



Thinking Longitudinally while Focusing on Education Policy

Eric Lichtenberger

Illinois Education Research Council
Southern Illinois University Edwardsville

IBHE Faculty Advisory Council

May 15, 2015

Edwardsville, IL

Illinois Education Research Council

- Founded in 2000
- Housed within the Graduate School at Southern Illinois University Edwardsville
- Research arm of the Illinois P-20 Council
- Advisory Board with wide representation
- Bringing research to both policy and practice
- Annual research symposium

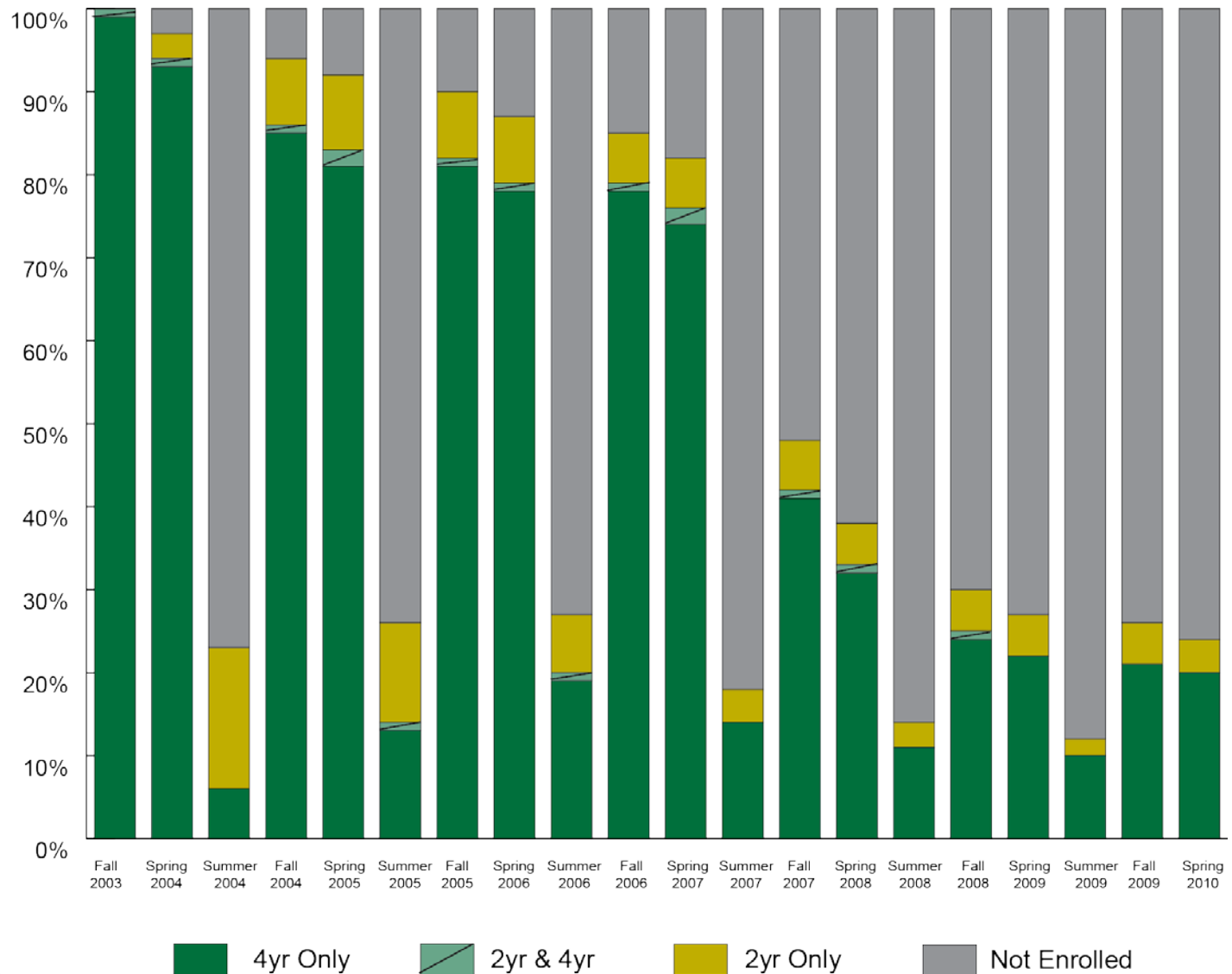
Overview of Presentation

- Describe longitudinal data sources
 - Present
 - Future (ILDS)
- Synopsis of recent IERC studies
 - Transfer/enrollment patterns leading to positive outcomes
 - Transfer/enrollment patterns that often lead to less than ideal outcomes
- Policy Implications

