Analyzing the High School Class of 2003 and Their Postsecondary Experience

2012 SHEEO/NCES Network Conference and IPEDS Workshop

Bethesda, MD

May 2, 2012

Illinois Education Research Council

Illinois Board of Higher Education

Presentation Outline

- The Illinois Policy Context
- The High School Class of 2003
  - Concurrent Enrollment
  - College Readiness
  - Reverse Transferring

The Policy Context

The Completion Agenda

- Is embraced by the Obama Administration, the National Governor's Association, the Governor's Office, the IBHE, Illinois P-20 Council, and numerous advocacy groups.
- US ranks 15th in degree attainment among G-20 countries for ages 25-34.
- 64-67% of jobs in Illinois will require post secondary training by 2020.
- 43% of working age adults in Illinois currently hold a post secondary credential.
- The Illinois goal is 60% of working age adults holding post-secondary credentials by 2025.

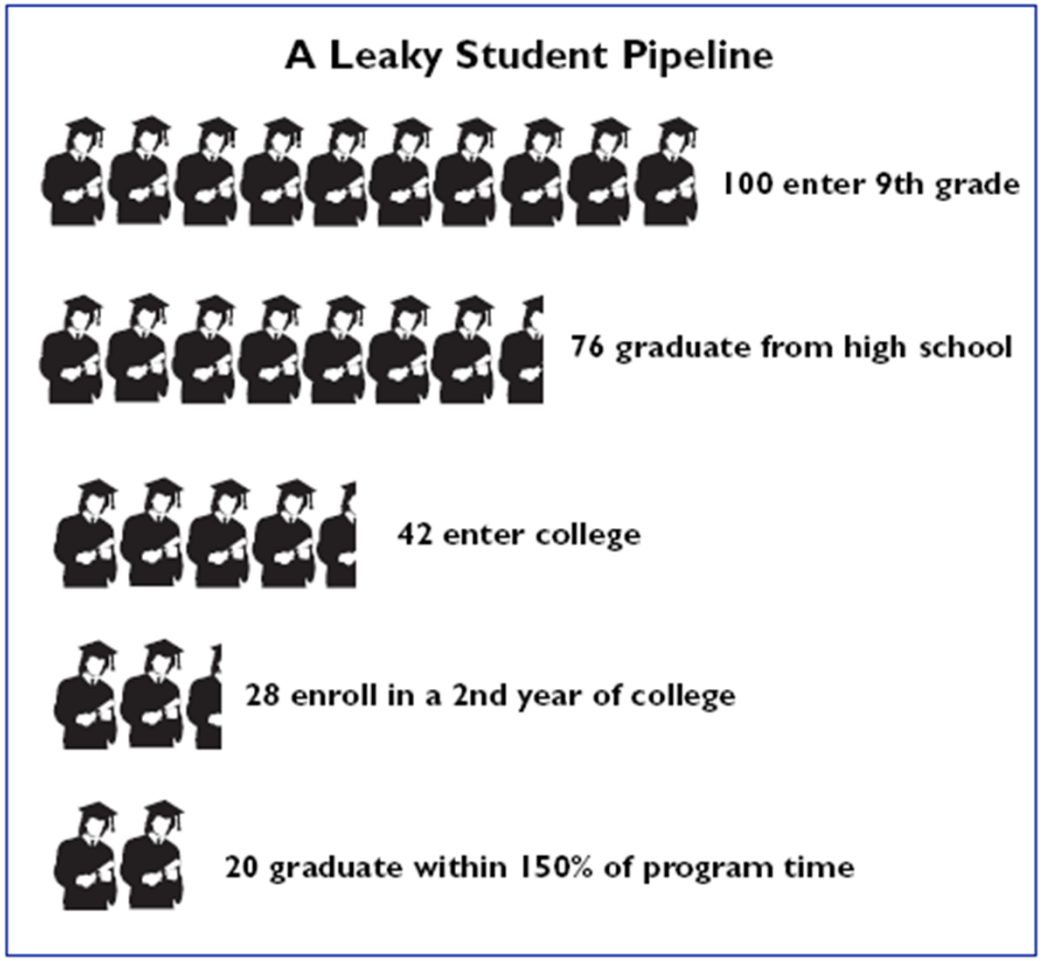
Sources: Complete College America http://www.completecollege.org/docs/Illinois.pdf /
Georgetown Center on Education and the Workforce http://cew.georgetown.edu/jobs2018/

Illinois Public Agenda for College and Career Success

- Master plan for Higher Education in Illinois
  - Originated with HJR 69 Spring 2007 adopted December 2008

1. Increase educational attainment.
2. Ensure college affordability for students, families, and taxpayers.
3. Increase the number of high-quality post-secondary credentials.
4. Better integrate Illinois' education, research, and innovation assets to meet economic needs of the state.

The Leaky Pipeline



Source: The Illinois Public Agenda for College and Career Success Full Report
http://www.ibhe.org/masterPlanning/materials/070109_PublicAgenda.pdf

State Initiatives to Achieve the Completion Agenda

- Incorporation of Common Core Standards into the Illinois Learning Standards
  - Aligns student outcomes to career and college readiness
- Implementation of improved teacher and school leader standards and preparation programs
- Implementation of Performance Funding for colleges and universities
- Establishment of a statewide P-20 Longitudinal Data System
- Alignment of curriculum to Common Core throughout P-20
  - Vertical and horizontal curriculum alignment projects
  - PARCC assessment
  - Illinois Articulation Initiative
  - Dual Credit Quality Act 2009

P-20 Longitudinal Data System

- P-20 Longitudinal Education Data System Act 2009
- State Board of Education, Board of Higher Education, Community College Board
  - Illinois Higher Education Consortium
- Governance in development
  - P-20 Council
  - Federated model
  - Linkages P-workforce

ILDS information available at http://www.ibhe.org/ILDS/default.htm

Dual Credit Task Force

- Dual Credit Task Force 2008
  - Potential Benefits
    - Reducing college costs
    - Speeding time to degree completion
    - Improving the curriculum for high school students
    - Facilitating the transitions and connections between high school and college
    - Opportunities for improving degree attainment for underserved student populations

Task Force materials available at http://www.ibhe.org/DualCredit/default.htm

Dual Credit Quality Act of 2009

- Emphasizes that the course is a college credit bearing course first and foremost
- Combined standards from
  - Existing ICCB administrative rules
  - National Alliance of Concurrent Enrollment Partnership Standards (NACEP)
  - Faculty
  - Students
  - Course Content

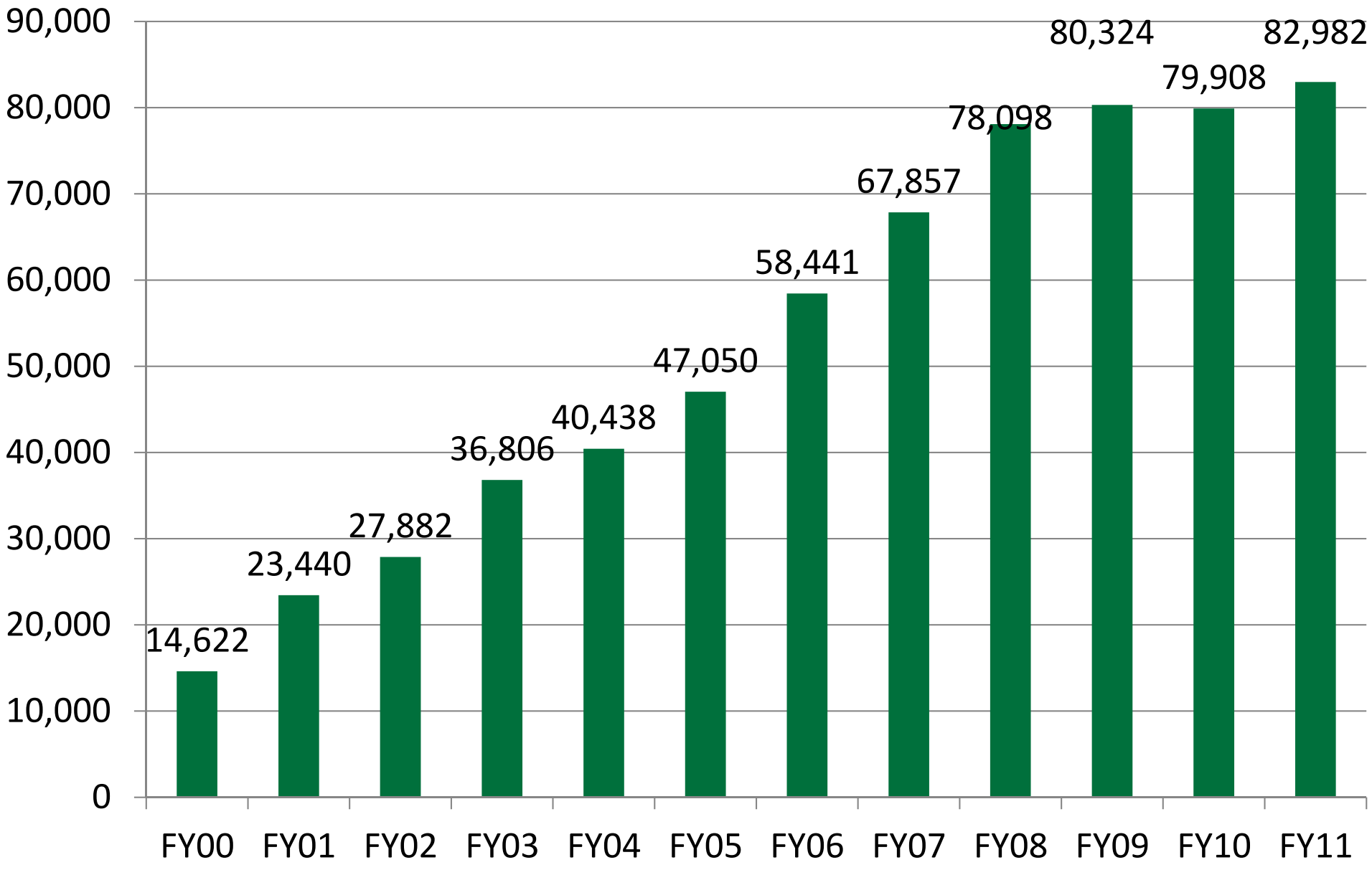
IBHE Dual Credit Fall 2010 Survey

Term	Institutions	Sections	Courses	Dual Credit Enrollment*	Total Enrollment
Fall 2009	13	59	40	966	1426
Spring 2010	9	45	30	640	1659
Summer 2010	1	15	4	388	388

* Enrollment numbers are duplicated if the same student enrolls in more than one course.

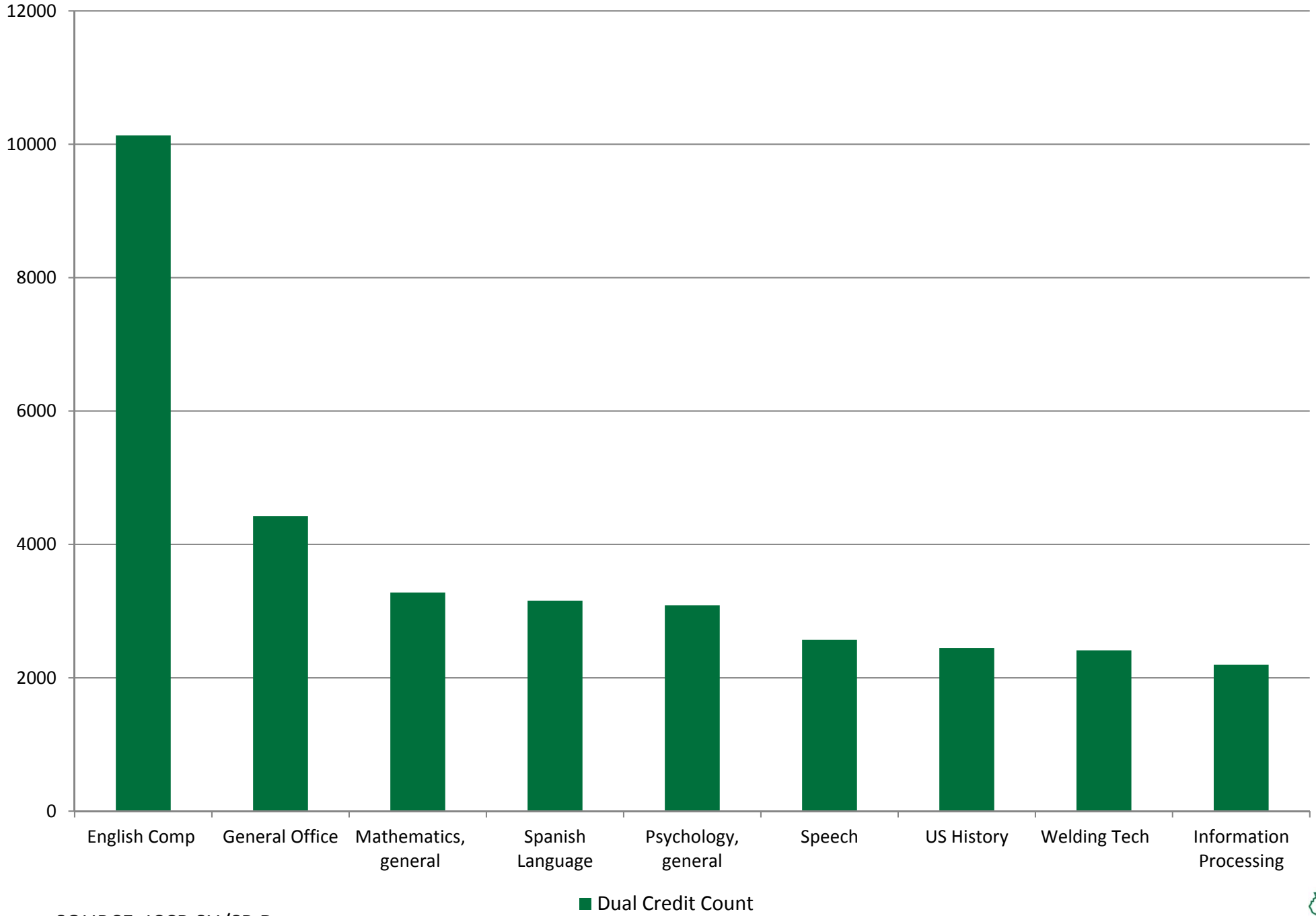
- Although not required to report on dual enrollment activity, 29 institutions indicated they had such enrollments.
- Only Illinois State University and Northeastern Illinois University reported offering dual credit courses
- The University of Illinois at Urbana- Champaign reported dual enrollment

