A Longitudinal Study of the Illinois High School Class of 2002: A Six-Year Analysis of Postsecondary Enrollment and Completion

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Illinois Education Research Council

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The Study

• Who is included in the cohort
  - 113,135 public high school students who took the Prairie State Achievement Exam (PSAE)/ACT in the Spring of 2001 and indicated that they would be graduating in 2002.

• Who is not included in this cohort
  - Private high school graduates from Illinois
  - Out-of-State high school graduates who emigrated to Illinois higher education institutions
Sources of Data

- **ACT**-ACT scores and information from the Student Interest Profiler
- **National Student Clearinghouse**-enrollment and degrees
- **Illinois Community College Board**-enrollment and degrees
- **Illinois Shared Enrollment and Graduation Consortium**-enrollment and degrees
- **Illinois School Report Card**- characteristics of the high schools
- **IPEDS**-characteristics of the four-year institutions
- **Barron’s**-selectivity
Context of the Study

• Graduation initiatives: President Obama, Lumina Foundation, Complete College America

• Illinois Public Agenda for College and Career Success
  - Increase the number of quality degrees
  - Reduce geographic disparities in educational attainment
  - Ensure college affordability for individuals, families, and taxpayers
  - Improve transitions along the educational pipeline—the postsecondary portion

• Several current studies that are focusing on postsecondary completion rather than only access (Bowen).
Framework of Study

High School Characteristics
- ITAC Score
- School Funding
- Location

Student Characteristics
- Demographics
  - Gender
  - Race
  - Parents’ Income

- Academic Preparation
  - College Readiness
  - ACT Core

Initial College Enrollment
- Two-Year
- Four-Year
- Delay
- Never

Outcome Two-Year
- Certificate
- Associate’s
- Transfer
- None

Outcome Four-Year
- Bachelor’s
- None

Footnotes:
1 Potentially malleable
2 By sector and selectivity
3 Two-year outcomes are not mutually exclusive, so more than one could occur
4 For two-year to four-year transfers
IERC College Readiness Index

<table>
<thead>
<tr>
<th>ACT</th>
<th>&lt;= 2.4</th>
<th>2.5 - 2.9</th>
<th>3.0 - 3.4</th>
<th>3.5 - 4.0</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20</td>
<td>19.7%</td>
<td>8.0%</td>
<td>6.5%</td>
<td>1.9%</td>
<td>14.6%</td>
</tr>
<tr>
<td>20-22</td>
<td>3.1%</td>
<td>3.5%</td>
<td>5.2%</td>
<td>2.9%</td>
<td>4.0%</td>
</tr>
<tr>
<td>23-25</td>
<td>1.1%</td>
<td>1.7%</td>
<td>4.2%</td>
<td>4.8%</td>
<td>2.7%</td>
</tr>
<tr>
<td>26+</td>
<td>0.4%</td>
<td>0.8%</td>
<td>2.7%</td>
<td>9.5%</td>
<td>2.8%</td>
</tr>
</tbody>
</table>

- Not/Least Ready
- Minimally Ready
- Somewhat Ready
- More Ready
- Most Ready

- Index created by combining ACT and HS GPA.
Basic College Enrollment

- 62% Enrolled the initial fall semester.
- 17% delayed enrollment at a either a 2 or four yr. institution after fall 2002.
- 21% never enrolled in higher education over the six-year study period.

- 4-yr, 36%
- 2-yr, 26%
- Never Enrolled, 21%
- Delayed Enrollment, 17%
A little less than half attend Public Universities
Around a quarter attend in state privates.
38% attend privates overall.
Nearly a third attend out of state.
More than half of students who go out of state attend public institutions.
Illinois ranks 51st for Net Migration of College Freshman (PEO April 2010)
Sector of Four-Year Starters By Race/Ethnicity