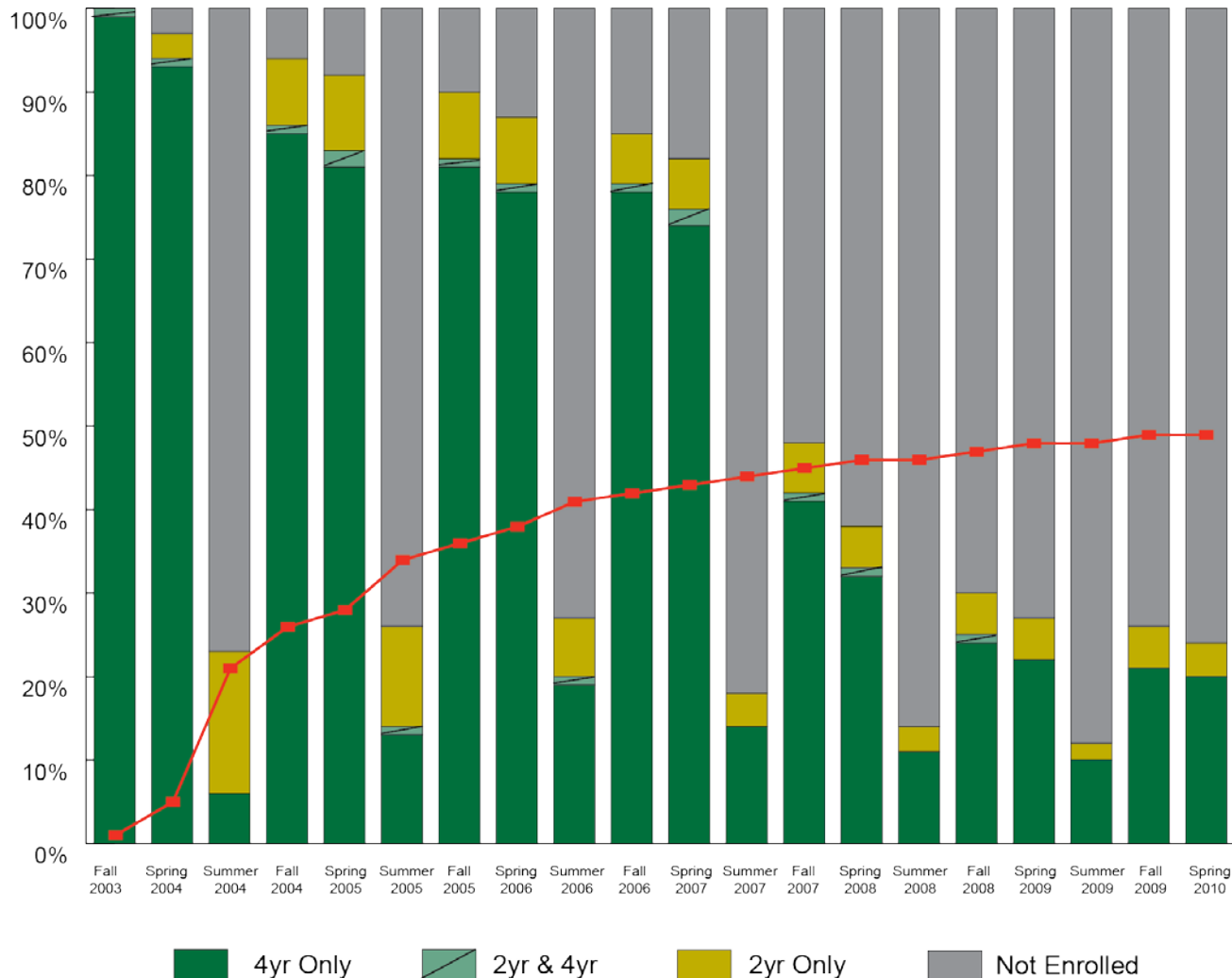
Issues with Current Reporting Requirements

- Centered on institutions reporting information in isolation
- Does not take into consideration the outcomes of transfer students, nor does it treat transferring as an outcome
- Cohort approach-first-time/ full-time
- IERC longitudinal studies are student centered
 - Allow for higher education to be viewed more systemically, rather than in isolation

Enrollment at 4yr and 2yr Institutions



Enrollment Trends for Four-Year Starters



Current Sources of Data for IERC Enrollment/Transfer Studies

- **ACT-PSAE** and the Student Interest Profiler
- **National Student Clearinghouse**-covers 92% of all postsecondary enrollment
- **Illinois Interactive High School Report Card**-institutional characteristics of the high schools
- **IPEDS and IBHE**-sector of the postsecondary institutions
- **IDES**-earnings and employment
- **Institutional Sources**

Future Data Sources

- Once ILDS comes on line may be able to get course-level information:
 - high school math ladder
 - # of high school courses
 - honors/AP/IB track
 - high school GPA

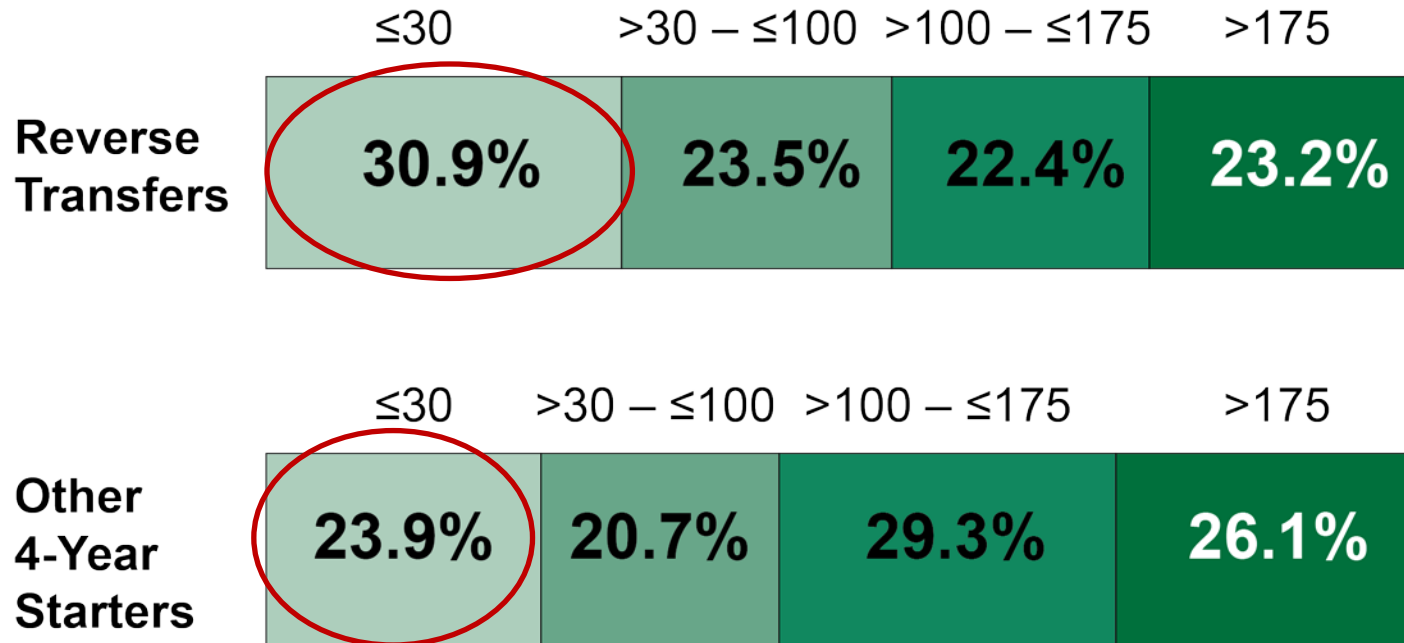
Potentially Problematic Enrollment/Transfer Patterns

- For four-year college students
 - Reverse transferring, undermatching
- For community college students
 - Transferring early, enrolling part-time, transferring without a degree

Reverse Transferring

- Pertains to students who start at a four-year college and later transfer to a community college.
- The term has been used in educational research for the past 20 years.
- The definition usually excludes concurrent enrollment and summer school enrollment.
- A transfer takes place.