Community College Dual Credit Enrollments



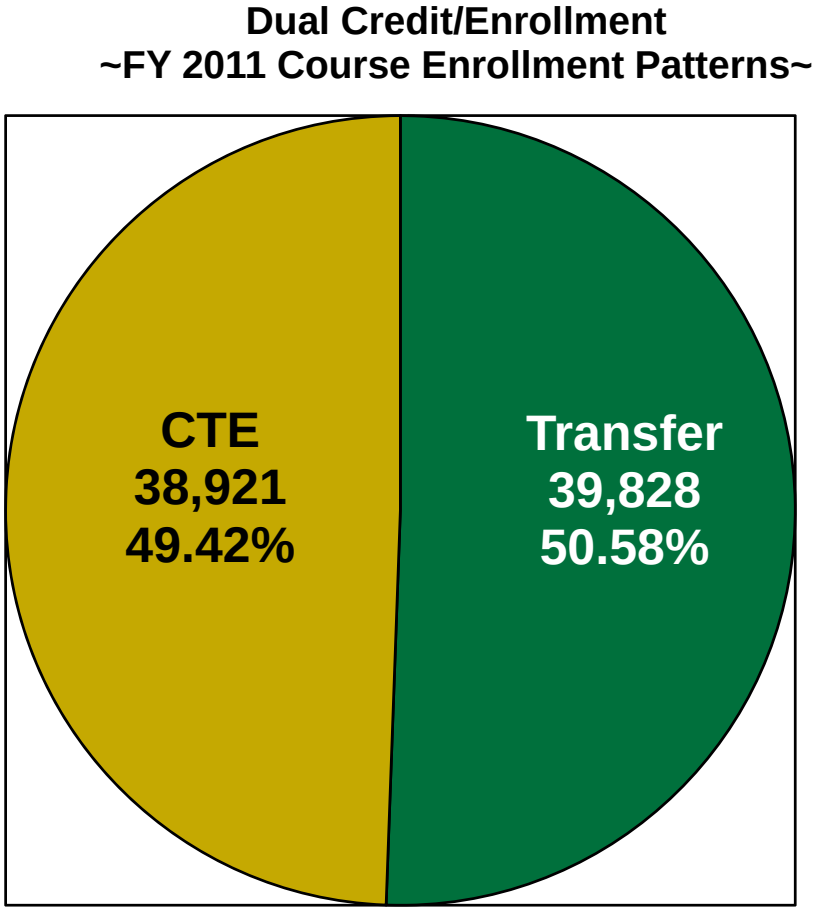
SOURCE: ICCB SU/SR Data

FY11 Community College Dual Credit Courses, by enrollment



SOURCE: ICCB SU/SR Data

Community College Dual Credit Course Pattern



SOURCE: ICCB SU/SR Data

Research on the Illinois High School Class of 2003

Illinois High School Class of 2003

- Includes 115,677 public high school students
  - Took the ACT in spring of 2002
  - Graduated high school in spring of 2003
- Does not include
  - Graduates of private high schools in Illinois
  - Students from other states who migrated to postsecondary institutions in Illinois
- Study period-fall of 2000 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
  - Supplemented with information from the Illinois High School Report Card, Barron's, IPEDS, and the Illinois Board of Higher Education

Effects of Concurrent Enrollment on Postsecondary Enrollment and Bachelor's Completion

Research Questions

By income category (quartiles)-

<$30K---- $30K-<$50K---- $50K-<$80K---- $80K+

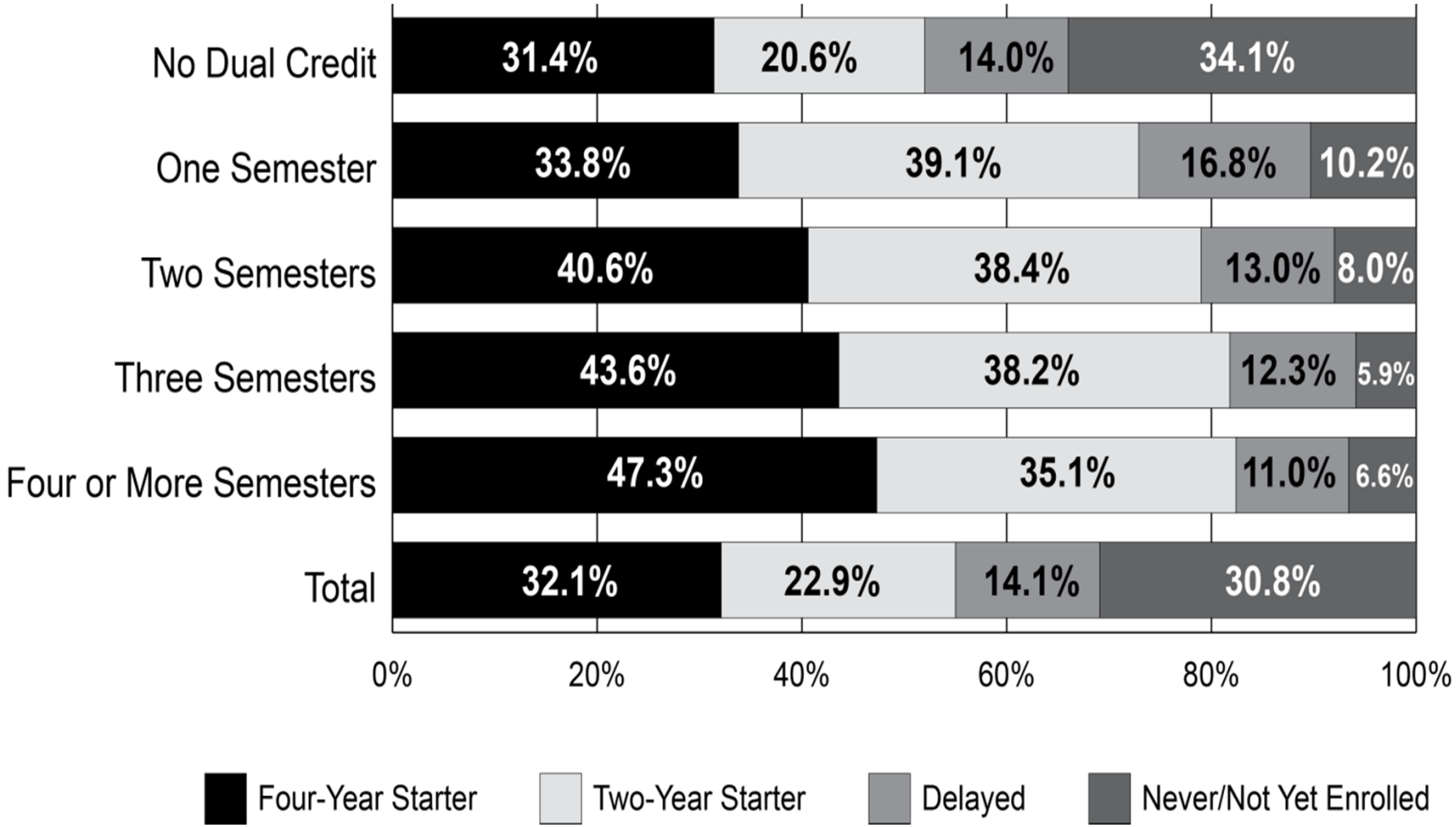
1. Controlling for other factors, what effect did concurrent enrollment have on postsecondary enrollment?

2. Controlling for other factors, what effect did concurrent enrollment have on time to bachelor's degree completion?

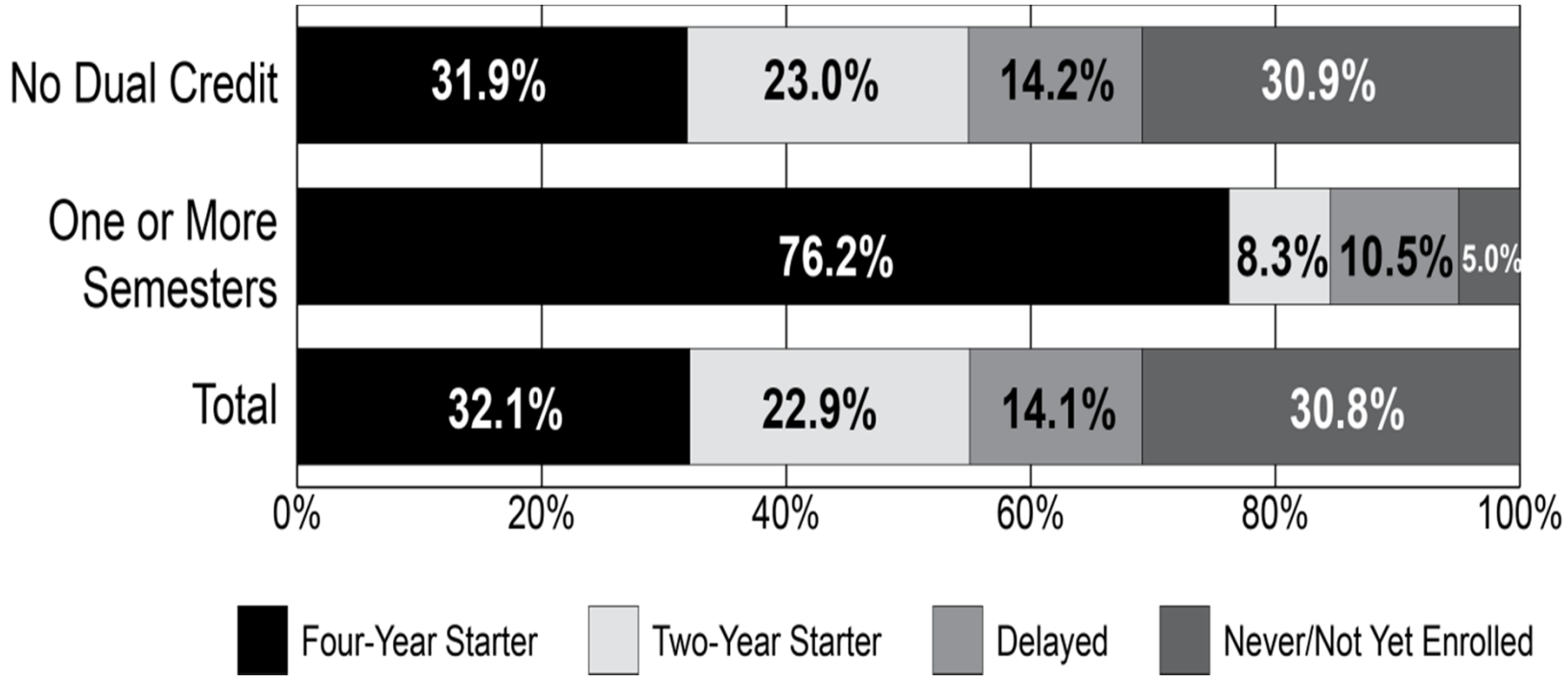
Methods

- **Research Question #1: Multinomial Logistic Regression**
  - Used with a categorical outcome (dependent).
  - Provides an estimate of the treatment effect (odds ratios) on each outcome category after adjusting for the other explanatory variables.
  - Outcome of reference was not being enrolled during the study period.
- **Research Question #2: Survival Analysis (Cox Regression)**
  - Traditionally used in medical and epidemiology research.
  - Used to explore the relationship between a set of explanatory variables and a time-based event of interest (number of semesters until reverse transfer).
  - Provides an estimate of the treatment effect (odds ratios) on survival.