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Private For-Profit</th>
<th>Private Not-For-Profit</th>
<th>Public 4-Yr</th>
<th>Public -Out-of-State</th>
<th>Private-Out-of-State</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>12%</td>
<td>19%</td>
<td>49%</td>
<td>31%</td>
<td>18%</td>
</tr>
<tr>
<td>White (Non-Hispanic)</td>
<td>14%</td>
<td>17%</td>
<td>46%</td>
<td>31%</td>
<td>22%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>8%</td>
<td>5%</td>
<td>50%</td>
<td>16%</td>
<td>29%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>9%</td>
<td>2%</td>
<td>58%</td>
<td>9%</td>
<td>22%</td>
</tr>
</tbody>
</table>
Sector of Four-Year Starters By College Readiness

<table>
<thead>
<tr>
<th>Not/Least Ready</th>
<th>Minimally ready</th>
<th>Somewhat ready</th>
<th>More ready</th>
<th>Most ready</th>
</tr>
</thead>
<tbody>
<tr>
<td>45%</td>
<td>50%</td>
<td>54%</td>
<td>49%</td>
<td>42%</td>
</tr>
<tr>
<td>Public 4-Yr</td>
<td>Private Not-For-Profit</td>
<td>Private For-Profit</td>
<td>Public -Out-of-State</td>
<td>Private-Out-of-State</td>
</tr>
</tbody>
</table>
Four-Year Outcomes

- 67% Grad rate over six years.
- An additional 10% were still enrolled in higher education.
- A little less than a quarter did not complete and were not enrolled.
Reverse Transfer

- Completed Bachelor’s Degree: 78%
- Did Not Complete Bachelor’s Degree: 22%
- Reverse Transfer: 19%
- Did Not Reverse Transfer: 81%

N=41,234

- Completed Bachelor’s Degree: 22%
- Did Not Complete Bachelor’s Degree: 78%

N=7,935
Total Initially Enrolling at a Two-Year Institution (28,875)

- Certificate (1,713)
- Associate's Degree (7,475)
- Transfer (11,076)
- Unmet/Unknown Outcome 14,210

- 38% Transferred
- 26% Associates
- 44% of Transfers had Associates
- 6% Certificates
- 51% At least one outcome
Two-Year to Four-Year Transfer

- Over half earned a bachelor’s degree by the Spring of 2008.
- An additional 22% were still enrolled in a four-year institution.
- This illustrates that time to degree may be increased.

- Enrolled in Four-Year: 22%
- Not Enrolled: 20%
- Enrolled in Two-Year: 3%
- Bachelor’s Degree: 54%
Bachelor Completion Rate for Two-Year to Four-Year Transfers

Transfer (11,076)

A 6,068 (54%)
B 4,677 (64%)
C 157 (48%)
D 174 (64%)
Logistic Regression

- Two separate models
- Initial enrollment at four-year institution
- Bachelor’s degree completion for four-year starters
- Included all student and school characteristics included in the framework
- Determined each variable’s predictive importance regarding the outcome holding everything else constant
Predicting 4-Yr Enrollment and Bachelor Completion

Odds Ratios for Key Student Characteristics

- Definite Gender Gap (widens)

- For Race, the pattern varied across the comparisons

- Although parental income was extremely important in both measures, it lost some of its predictive value in terms of completion

<table>
<thead>
<tr>
<th>Variable</th>
<th>Initial 4-yr Enrollment</th>
<th>Bachelor Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female to Male</td>
<td>1.19</td>
<td>1.51</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African-American to White</td>
<td>2.17</td>
<td>(1.56)</td>
</tr>
<tr>
<td>Hispanic to White</td>
<td>~</td>
<td>(1.38)</td>
</tr>
<tr>
<td>Asian to White</td>
<td>1.48</td>
<td>~</td>
</tr>
<tr>
<td>Parental Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High to Low</td>
<td>2.28</td>
<td>1.76</td>
</tr>
<tr>
<td>Mid-High to Low</td>
<td>1.63</td>
<td>1.47</td>
</tr>
<tr>
<td>Mid-Low to Low</td>
<td>1.20</td>
<td>1.14</td>
</tr>
</tbody>
</table>