Distance in Miles Between High School and Initial Four-Year Institution

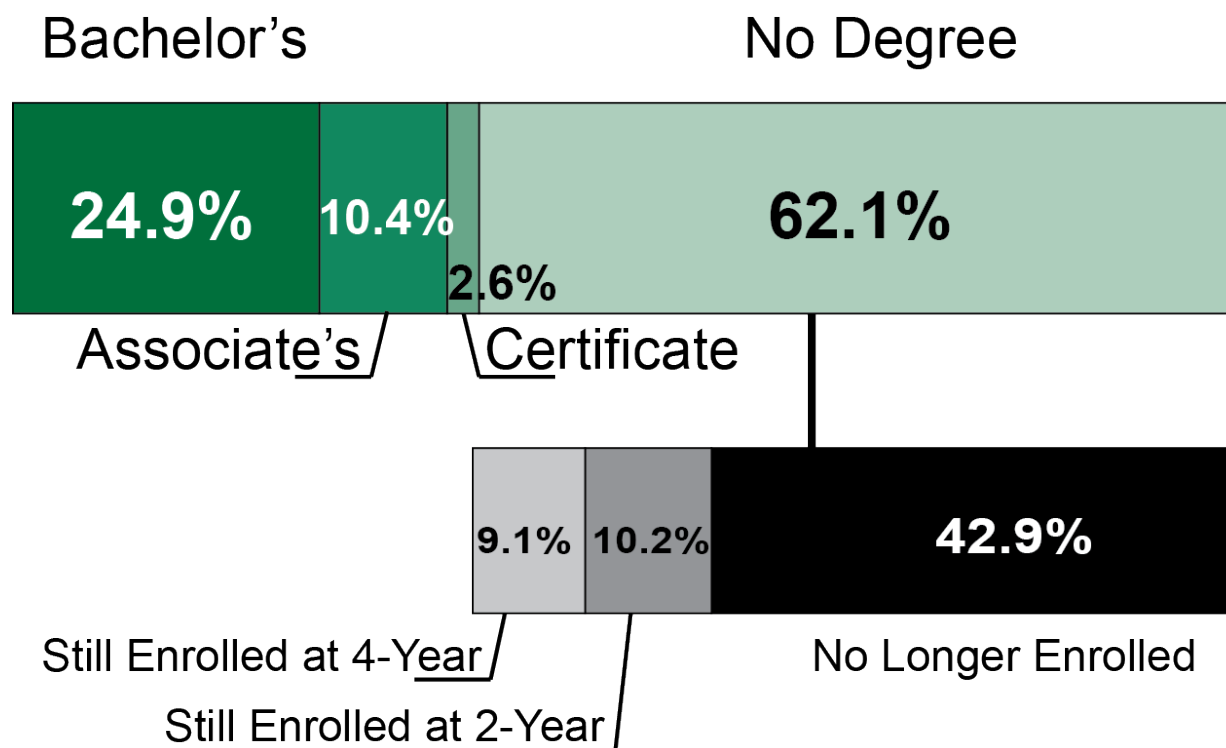


Reverse transfer students tend to initially enroll closer to home.

Reverse Transfer and End of Study Status

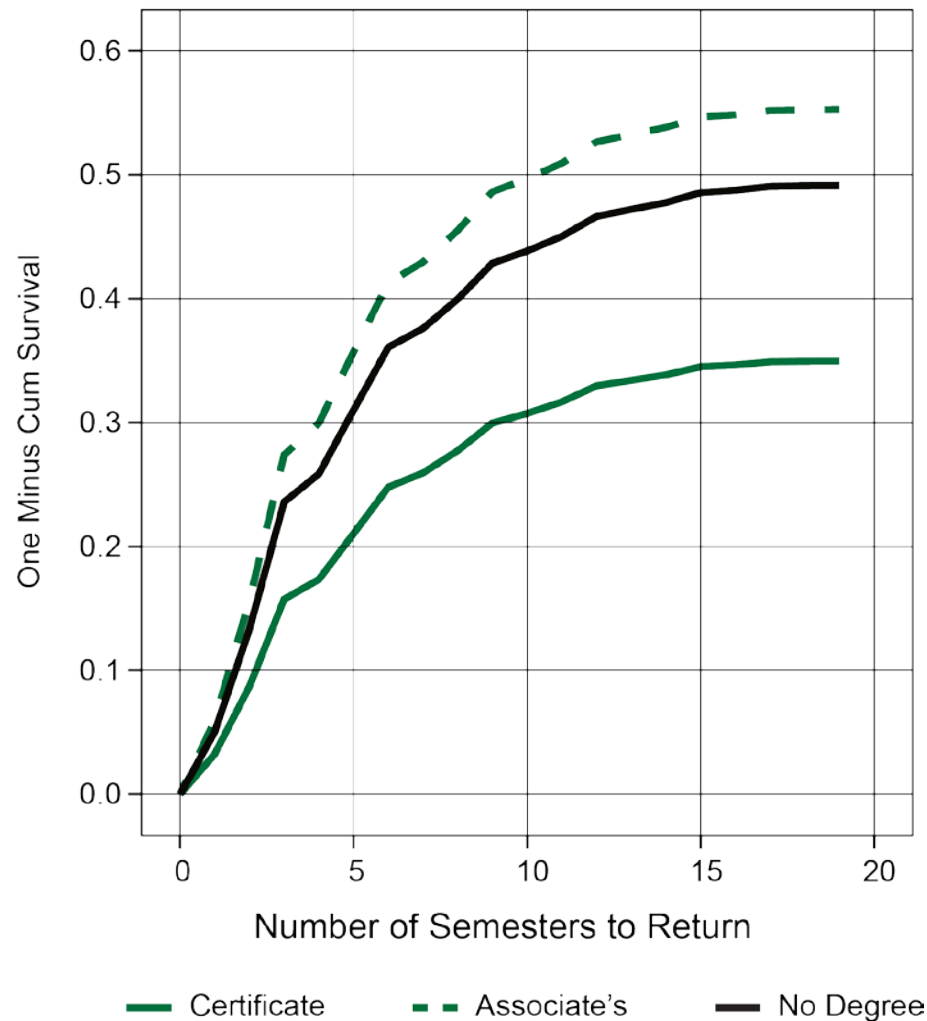
End of Study Status						
		Bachelor's Degree or Higher	Non-Completers			Total
			Still Enrolled at 4-yr	Still Enrolled at 2-yr	No Longer Enrolled	
Reverse Transfer Students	Row %	24.9%	12.1%	12.4%	50.6%	100.0%
	Column %	7.2%	54.9%	100.0%	50.2%	20.7%
Other Four-Year Starters	Row %	84.3%	2.6%	0.0%	13.1%	100.0%
	Column %	92.8%	45.1%	0.0%	49.8%	79.3%
Total	Row %	72.0%	4.6%	2.6%	20.9%	100.0%
	Column %	100.0%	100.0%	100.0%	100.0%	100.0%