Enrollment by the Number of Semesters Dually-Enrolled via ICCB



Enrollment by the Number of Semesters Dually-Enrolled via Four-Year Institutions



Predicting Enrollment Patterns*

	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 ICCB	4.124	5.305	3.349	4.026	2.966	3.631	2.500	2.953
Semesters Dually Enrolled 4-yr	9.121	4.187			10.909	2.422	13.844	5.754
AP English	.904	.904	.970	.927	1.002	.915	.961	.921
AP Math	.939	.946	.885	.811	.996	.865	.905	.960
AP Science	1.010	.928	.967	.937	1.033	1.002	1.161	.956
AP Social Studies	.886	.693	.932	.793	.899	.813	1.039	.820
AP Foreign Language	1.035	.822	.981	.854	1.124	.987	1.094	1.019
Gender (Male)	.794	.938	.909	.883	.869	.815	.881	.801
Race (African-American to White)	1.621	.686	2.500	.620	3.210	1.001	3.081	.988
(Hispanic to White)	1.080	.988	1.047	.783	.816	.799	.887	.709
(Asian to White)	.943	1.222	.993	.730	1.229	1.061	1.476	1.225
HS GPA (2.5-2.9 to ≤2.4)	2.769	1.337	2.840	1.496	2.703	1.345	2.706	1.243
(3.0-3.4 to ≤2.4)	3.512	1.187	3.733	1.394	3.943	1.495	3.732	1.483
(3.5-4.0 to ≤2.4)	3.568	.721	3.984	.988	4.456	1.098	3.986	1.099
ACT English	1.034	.986	1.057	.994	1.059	1.008	1.078	1.014
ACT Math	1.031	.958	1.028	.978	1.021	.978	1.044	.985
ACT Reading	1.011	.996	1.018	.996	1.017	.997	.998	.987
ACT Science	1.009	1.011	1.019	1.007	1.047	1.017	1.073	1.026
Completed ACT Core	1.391	1.118	1.475	1.172	1.339	1.194	1.491	1.132
HS Program (CTE to College Prep)	.540	1.074	.429	.703	.546	.830	.722	.837
(General to College Prep)	.739	1.133	.614	.935	.647	.879	.644	.782
Expecting to Work While Enrolled	.900	1.265	.928	1.012	.837	.829	.804	.869
Expecting to Receive Financial Aid	1.161	1.172	1.272	1.010	1.465	1.123	1.659	1.273
Number of Siblings	.921	.972	.938	.962	.923	.950	.928	.930
Region (Northeast to Chicago)	.905	1.929	.944	1.376	.848	1.950	.682	1.473
(Northwest to Chicago)	.538	2.179	.567	1.490	.514	2.197	.374	1.362
(East Central to Chicago)	.618	2.078	.546	1.232	.454	1.427	.445	1.074
(West Central to Chicago)	.622	1.994	.688	1.594	.482	2.050	.337	1.449
(Southwest to Chicago)	.662	1.500	.625	.965	.460	1.506	.444	1.012
(Southeast to Chicago)	.366	2.008	.343	1.173	.256	1.748	.243	1.193
High School Mean Composite ACT	1.075	.935	1.111	1.005	1.101	1.018	1.066	1.043

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High School Mean Composite ACT	1.075	.935	1.111	1.005	1.101	1.018	1.066	1.043

*shaded cells indicate statistical significance at the p≤.001 level.

Predicting an Accelerated Time to 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 ICCB	1.034	1.014	1.046	1.098
Semesters Dually Enrolled 4-yr	1.027		1.123	1.173
AP English	.959	1.002	.990	.999
AP Math	1.011	1.030	1.030	.967
AP Science	.987	.934	.965	.929
AP Social Studies	1.052	1.065	1.069	1.067
AP Foreign Language	1.077	1.048	1.033	1.008
Gender (Male)	.808	.843	.831	.825
Race (African-American to White)	.840	.830	.834	.708
(Hispanic to White)	.804	.767	.828	.705
(Asian to White)	.942	.925	.941	1.109
HS GPA (2.5-2.9 to ≤2.4)	1.518	1.531	1.249	1.420
(3.0-3.4 to ≤2.4)	1.998	2.177	1.829	2.067
(3.5-4.0 to ≤2.4)	2.593	2.981	2.528	2.902
ACT English	1.011	1.003	1.014	1.010
ACT Math	1.009	1.016	1.018	1.022
ACT Reading	1.004	.999	.998	1.013
ACT Science	.994	.991	.996	.995
Completed ACT Core	1.030	1.052	1.102	1.148
High School Program (CTE to College Prep)	1.015	.900	.897	.966
(General to College Prep)	.970	.892	.985	.950
Expecting to Work While Enrolled	.968	.962	.895	.955
Expecting to Receive Financial Aid	.988	.929	.994	.776
Number of Siblings	.969	.973	.975	.910
Region (Northwest to Chicago)	1.051	.971	.846	1.007
(Northwest to Chicago)	.995	1.035	.910	.884
(East Central to Chicago)	1.028	.972	.977	.984
(West Central to Chicago)	.973	.891	.844	.837
(Southwest to Chicago)	.968	.848	.979	.910
(Southeast to Chicago)	.739	.941	.814	1.050
High School Mean Composite ACT	1.042	1.049	1.046	1.050
Distance between HS and College (>30-74 to <30)	1.047	1.059	1.142	1.222
(75-174 to <30)	1.101	1.175	1.166	1.385
(175+ to <30)	1.113	1.074	1.106	1.296
Sector (Public)	1.040	.980	1.014	.964
Selectivity (Highly Selective)	1.068	1.134	1.122	1.161
Selectivity/ College Readiness Alignment (Undermatched to Aligned)	.920	.984	.868	.850
Overmatched to Aligned	1.130	1.161	1.139	1.322

Predicting an Accelerated Time to 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 ICCB	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≤.001 level.

ACT Math	1.009	1.016	1.018	1.022
ACT Reading	1.004	.999	.998	1.013
ACT Science	.994	.991	.996	.995
Completed ACT Core	1.030	1.052	1.102	1.148
High School Program (CTE to College Prep)	1.015	.900	.897	.966
(General to College Prep)	.970	.892	.985	.950
Expecting to Work While Enrolled	.968	.962	.895	.955
Expecting to Receive Financial Aid	.988	.929	.994	.776
Number of Siblings	.969	.973	.975	.910
Region (Northwest to Chicago)	1.051	.971	.846	1.007
(Northwest to Chicago)	.995	1.035	.910	.884
(East Central to Chicago)	1.028	.972	.977	.984
(West Central to Chicago)	.973	.891	.844	.837
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Predicting an Accelerated Time to Bachelor's Degree Completion*

	High Income	Mid-High Income	Mid-Low Income	Low Income
	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
AP English	.959	1.002	.990	.999
AP Math	1.011	1.030	1.030	.967
AP Science	.987	.934	.965	.929
AP Social Studies	1.052	1.065	1.069	1.067
AP Foreign Language	1.077	1.048	1.033	1.008

*shaded cells indicate statistical significance at the p≤.001 level.

Predicting an Accelerated Time to Bachelor's Degree Completion*

	High Income	Mid-High Income	Mid-Low Income	Low Income
	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
Gender (Male)	.808	.843	.831	.825
Race (African-American to White)	.840	.830	.834	.708
(Hispanic to White)	.804	.767	.828	.705
(Asian to White)	.942	.925	.941	1.109

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*shaded cells indicate statistical significance at the p≤.001 level.

Major Findings

- Dual credit via ICCB had a strong effect on the likelihood of postsecondary enrollment for all income groups; however the effect for high income students was slightly larger.
- Dual credit via four-year institutions had a strong effect on the likelihood of enrolling at four-year institutions for lower income students only.
- Dual credit via ICCB had a strong effect on the likelihood of an accelerated time to bachelor's degree completion for low income students only.

College Readiness and Bachelor's Completion

Research Questions

1. How is college readiness distributed among the Illinois high school class of 2003?

2. How is college readiness associated with gender, race, parental income, and region?

3. How do the college readiness benchmark patterns relate to bachelor's completion?

4. What happens when we explore bachelor's degree completion by looking at the interaction of college readiness and key demographic factors?

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 college 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

ACT College Readiness Benchmarks

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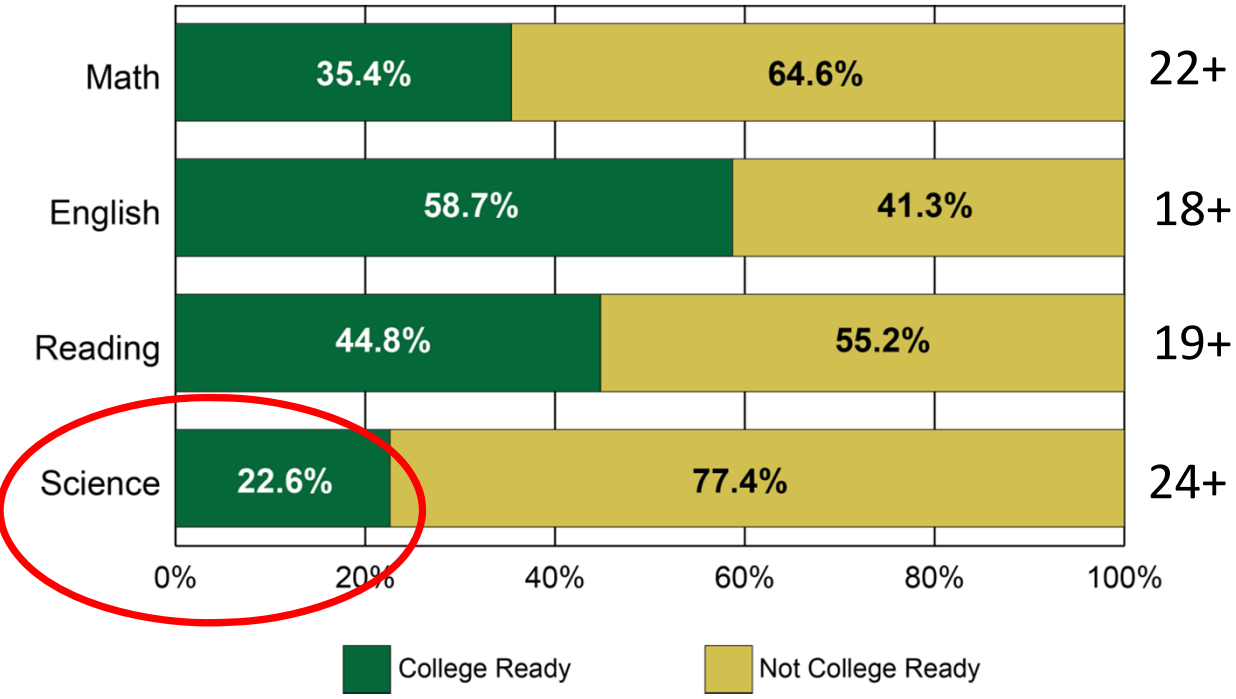
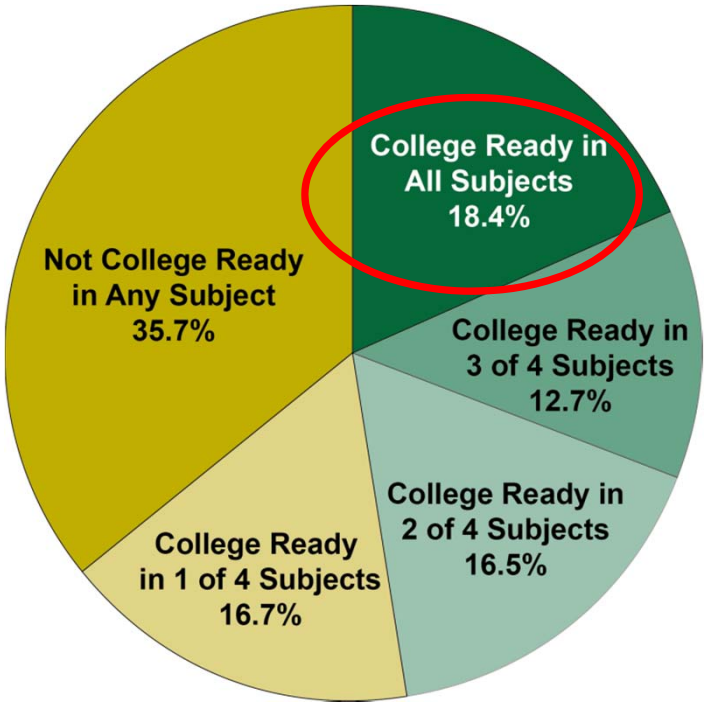
How is college readiness distributed among the Class of 2003?