~no statistically significant difference at the p=<.001 level
Predicting 4-Yr Enrollment and Bachelor Completion

Odds Ratios Calculated for College Readiness and Region

- College readiness matters the most in both measures.
- All of the regions were more likely to enroll than the Southeast.
- However, only two of the regions were more likely to complete: Northeast and West Central.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Initial 4-yr Enrollment</th>
<th>Bachelor Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Readiness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most to Not/Least</td>
<td>24.59</td>
<td>5.85</td>
</tr>
<tr>
<td>More to Not/Least</td>
<td>11.30</td>
<td>2.86</td>
</tr>
<tr>
<td>Somewhat to Not/Least</td>
<td>5.29</td>
<td>1.91</td>
</tr>
<tr>
<td>Minimally to Not/Least</td>
<td>2.91</td>
<td>1.29</td>
</tr>
<tr>
<td>Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chicago to Southeast</td>
<td>4.44</td>
<td>~</td>
</tr>
<tr>
<td>Northeast to Southeast</td>
<td>2.10</td>
<td>1.40</td>
</tr>
<tr>
<td>Northwest to Southeast</td>
<td>1.51</td>
<td>~</td>
</tr>
<tr>
<td>West Central to Southeast</td>
<td>1.86</td>
<td>1.41</td>
</tr>
<tr>
<td>East Central to Southeast</td>
<td>1.72</td>
<td>~</td>
</tr>
<tr>
<td>Southwest to Southeast</td>
<td>2.21</td>
<td>~</td>
</tr>
</tbody>
</table>

~no statistically significant difference at the p=<.001 level
DISCUSSION
College Readiness Matters

### MOST READY
- Initial 4-year Enrollment: 82%
- 2-year to 4-year Transfer: 71%

### MORE READY
- Initial 4-year Enrollment: 68%
- 2-year to 4-year Transfer: 63%

### SOMewhat READY
- Initial 4-year Enrollment: 56%
- 2-year to 4-year Transfer: 56%

### MINIMALLY READY
- Initial 4-year Enrollment: 42%
- 2-year to 4-year Transfer: 45%

### NOT/LEAST READY
- Initial 4-year Enrollment: 38%
- 2-year to 4-year Transfer: 40%

Legend:
- Bachelor's completion
- Enrolled at 4-year
- Enrolled at 2-year
- Not Enrolled

Non-Completers at the end of the 6-year study
Gender Difference

- **Overall Enrollment**: +6 point gap
  - Females were 1.18 times more likely to enroll*

- **Initial 4-Year Enrollment**: +6 point gap
  - Females were 1.50 times more likely to enroll*

- **Completing Bachelor’s Degree**: +7 point gap
  - Females were 1.50 times more likely to complete*

- **Certificate Attainment**: +2 point gap

- **Associate’s Attainment**: +6 point gap

- **Transfer 2-Year to 4-Year**: +1 point gap

- **Transfers Completing Bachelor’s Degree**: +4 point gap

- **Enrolling at Most/High Competitive Institutions**: -3 point gap

* Based on logistic regression.
• Limited access to four-year institutions in Southeast IL
• Highest college going region (85%)
• Highest Two-Year Starters (47%)
• Lowest Four-Year Starters Region (19%)
• 39% four-year starter go out of state.
Conclusions

- College Readiness was the strongest indicator of participation and completion through all the different outcomes measured in this study.

- There was a gender gap favoring female students in terms of participation and an even larger gap favoring female students for bachelor completion.

- Generally speaking, Asian and White students had higher participation and completion rates compared with African-American and Hispanic students (the descriptive and predictive results varied).

- Students in the Southeast region have less access (proximity) to four-year institutions, so they use the community college system and out-of-state 4-yr institutions more than students from other areas of the state.

- Two-yr to four-yr transfer is a viable pathway for bachelor degree completion. For students in the somewhat to the not/least ready college readiness categories, taking the two-year to four-year transfer pathway improves the likelihood that the student will graduate with a bachelor’s degree.
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