Highest Degree and End of Study Status for Reverse Transfer Students



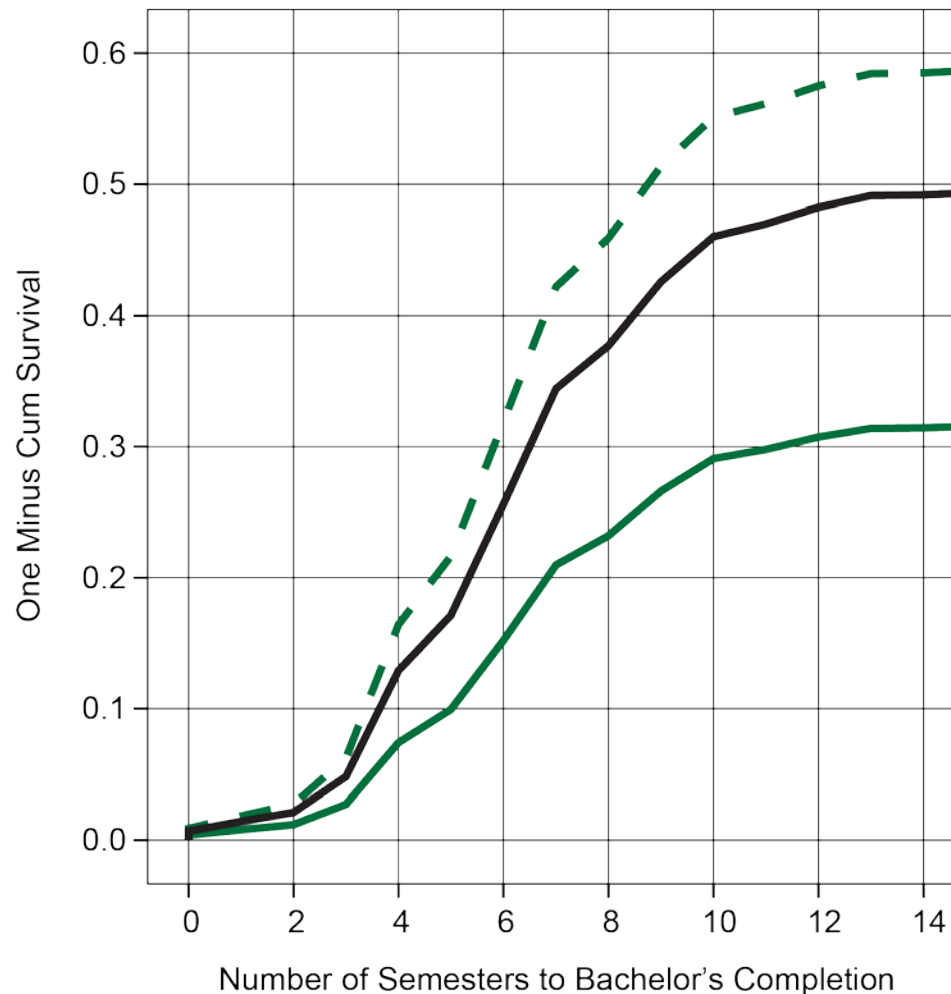
Model Adjusted Time to Return

Highest Community College Degree



Model Adjusted Time to Bachelor's Completion

Highest Community College Degree



College Readiness, Institutional Selectivity, and Bachelor's Completion

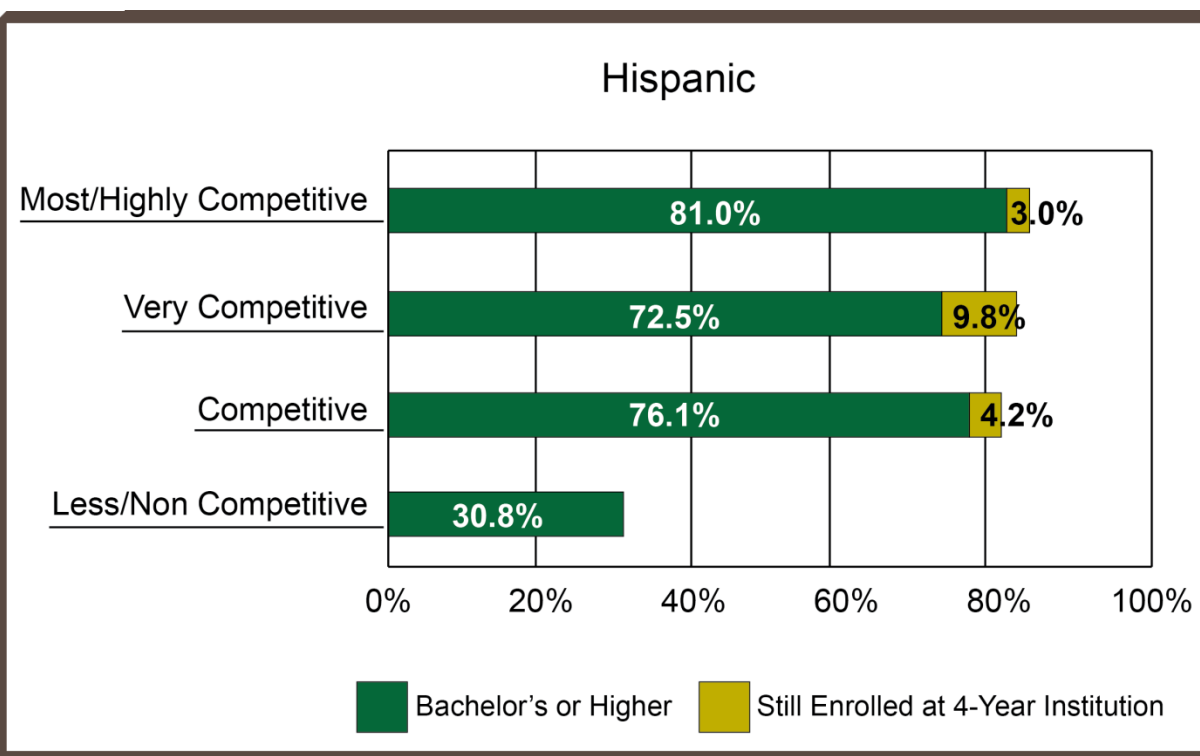
Selectivity	End of Study Status			
	Bachelor's or Higher	Still Enrolled at Four-Year	Still Enrolled at Two-Year	No Longer Enrolled
Most/Highly Competitive				
All Four	92.2%	1.7%	0.6%	5.5%
3 of 4	89.2%	2.1%	1.0%	7.7%
2 of 4	82.5%	4.2%	1.1%	12.3%
1 of 4	74.3%	2.3%	3.6%	19.8%
None	72.7%	7.1%	2.0%	18.2%
Very Competitive				
All Four	83.2%	3.4%	1.3%	12.1%
3 of 4	82.4%	3.5%	1.6%	12.4%
2 of 4	72.0%	5.7%	3.1%	19.2%
1 of 4	68.4%	5.6%	4.0%	22.0%
None	55.9%	8.7%	4.9%	30.5%
Competitive				
All Four	76.6%	3.8%	2.0%	17.6%
3 of 4	74.2%	3.1%	2.3%	20.4%
2 of 4	66.4%	5.4%	3.4%	24.9%