- Lower benchmarks are associated with higher rates of meeting the benchmark
- Overall college readiness (meeting all four) is almost entirely predicated on the test with the highest benchmark-Science
- 80% of the students meeting the science benchmark, met all of the benchmarks

ACT College Readiness

	Math	English	Reading	Science	n	% of Total Enrolled
	≥22	≥18	≥21	≥24	115,677	100.0%
All Subjects	✓	✓	✓	✓	21,246	18.4%
3 of 4 Subjects	✓	✓	✓	⊘	10,743	9.3%
	✓	✓	⊘	✓	1,618	1.4%
	✓	⊘	✓	✓	146	0.1%
	⊘	✓	✓	✓	2,235	1.9%
2 of 4 Subjects	✓	✓	⊘	⊘	4,798	4.1%
	✓	⊘	✓	⊘	539	0.5%
	✓	⊘	⊘	✓	143	0.1%
	⊘	✓	✓	⊘	13,123	11.3%
	⊘	✓	⊘	✓	479	0.4%
	⊘	⊘	✓	✓	121	0.1%
1 of 4 Subjects	✓	⊘	⊘	⊘	1,706	1.5%
	⊘	✓	⊘	⊘	13,709	11.9%
	⊘	⊘	✓	⊘	3633	3.1%
	⊘	⊘	⊘	✓	182	0.2%
None	⊘	⊘	⊘	⊘	41,256	35.7%

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	⊘	⊘	✓	⊘	3633	3.1%
None	⊘	⊘	⊘	⊘	41,256	35.7%

✓ = met the benchmark ⊘ = missed the benchmark

	⊘	⊘	⊘	✓	182	0.2%
ne	⊘	⊘	⊘	⊘	41,256	35.7%

How is college readiness associated with gender, parental income, and race?

ACT College Readiness Category	M-E-R-S ✓-✓-✓-✓	M-E-R-S ✓-✓-✓-⊘	M-E-R-S ✓-✓-⊘-⊘	M-E-R-S ⊘-✓-✓-⊘	M-E-R-S ⊘-✓-⊘-⊘	M-E-R-S ⊘-⊘-✓-⊘	M-E-R-S ⊘-⊘-⊘-⊘
Gender							
Male	21%	8%	4%	8%	10%	4%	38%
Female	16%	10%	4%	14%	14%	3%	34%
Parental Income							
High	37%	14%	5%	10%	10%	2%	14%
Mid-High	24%	12%	5%	13%	12%	3%	23%
Mid-Low	15%	9%	4%	13%	13%	4%	36%
Low	7%	5%	3%	10%	12%	4%	54%
Race							
African-American	3%	4%	2%	10%	15%	3%	61%
Hispanic	5%	6%	3%	10%	12%	4%	57%
Asian	29%	12%	8%	8%	8%	2%	23%
White	24%	12%	5%	13%	12%	3%	24%

M = Math E = English R = Reading S = Science

How is college readiness associated with gender, parental income, and race?

ACT College Readiness Category	M-E-R-S ✓-✓-✓-✓	M-E-R-S ✓-✓-✓-⊘	M-E-R-S ✓-✓-⊘-⊘	M-E-R-S ⊘-✓-✓-⊘	M-E-R-S ⊘-✓-⊘-⊘	M-E-R-S ⊘-⊘-✓-⊘	M-E-R-S ⊘-⊘-⊘-⊘
Gender							
Male	21%	8%	4%	8%	10%	4%	38%
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M = Math E = English R = Reading S = Science

R

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How is college readiness associated with gender, parental income, and race?

ACT College Readiness Category	M-E-R-S ✓-✓-✓-✓	M-E-R-S ✓-✓-✓-⊘	M-E-R-S ✓-✓-⊘-⊘	M-E-R-S ⊘-✓-✓-⊘	M-E-R-S ⊘-✓-⊘-⊘	M-E-R-S ⊘-⊘-✓-⊘	M-E-R-S ⊘-⊘-⊘-⊘
Parental Income							
High	37%	14%	5%	10%	10%	2%	14%
Mid-High	24%	12%	5%	13%	12%	3%	23%
Mid-Low	15%	9%	4%	13%	13%	4%	36%
Low	7%	5%	3%	10%	12%	4%	54%
Hispanic	5%	6%	3%	10%	12%	4%	57%
Asian	29%	12%	8%	8%	8%	2%	23%
White	24%	12%	5%	13%	12%	3%	24%

M = Math E = English R = Reading S = Science

How is college readiness associated with gender, parental income, and race?

ACT College Readiness Category	M-E-R-S ✓-✓-✓-✓	M-E-R-S ✓-✓-✓-⊘	M-E-R-S ✓-✓-⊘-⊘	M-E-R-S ⊘-✓-✓-⊘	M-E-R-S ⊘-✓-⊘-⊘	M-E-R-S ⊘-⊘-✓-⊘	M-E-R-S ⊘-⊘-⊘-⊘
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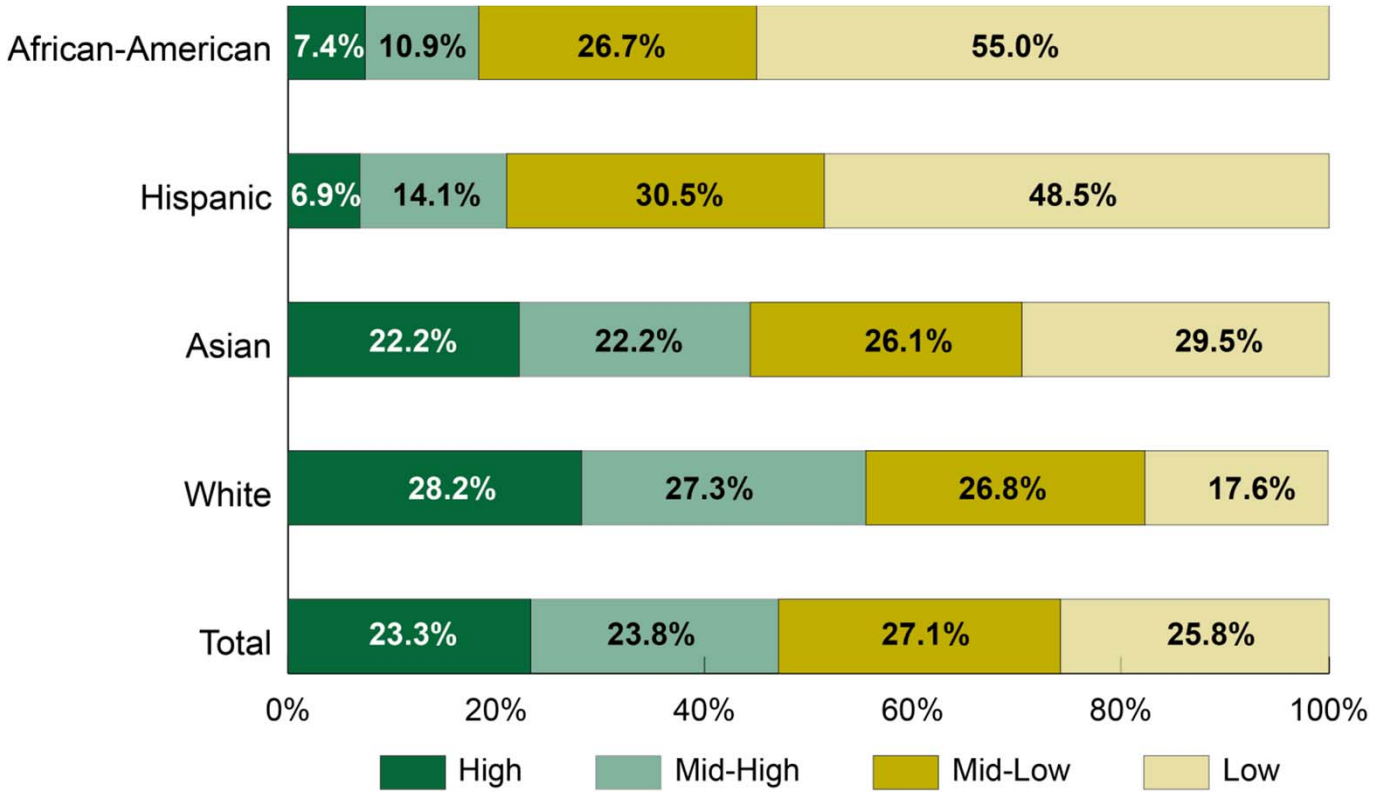
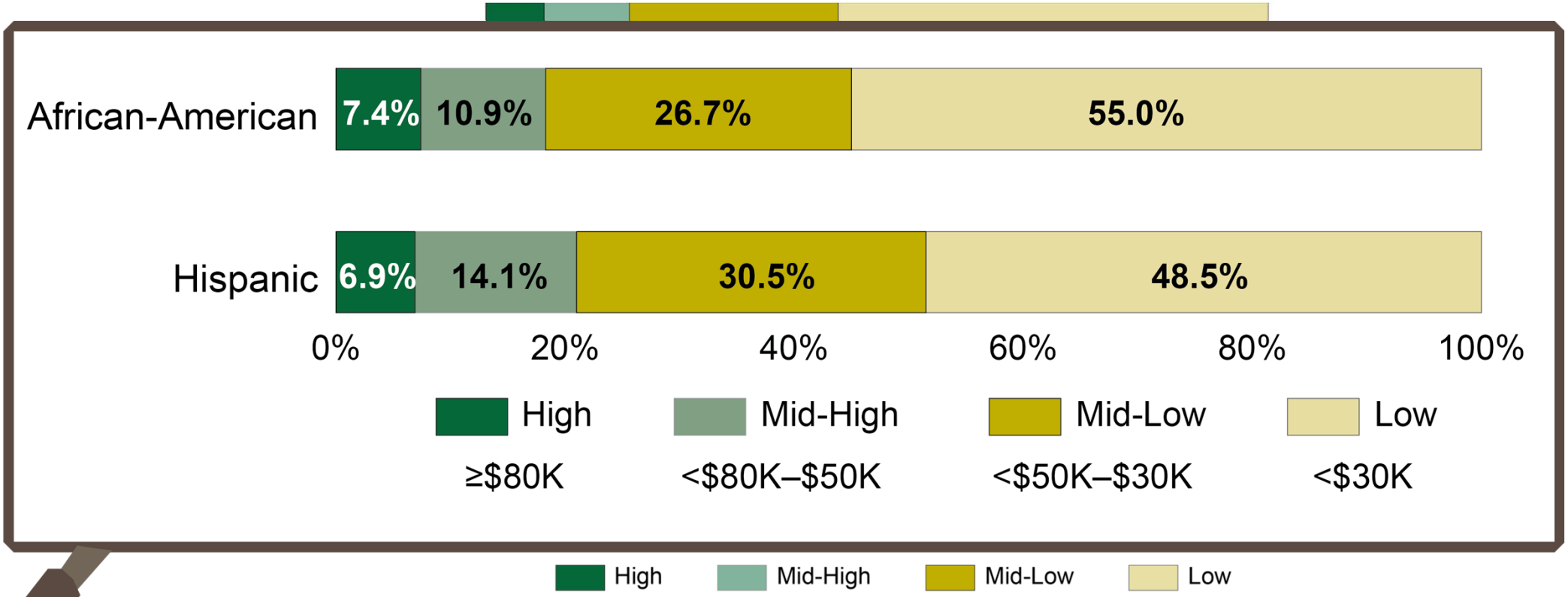
Race and Parental Income

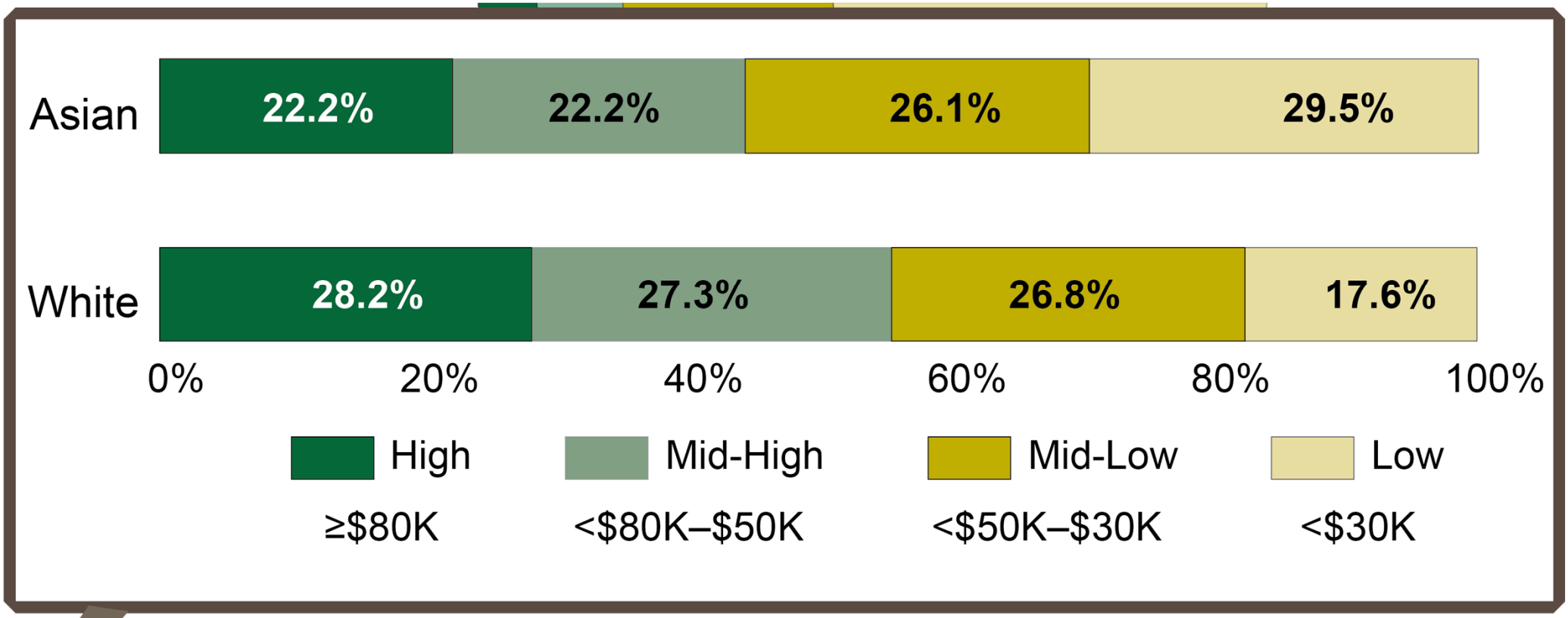


Race and Parental Income



- A disproportionately high number of non-Asian minority students fell into the lower income categories (roughly 80%)

