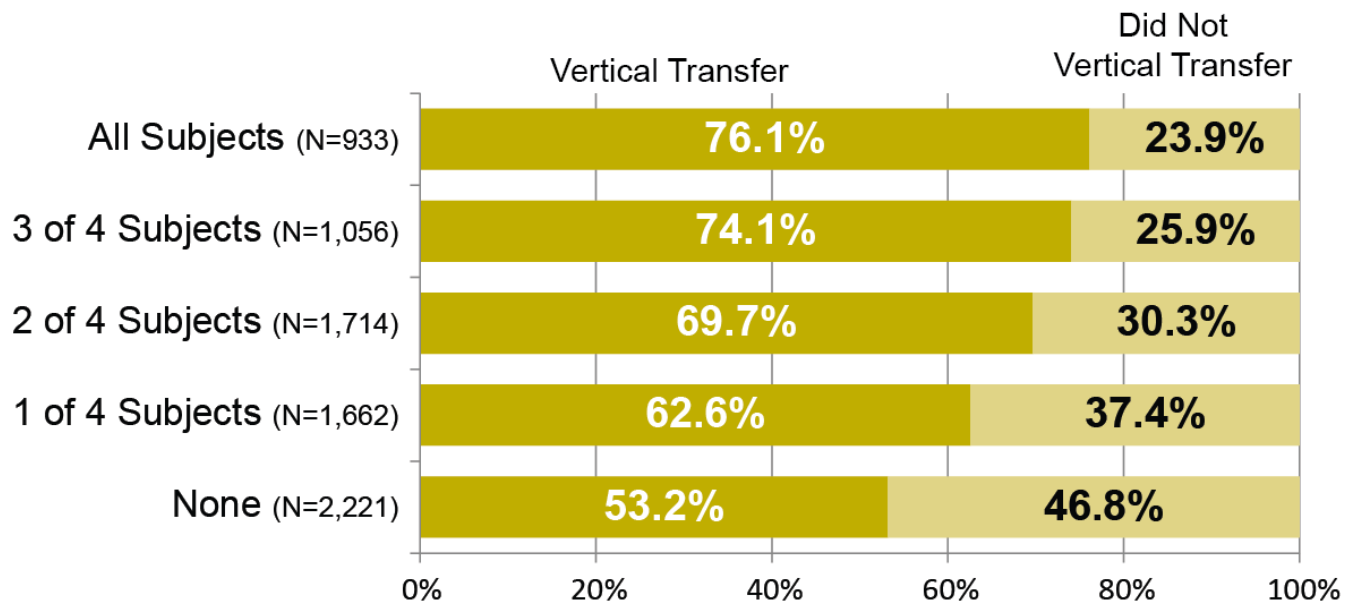
Illinois Regions and Post-Secondary Institutions by Sector



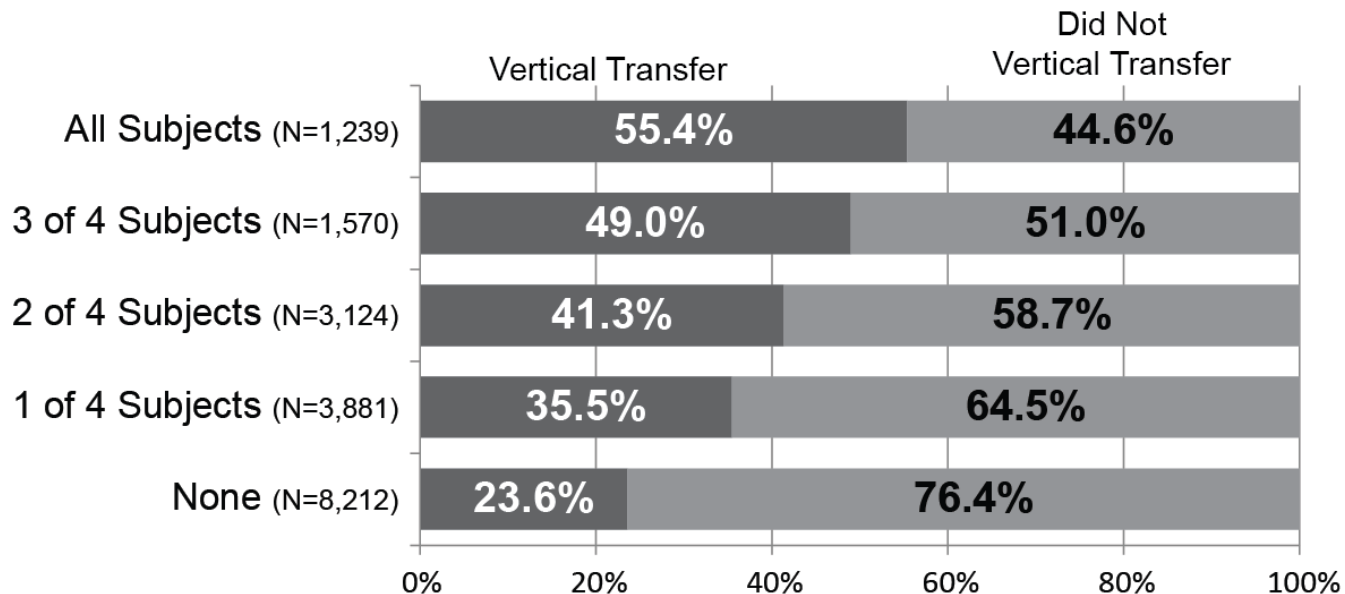
- Students from the Southeast Region had the highest vertical transfer rates.
- Students from Chicago, had fairly high rates of vertical transfer but the lowest rates of transfer without degree.

No Degree

Associate



No Degree



Major Findings

- Wide variation in outcome attainment across the college readiness categories.
 - Three or more
 - None
- College readiness and pre-college and environmental factors
 - Gender gap
 - Expecting to receive vs. expecting to work
 - Family income
- Vertical Transferring without an associate degree?



Policy Implications

1. Community college as an integral part of the completion agenda
2. Reverse articulation/credit when it's due initiative

Future Research

1. College readiness as it relates to bachelor's degree completion for vertical transfer students
2. Time to degree among vertical transfer students
3. Interviewing vertical transfer students



Questions

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