1 of 4	62.2%	5.6%	4.4%	27.8%
None	46.7%	8.2%	4.7%	40.4%
Less/Non Competitive				
All Four	63.6%	4.7%	2.5%	29.2%
3 of 4	60.3%	4.5%	3.7%	31.5%
2 of 4	49.8%	9.3%	4.2%	36.8%
1 of 4	42.8%	9.3%	4.2%	43.7%
None	27.5%	10.9%	6.6%	55.0%

- Students meeting two of four benchmarks from the most competitive institutions had similar rates of bachelor's completion as students meeting all four benchmarks enrolling at very competitive institutions.
- The least prepared students enrolling at the most competitive institutions outperformed the best prepared students at less competitive institutions.

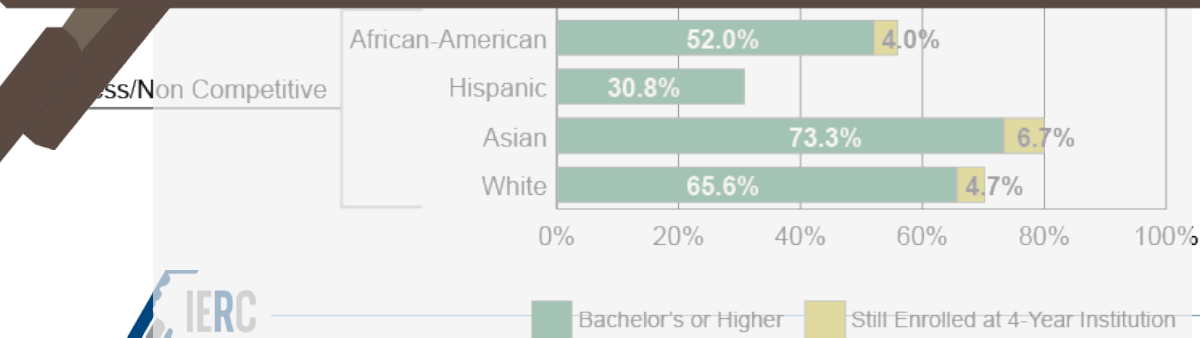
Transfer and Enrollment Patterns Related to Positive Outcomes

- Four-year college students
 - Enrolling at more selective institutions, taking summer courses, having participated in dual-credit
- Community college students
 - Consistent full-time enrollment, transferring with an associate degree, having participated in dual-credit