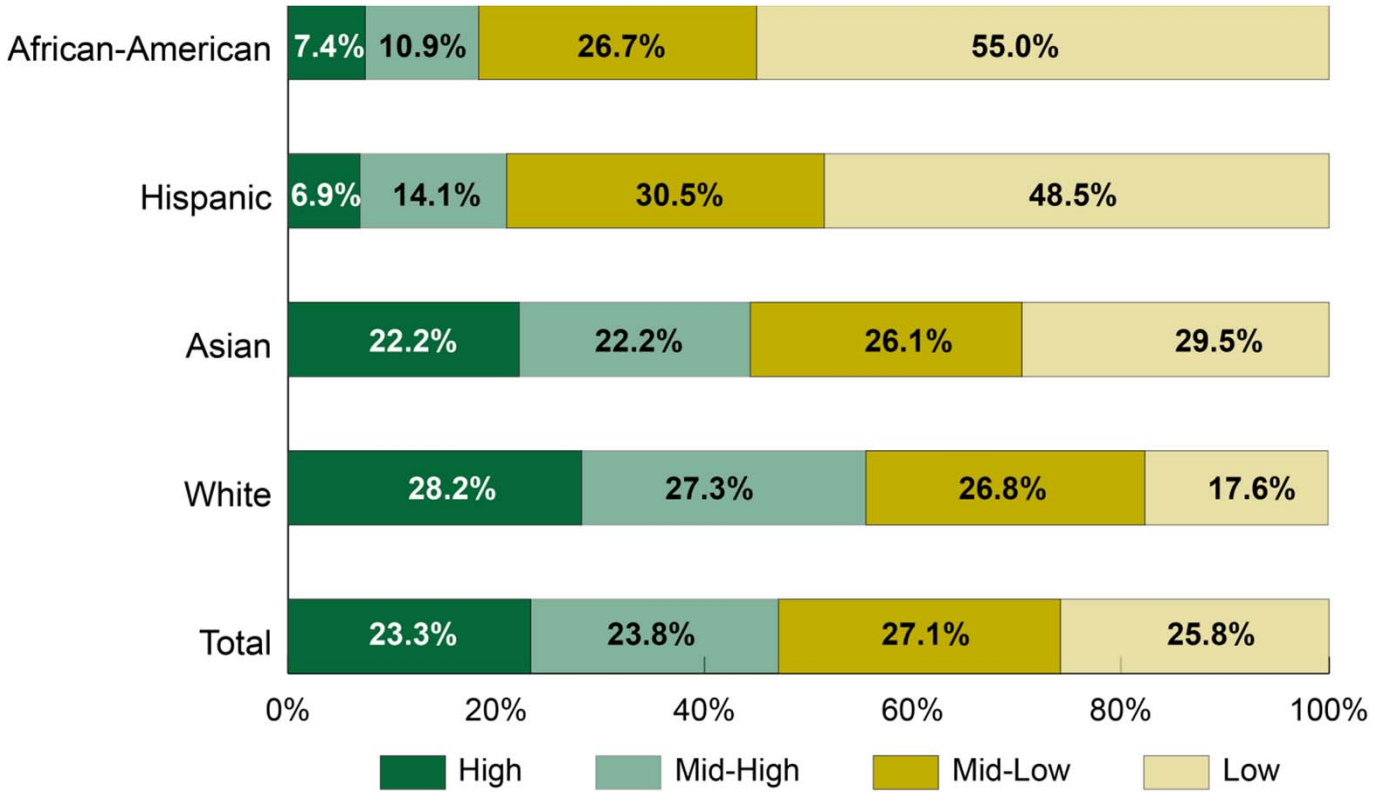
Race and Parental Income



A disproportionately high number of non-Asian minority students fell into the lower income categories (roughly 80%)

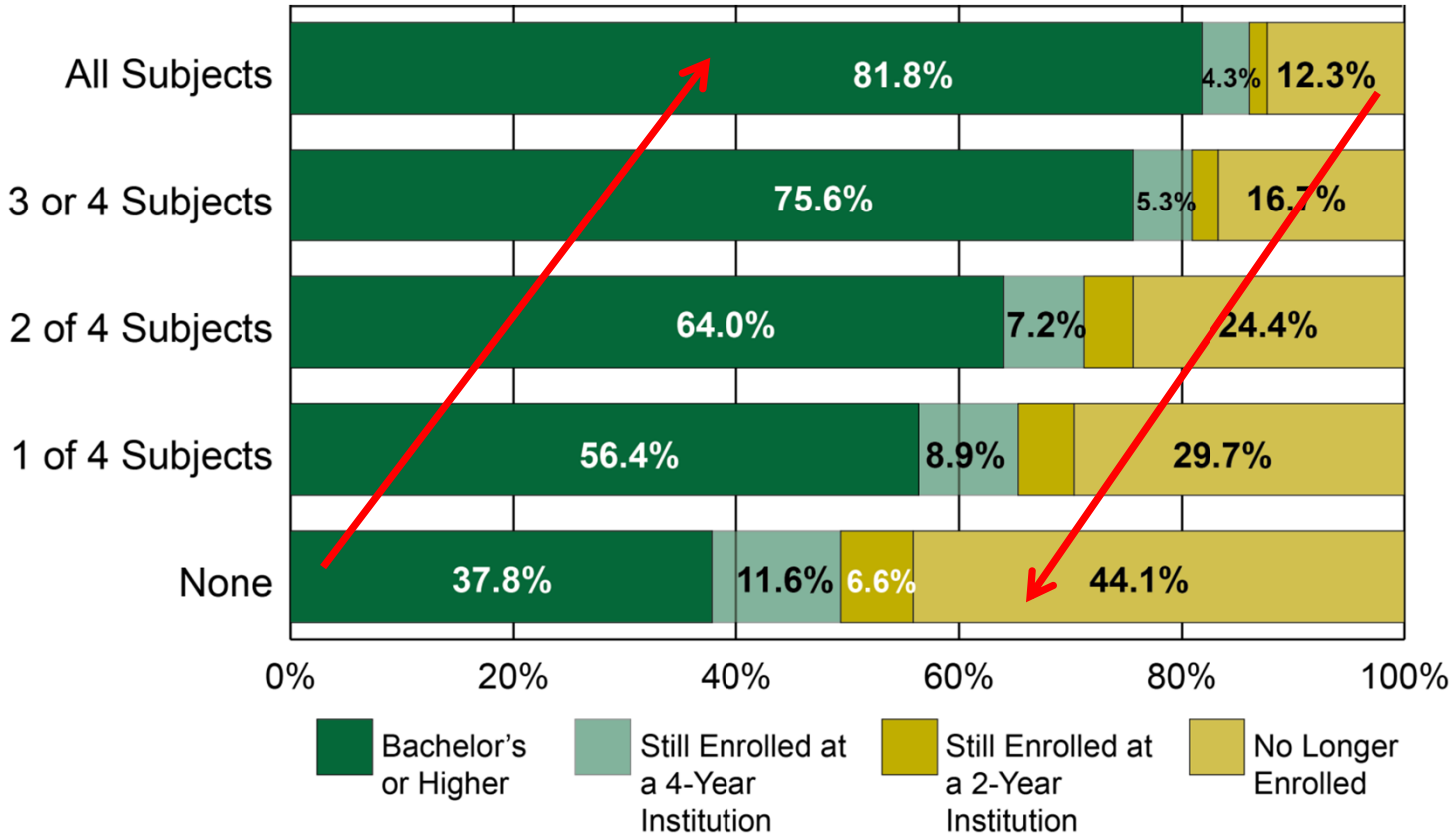
- White and Asian students had a more equal income distribution. Slightly more white students fell in the upper income categories

Race and Parental Income



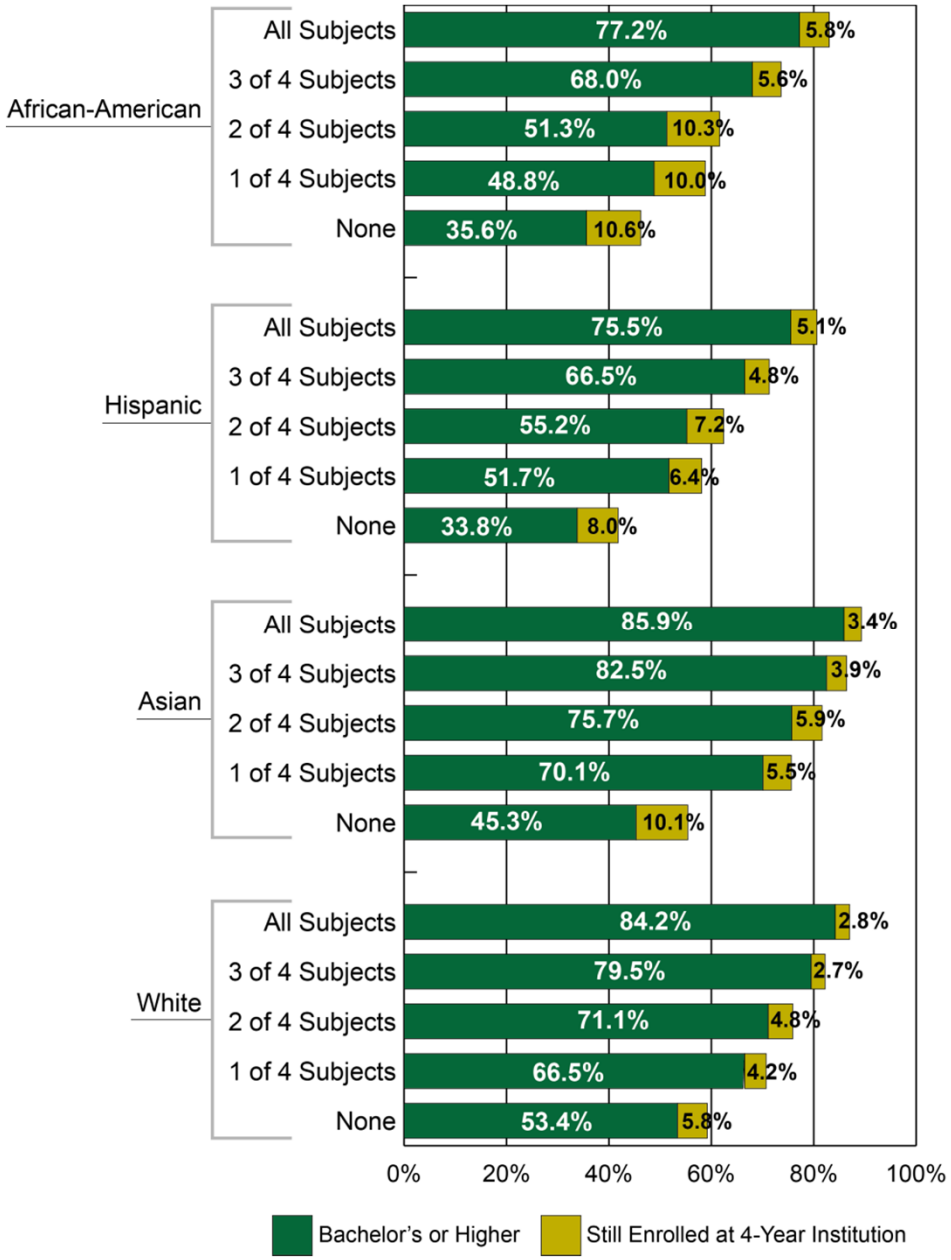
- A disproportionately high number of non-Asian minority students fell into the lower income categories (roughly 80%)
- White and Asian students had a more equal income distribution. Slightly more white students fell in the upper income categories
- When looking at educational outcomes and race, one must also consider the concentration of poverty.

How is college readiness associated with bachelor's completion?