The Interaction of Institutional Selectivity & Race and Bachelor's Completion



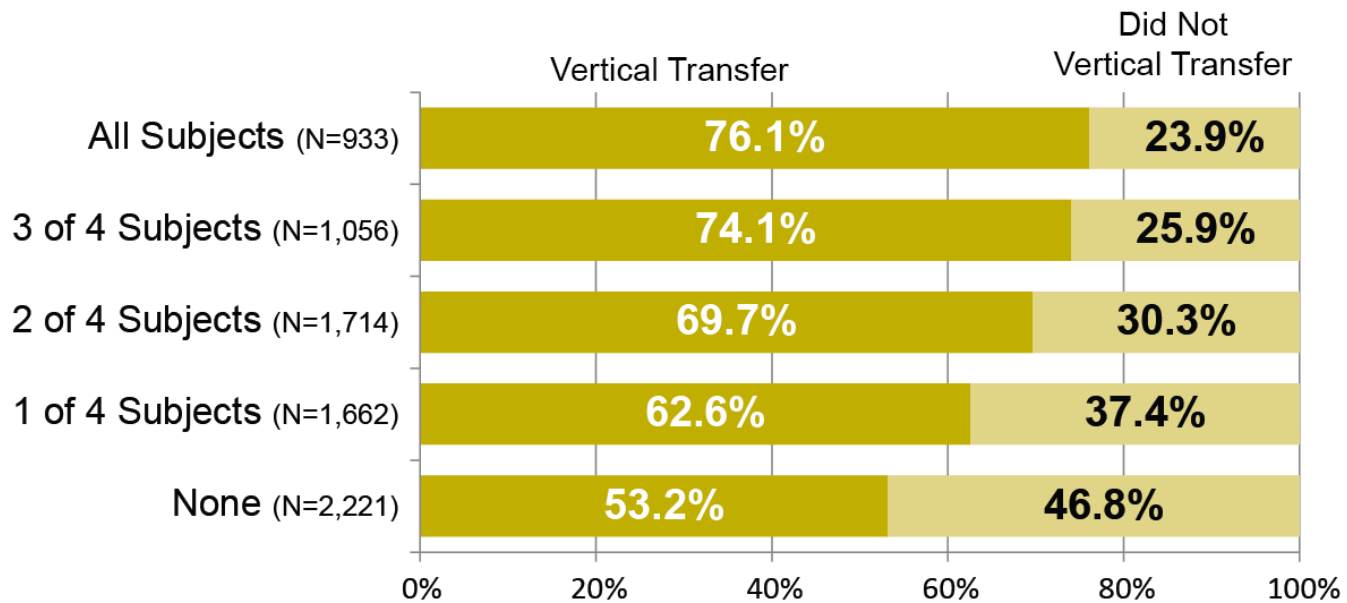
- For the most-ready Hispanic students, there was only a moderate difference between those enrolling at competitive or better institutions.
- However, among the most-ready Hispanic students there was a sharp decline in BA completion at non-competitive institutions.



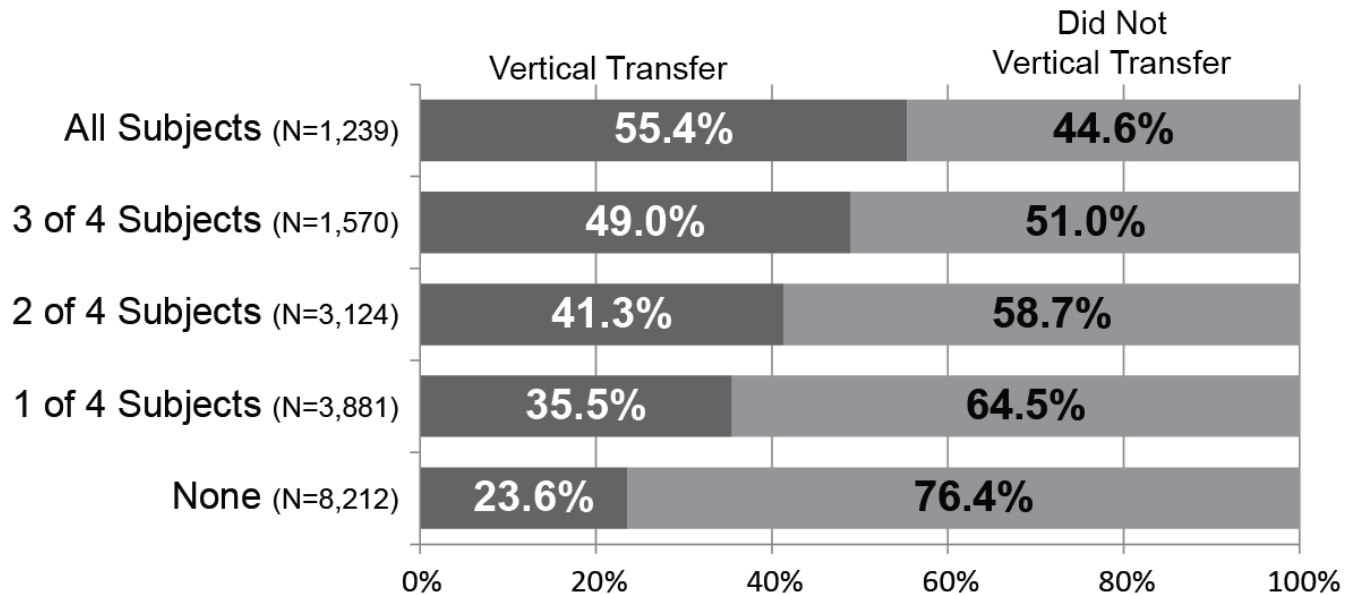
- Enrolling at a highly selective institution narrows the racial gap for African-American students.