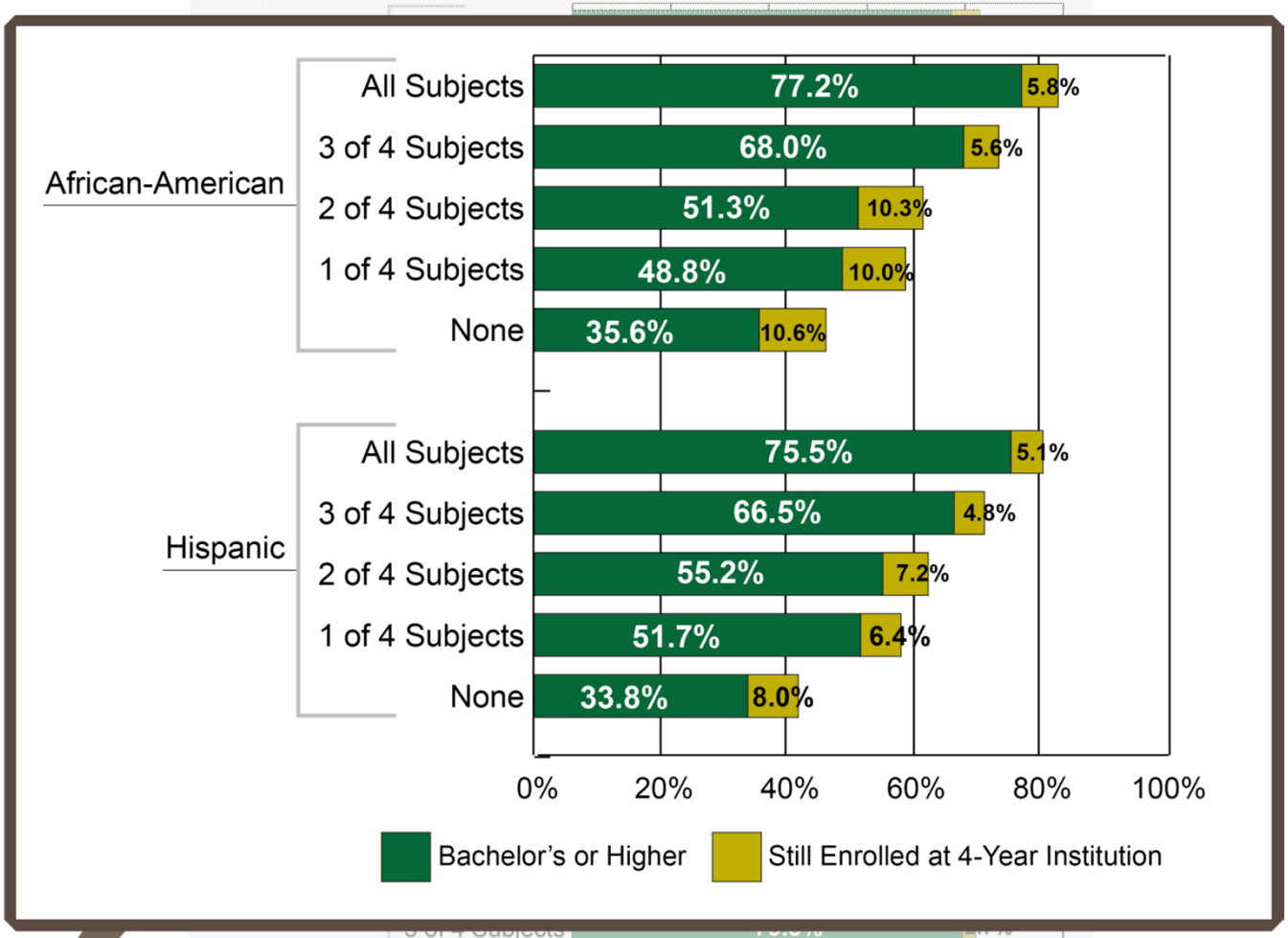
Within seven academic years of initial enrollment-fall of 2003 through spring of 2010.

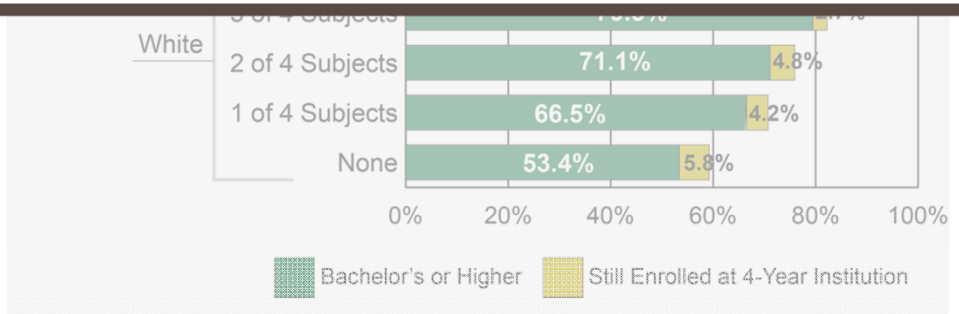
Interaction of Race & College Readiness and Bachelor's Completion



Interaction of Race & College Readiness and Bachelor's Completion

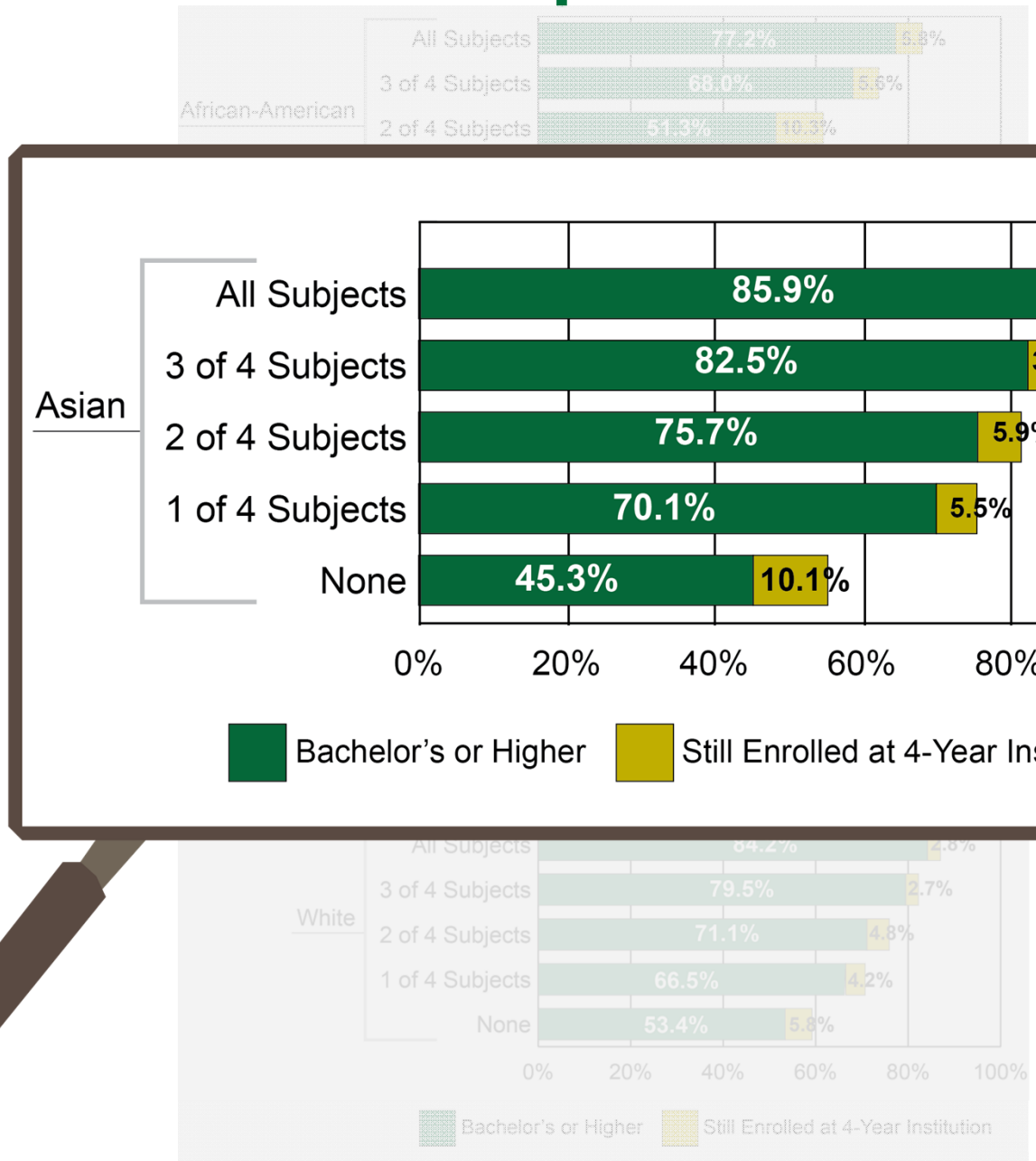
- Non-Asian minority students had lower rates of degree completion throughout all readiness categories and a higher proportion still in the educational pipeline.





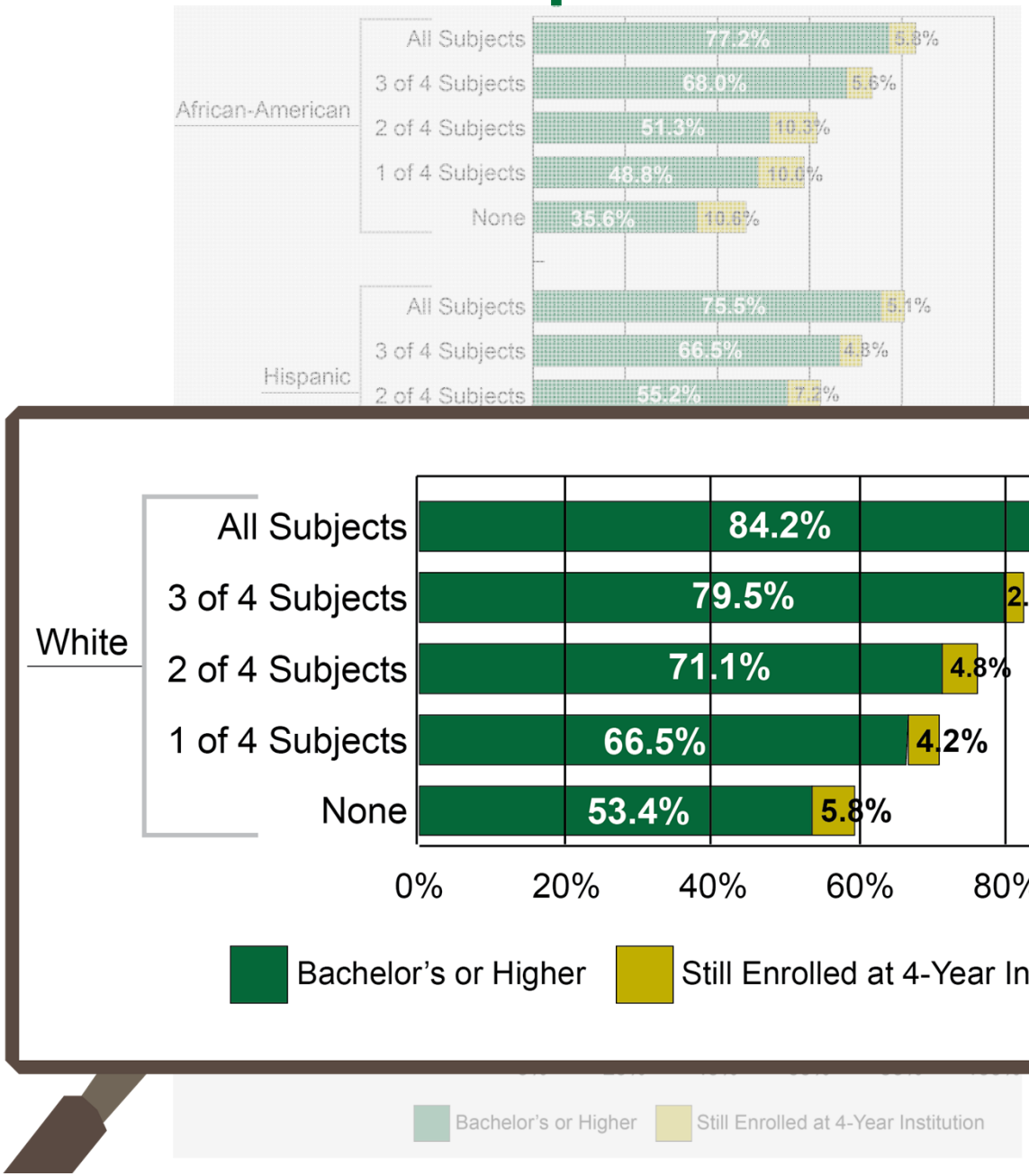
Interaction of Race & College Readiness and Bachelor's Completion

- Asian students completed bachelor's degrees at higher rates than similarly prepared white students in all but one category



Interaction of Race & College Readiness and Bachelor's Completion

- White students missing all of the benchmarks had a degree completion rate over 53%. This is higher than African-American students meeting one to two of the benchmarks.



Interaction of Selectivity & College Readiness on Bachelor's Completion

	End of Study Status			
Selectivity	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 highly competitive institutions had similar rates of bachelor's completion as students meeting all four benchmarks enrolling at very competitive institutions.

Interaction of Selectivity & College Readiness on Bachelor's Completion

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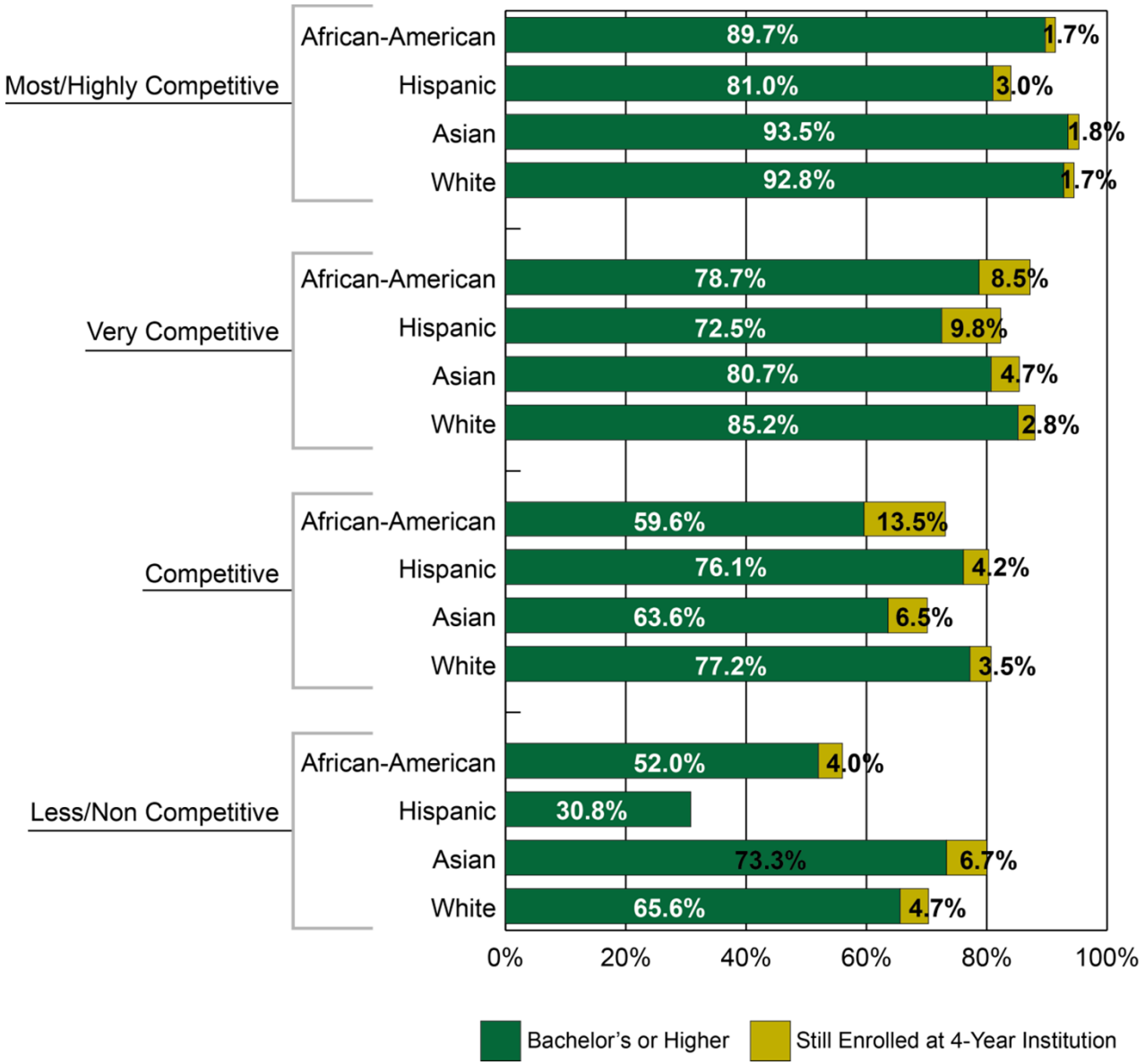
1 of 4	42.8%	9.3%	4.2%	43.7%
None	27.5%	10.9%	6.6%	55.0%

- The least prepared students enrolling at the most selective institutions outperformed the best prepared students at less selective institutions.

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



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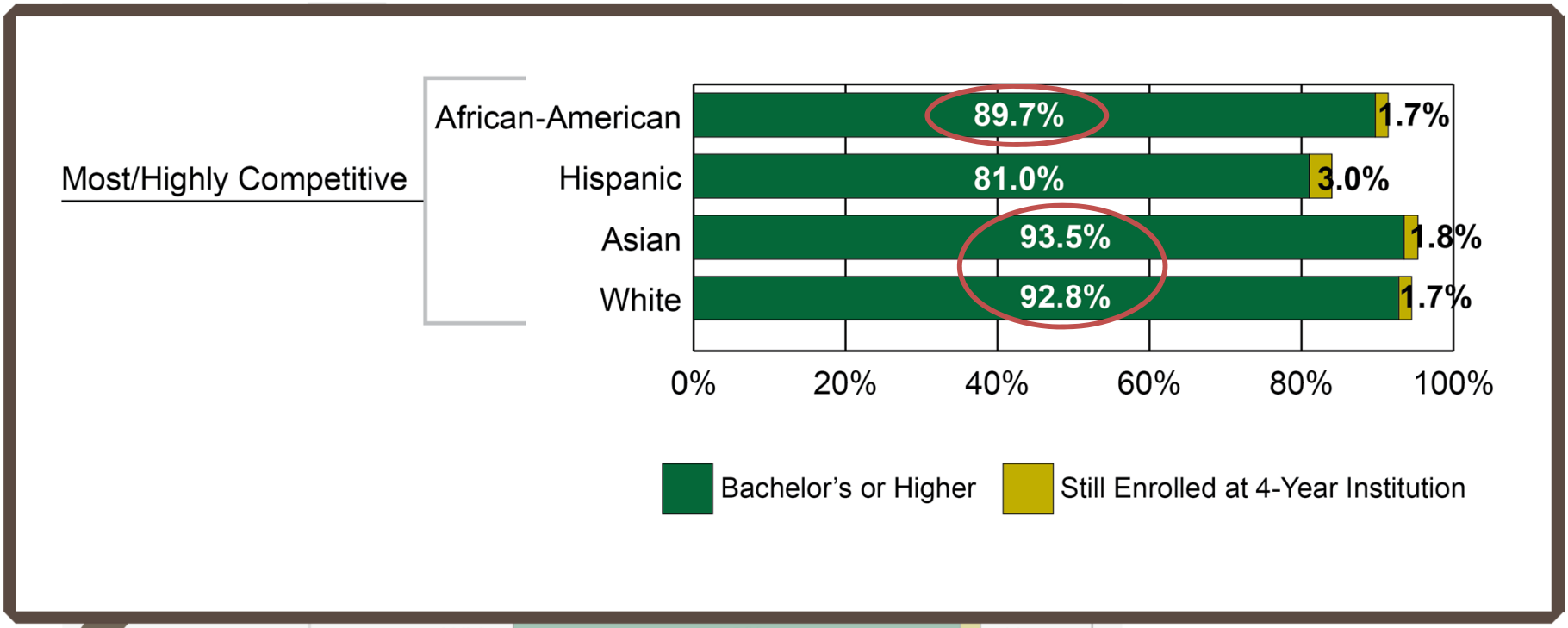
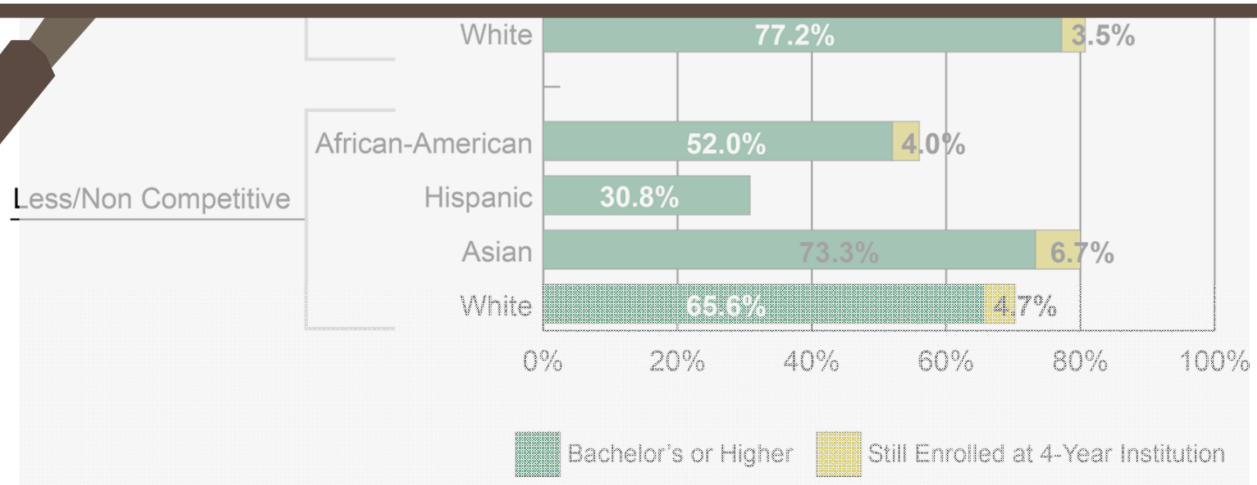
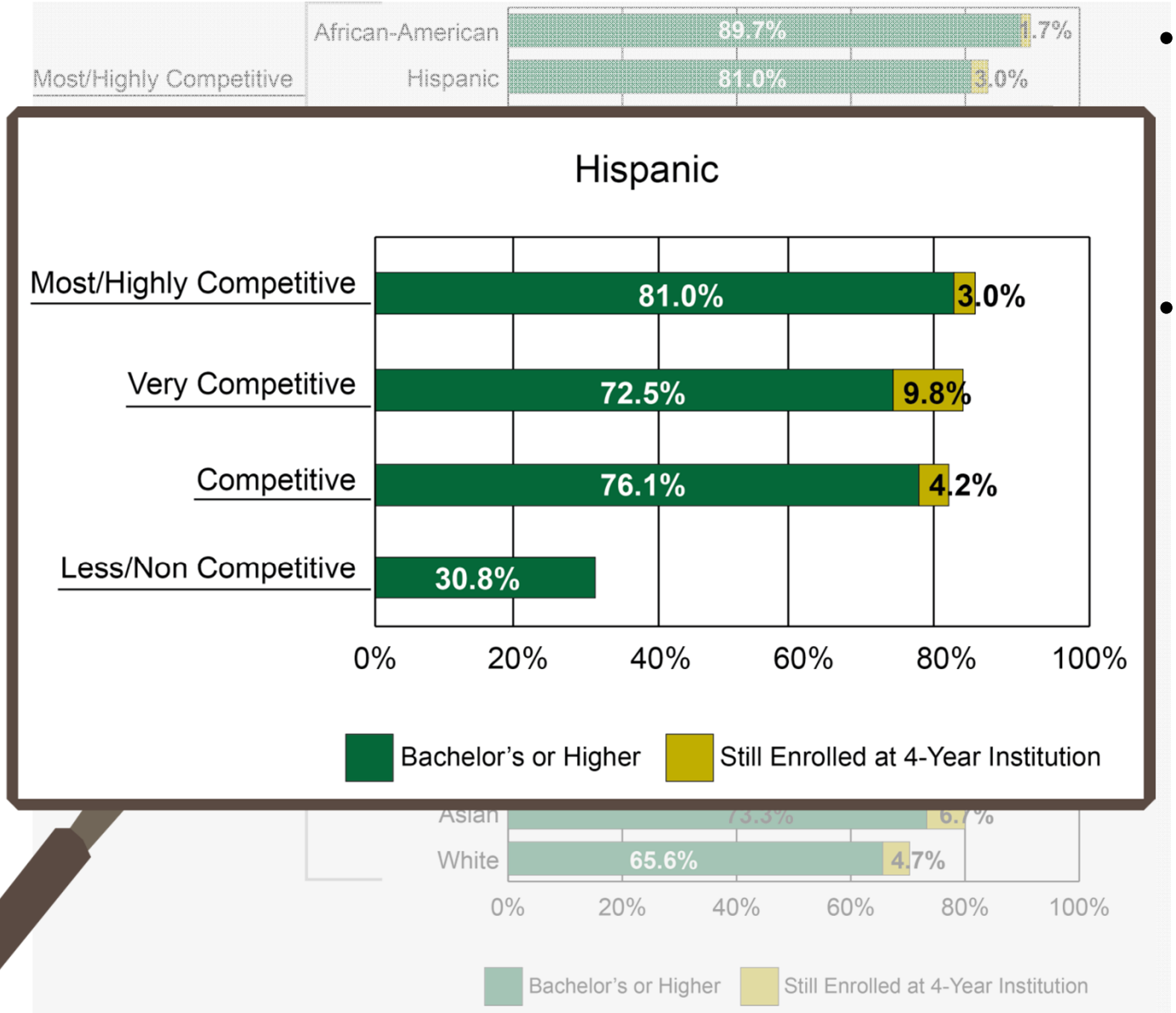




- Enrolling at a highly selective institution narrows the racial gap for African-American students.