High Read

Associate



No Degree

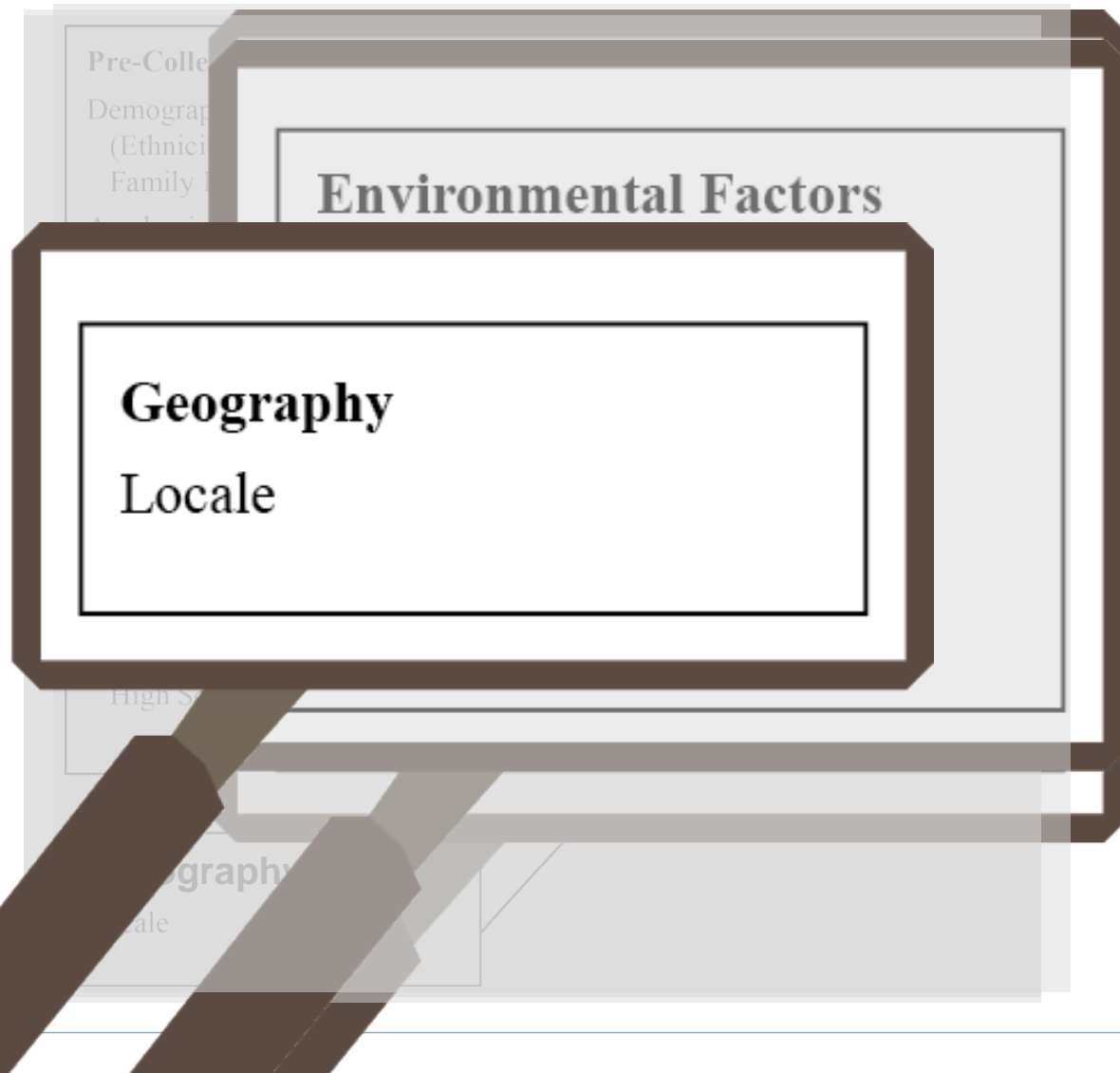


100%

Community College Penalty and Bachelor's Degree Completion?

- Penalty-Community college students are less likely to earn a bachelor's degree than direct entrants to four-year colleges.
- Penalty seems to be related to the point at which the given study commences tracking outcomes
 - At initial community college enrollment
 - After vertical transfer
- Wide variation in college readiness among community college enrollees
- Observationally equivalent groups
- One cannot earn a bachelor's degree at a community college
- Parallel point of entry and time allotted for degree completion

Framework for the Propensity Score Matching Model

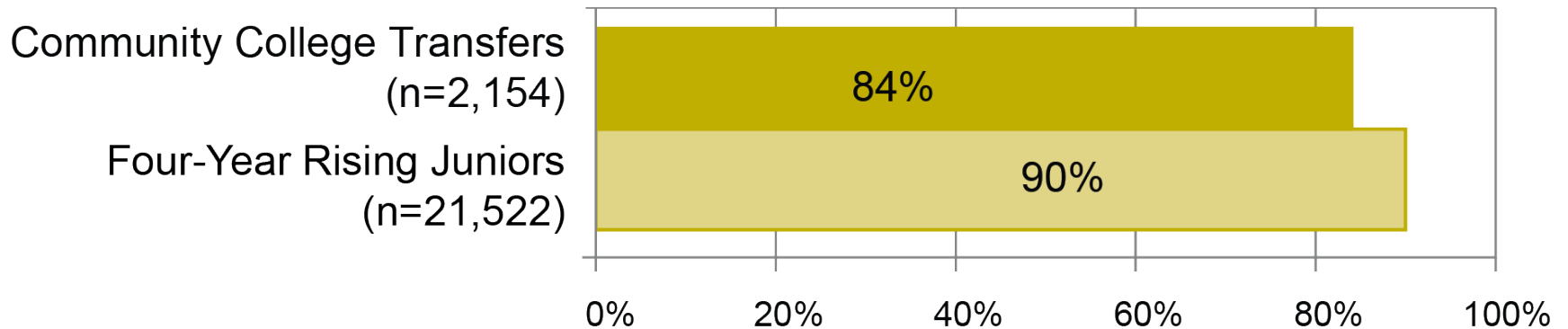


Comparing the Matched Pairs

For each community college transfer student we found a rising four-year college junior:

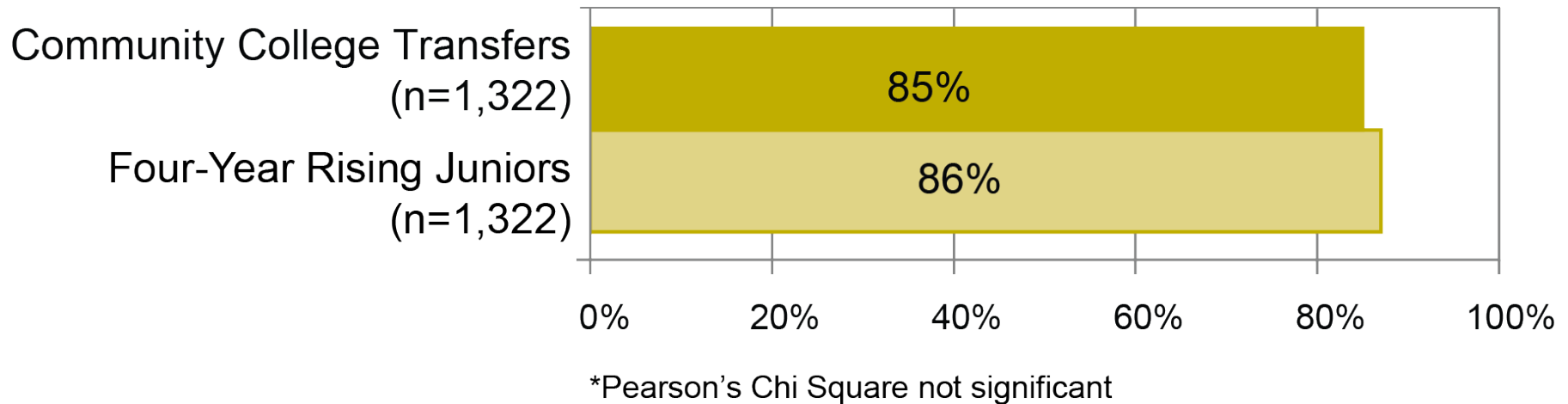
- With a similar profile based on key demographic, academic, and environmental factors
- Graduated from the same high school
- Enrolled at a similarly selective four-year college (in many cases it was the same college)

Bachelor's Completion Rates Prior to Matching



* Statistically significant based on Pearson's Chi Square

Bachelor's Completion Rates after Propensity Score Matching and Post-Treatment Adjustment



- After matching on key factors, *no community college penalty was evident.*

Dual Credit Dual Enrollment

Witt, A., Lichtenberger, E., Blankenberger, B. & Franklin, D. (2012). *Dual credit/dual enrollment and data-driven policy implementation: Reform initiatives and postsecondary credential attainment*. Paper presented at the Association for Institutional Research's Annual Forum: New Orleans, LA.

- DCDE for students that graduated high school in 2003
- 16% of students participated
- Wide variation depending on geographical region

Dual Credit and Enrollment*

	High Income Model		Mid-High Income Model		Mid-Low Income Model		Low Income Model	
	High Income Model		Mid-High Income Model		Mid-Low Income Model		Low Income Model	
	Four-Year	Two-Year	Four-Year	Two-Year	Four-Year	Two-Year	Four-Year	Two-Year
	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
Semesters Dually Enrolled 2-yr	4.1	5.3	3.3	4.0	3.0	3.6	2.5	3.0
Semesters Dually Enrolled 4-yr	9.1	4.2			10.9	2.4	13.8	5.8

*shaded cells indicate statistical significance at the $p \leq .001$ level.

- Students dually enrolled at community colleges had increased odds of college enrollment across income brackets
- Students dually enrolled at 4-year institutions had increased odds of college enrollment mainly for low and mid-low income brackets

(Southwest to Chicago)	.7	1.5	.6	1.0	.5	1.5	.4	1.0
(Southeast to Chicago)	.4	2.0	.3	1.2	.3	1.7	.2	1.2
High School Mean Composite ACT	1.1	.9	1.1	1.0	1.1	1.0	1.1	1.0

*shaded cells indicate statistical significance at the $\leq .001$ level.

Dual Credit and Bachelor's Degree Completion

	High Income	Mid-High Income	Mid-Low Income	Low Income
	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
Semesters Dually Enrolled 2-yr	1.034	1.014	1.046	1.098
Semesters Dually Enrolled 4-yr	1.027		1.123	1.173

*shaded cells indicate statistical significance at the $p \leq .001$ level.

- In terms of predicting an increased likelihood of bachelor's degree completion, dual credit was only significant for low income students.

(Undermatched to Aligned)				
Overmatched to Aligned	1.130	1.161	1.139	1.322

Policy Implications

- Continue to develop baseline information about statewide enrollment/transfer performance.
- Set goals for institutional performance related to vertical transfer.
- Importance of tracking transfer patterns, ILDS will be beneficial for this
- Expanding articulation initiatives to give credit to student after transferring

Policy Implications (cont.)

- Providing academic & financial advisement regarding attending appropriate-level institution
- Help students face their financial aid future by developing information and incentives spanning undergraduate enrollment.
- Preliminary evidence (supported elsewhere) suggests the importance of FT, continuous enrollment toward degree completion

References

Lichtenberger, Eric J. (2011). *Reverse transfer students and postsecondary outcomes: A potential opportunity* (IERC 2011-5). Edwardsville, IL: Illinois Education Research Council.

Lichtenberger, Eric J. & Dietrich, Cecile. (2012). *College readiness and the potentially overlapping outcomes of community college entrants* (IERC 2012-3). Edwardsville, IL: Illinois Education Research Council at Southern Illinois University Edwardsville.

Lichtenberger, Eric J. & Dietrich, Cecile. (2013). *The community college penalty and bachelor's degree completion: Fact of fiction?* (IERC 2013-1). Edwardsville, IL: Illinois Education Research Council at Southern Illinois University Edwardsville.

Witt, A., Lichtenberger, E., Blankenberger, B. & Franklin, D. (2012). *Dual credit/dual enrollment and data-driven policy implementation: Reform initiatives and postsecondary credential attainment*. Paper presented at the Association for Institutional Research's Annual Forum: New Orleans, LA.

Questions





Illinois Education Research Council

Southern Illinois University Edwardsville

Eric Lichtenberger

`elichte@siue.edu`

866-799-IERC (4372)

<http://ierc.education>