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 large decline in moving from competitive to non-competitive institutions.

Key Findings

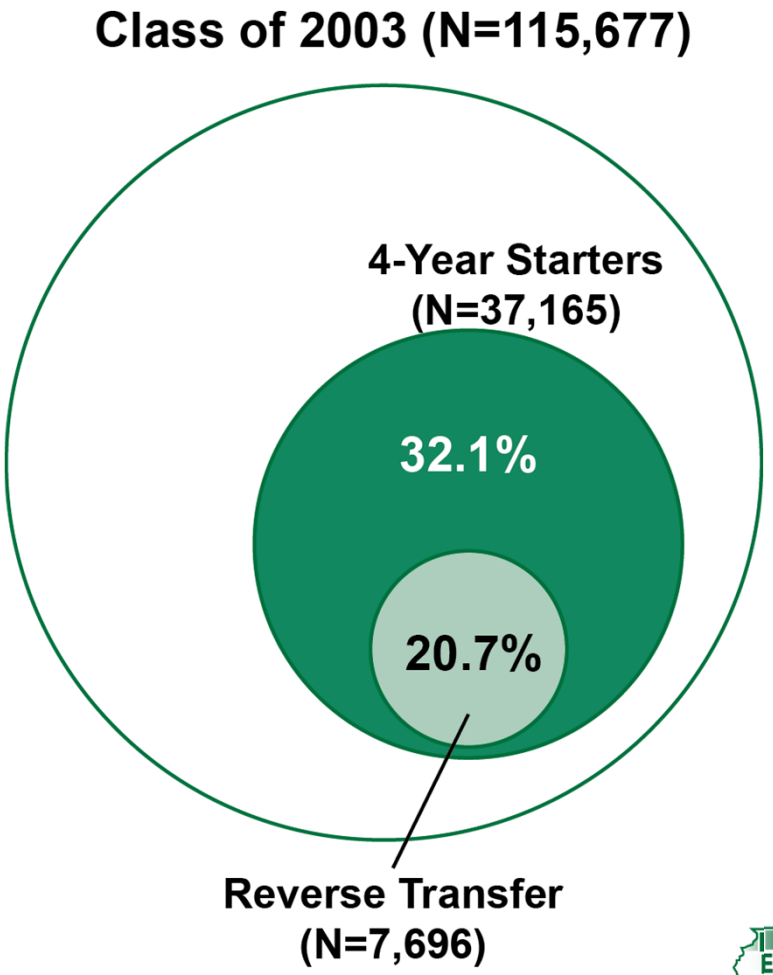
- College readiness, as measured by the ACT benchmarks, was not evenly distributed across the demographic factors we explored.
- Meeting three or more of the benchmarks was related to an increased rate of bachelor's completion, particularly for higher income students and those enrolling at more selective institutions.
  - ❖ In terms of bachelor's completion the importance of college readiness varied across demographic groups.
- When we looked at the more nuanced readiness patterns, meeting the English and/or Math benchmarks appeared to have more of a positive impact on the postsecondary outcomes than meeting the Science or Reading benchmarks.
  - ❖ Bettinger, Evans, and Pope (2011)
  - ❖ Lichtenberger (2011)

Reverse Transfer Students and Postsecondary Outcomes: A Potential Opportunity

What is a reverse transfer student?

A student who initially enrolls at a four-year college and subsequently transfers to a community college.

- More than one out of every five four-year starters met this distinction (21%)
  - Does not include summer enrollment
  - Does not include concurrent enrollment
  - Does not include post-bachelor's enrollment



Research Questions: Conditional Upon Initially Enrolling at a Four-Year Institution:

1. What factors are related to an accelerated time to reverse transfer?
2. Among reverse transfer students, which outcomes were attained at the community college (e.g., associate's completion)?
3. Among reverse transfer students, what factors are related to an accelerated time to return to a four-year institution?
4. Among those returning, what factors are related to an accelerated time to bachelor's completion?

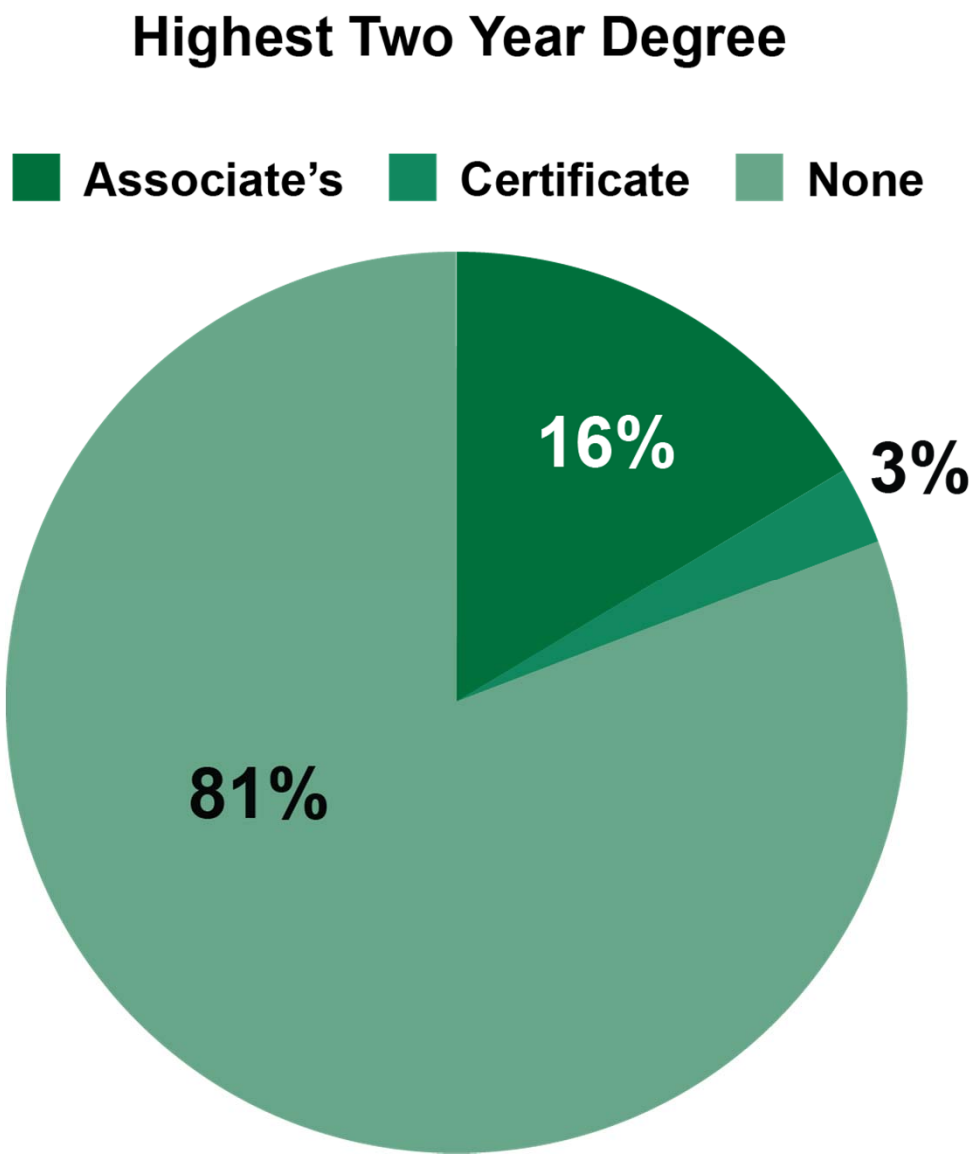
Factors

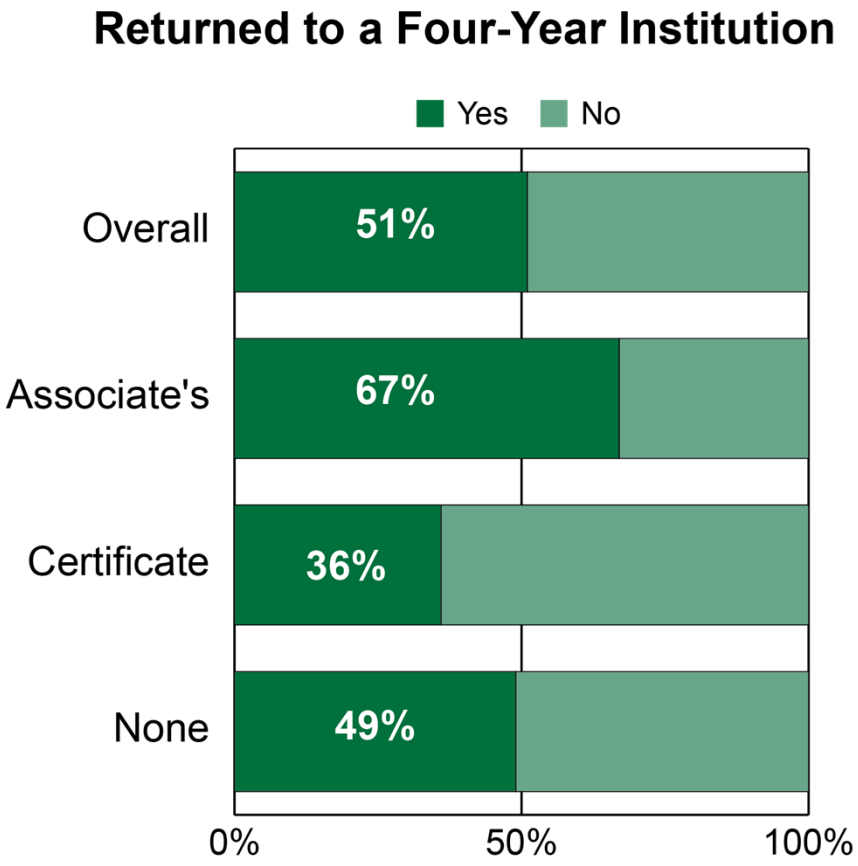
Category	Variables
Student Characteristics	Gender & Race
Student Academic Characteristics	HS class rank, HS GPA, highest expected degree, HS program type, core curriculum, ACT subscale scores, AP participation, stated need for help
Ability to Pay/ Financial Aid	Parental income, number of siblings, expecting to receive financial aid, expecting to work while enrolled
High School Characteristics	Region, Mean HS Composite ACT, Distance to 1st Four-Year, Distance to CC, Distance to Four-Year of Return
Four-Year Characteristics	Sector, selectivity, state

Odds of an Accelerated Time to Reverse Transfer

Factor	Comparison	Odds Ratio
Parental Income	Mid-High to High Mid-Low to High	1.16 1.20
Expecting to Work		1.24
HS GPA	2.5-2.9 to ≤2.4 3.0-3.4 to ≤2.4 ≥3.5 to ≤2.4	.882 .692 .403
Selectivity	Most/Highly	0.70
Sector	(Public)	1.19
Study Skills		1.18

Outcomes for Reverse Transfers at Community Colleges





Odds of a Timely Return

Factor		Odds Ratio
Race	Black to White	1.19
	Asian to White	1.38
HS GPA	≥3.5 to ≤2.4	1.29
Highest Expected Degree	<BA to BA+	0.69
Distance HS to 4yr	>100 – ≤175 to ≤30	1.19
	>175 to ≤30	1.14
Selectivity	Most/highly	1.29
Highest CC Degree	Cert. to No Degree	0.64
	Associate to No Degree	1.19
State	Illinois	0.85

Odds of a Timely Bachelor's Completion

Factor	Comparison	Odds Ratio
Gender	Male	0.80
Race	Black to White	0.66
Highest CC Degree	Cert. to No Degree	0.56
	Associate's to No Degree	1.30
Returned to Same 4yr		1.26
Selectivity Alignment	Equal to Less	1.29
State	Illinois	1.28
Selectivity	Most or Highly	1.33

Reverse Transfer and End of Study Status

		End of Study Status				
			Non-Completers			
		Bachelor's Degree or Higher	Still Enrolled at 4-yr	Still Enrolled at 2-yr	No Longer Enrolled	Total
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%

Discussion/Conclusions

- The factors related to academic preparation and financial aid had relatively strong effects in terms of reverse transferring.
- Patterns regarding the ACT and reverse transferring were noteworthy and parallel recent research focusing on similar outcomes.
- The importance of the factors related to financial aid and academic preparation faded as the outcome measures advanced. Institutional characteristics became more important.
- Associate's degree completion was positively and significantly related to both a timely return and a timely completion of a bachelor's degree.

Questions

For additional copies of the reports or this presentation contact:

Eric J. Lichtenberger, Ph.D.
Associate Director for Research
Illinois Education Research Council
Assistant Research Professor
Southern Illinois University Edwardsville
(618)650-3017
elichte@siue.edu

Or visit:

http://ierc.siue.edu/