The Illinois High School Class of 2002: Participation and Completion Patterns in Postsecondary Education Six Years after High School

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The Study

• Who is included in the cohort
  - This study applies to a cohort of 113,135 “traditional” students who took the Prairie State Achievement Exam (PSAE)/ACT in the Spring of 2001

• Who is not included in this cohort
  - Private high school graduates
  - Out-of-State high school graduates that migrated to Illinois higher education institutions
Provide information to inform the work of policy and decision-makers across the educational spectrum specifically related to:

- Enrollment patterns
- Pathways to completion
- Disparities among various groups in terms of the outcomes mentioned above
Context of the Study

- President Obama’s American Graduation Initiative: By 2020 have highest proportion of graduates in the world.
- 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
- *Crossing the Finish Line*: Research by Bowen, Chingos, and McPherson highlighting the importance of educational attainment and trends of completion at public universities.
Assumptions

- Intended outcome was associated with initial enrollment type.
- Once someone transferred from a 2yr to a 4yr, the outcome became bachelor completion.
- If there was concurrent enrollment at both a 4yr and 2yr institution, the 4yr outcome superseded the 2yr outcome.
Participation and Completion Framework

High School Characteristics
- ITAC Score\(^1\)
- School Funding\(^1\)
- Location

Student Characteristics
- Demographics
  - Gender
  - Race
  - Parents' Income
- Academic Preparation
  - College Readiness\(^1\)
  - ACT Core\(^1\)

Initial College Enrollment
- Two-Year
- Four-Year\(^1\)
- Delay
- Never

Outcome Two-Year\(^2\)
- Certificate
- Associate
- Transfer
- None

Outcome Four-Year\(^3\)
- Bachelor
- None

\(^1\) Potentially malleable
\(^2\) Two-year outcomes are not mutually exclusive, so more than one could occur
\(^3\) For two-year to four-year transfers
\(^4\) By sector and selectivity
Illinois administers the ACT to all public high school students, since 2001.

Readiness is a combination of high school GPA and ACT.

Index is modeled on the work of Berkner and Chavez (1997)

Roughly a third (37.3%) of the Class of 2002 are not/least ready for college, third (28.4%) are partially (minimally/somewhat) ready, and third (34.3%) are college (more/most) ready.

Overall Enrollment

- Post-secondary education is a prerequisite for success
- Logically, enrollment is often tied to access, which is a precondition to degree completion
- Nearly 4 out of every 5 participated in postsecondary
- More than 3 out of every 5 enrolled during the Fall Semester of 2002
- 17% delayed their enrollment

**Enrollment Status**

- Initial 4-yr: 26%
- Initial 2-yr: 36%
- Delayed: 21%
- Not Enrolled: 17%
Gender and Specific Enrollment

- Male:
  - 4-yr: 33%
  - 2-yr: 25%
  - Delayed: 17%
  - Never: 24%

- Female:
  - 4-yr: 39%
  - 2-yr: 26%
  - Delayed: 17%
  - Never: 18%

Overall Enrollment:
- 0% to 20%: 0%
- 20% to 40%: 33%
- 40% to 60%: 76%
- 60% to 80%: 17%
- 80% to 100%: 24%
Race and Specific Enrollment

Overall Enrollment

Hispanic
- Hispanic: 25% 22% 21% 32%

African-American
- African-American: 34% 19% 23% 24%

White
- White: 41% 28% 15% 16%

Asian
- Asian: 57% 21% 12% 10%

4-yr 2-yr Delayed Never

0% 20% 40% 60% 80% 100%
College Readiness and Enrollment

- **Most**:
  - 4-yr: 94%
  - 2-yr: 74%
  - Delayed: 10%
  - Never: 6%

- **More**:
  - 4-yr: 91%
  - 2-yr: 55%
  - Delayed: 13%
  - Never: 9%

- **Somewhat**: 84%
  - 4-yr: 32%
  - 2-yr: 36%
  - Delayed: 16%
  - Never: 16%

- **Minimally**: 76%
  - 4-yr: 35%
  - 2-yr: 20%
  - Delayed: 24%

- **Not/Least**: 63%
  - 4-yr: 29%
  - 2-yr: 23%
  - Delayed: 37%
## Region and Enrollment

<table>
<thead>
<tr>
<th>Region</th>
<th>4-yr</th>
<th>2-yr</th>
<th>Delayed</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago</td>
<td>29%</td>
<td>14%</td>
<td>22%</td>
<td>35%</td>
</tr>
<tr>
<td>Northeast</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northwest</td>
<td>28%</td>
<td>32%</td>
<td>16%</td>
<td>24%</td>
</tr>
<tr>
<td>West Central</td>
<td>32%</td>
<td>30%</td>
<td>16%</td>
<td>22%</td>
</tr>
<tr>
<td>East Central</td>
<td>32%</td>
<td>31%</td>
<td>17%</td>
<td>20%</td>
</tr>
<tr>
<td>Southwest</td>
<td>32%</td>
<td>29%</td>
<td>19%</td>
<td>20%</td>
</tr>
<tr>
<td>Southeast</td>
<td>19%</td>
<td>47%</td>
<td>19%</td>
<td>15%</td>
</tr>
</tbody>
</table>
Fall 2002 Choice of 4-Yr Institutions by Sector

- Almost half went to IL. Public Universities.
- Nearly a third went Out-of-State
- More than half that went Out-of-State went to a public institution.
- 37% attend a private institution.
- Illinois ranks 51st for Net Migration of College Freshman
## Location and Sector of Initial 4-Yr

<table>
<thead>
<tr>
<th>Region</th>
<th>Public 4-Yr</th>
<th>Private Not-For-Profit</th>
<th>Private For-Profit</th>
<th>Public Out-of-State</th>
<th>Private Out-of-State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago</td>
<td>53%</td>
<td>23%</td>
<td>11%</td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>43%</td>
<td>22%</td>
<td>19%</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>Northwest</td>
<td>46%</td>
<td>25%</td>
<td>13%</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>West Central</td>
<td>52%</td>
<td>28%</td>
<td>10%</td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>East Central</td>
<td>60%</td>
<td>24%</td>
<td>6%</td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>Southwest</td>
<td>55%</td>
<td>15%</td>
<td>15%</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>Southeast</td>
<td>49%</td>
<td>11%</td>
<td>21%</td>
<td>18%</td>
<td></td>
</tr>
</tbody>
</table>
**Bachelor Completion at Six Years**

- Over two-thirds completed a bachelors degree by 2008
- Around a quarter are no longer attending
- 10% are still attending college at end of study.

*For those initially enrolling at 4yr institutions.*
Gender and Bachelor Completion at Six Years

- Male:
  - Completer: 63%
  - Attending 4-yr: 7%
  - Attending 2-yr: 3%
  - Not Attending: 27%

- Female:
  - Completer: 70%
  - Attending 4-yr: 6%
  - Attending 2-yr: 3%
  - Not Attending: 20%
Race and Bachelor Completion at Six Years

- Hispanic
  - Completed: 53%
  - Attending 4-yr: 58%
  - Attending 2-yr: 33%
  - Not Attending: 47%

- African-American
  - Completed: 42%
  - Attending 4-yr: 17%
  - Attending 2-yr: 28%
  - Not Attending: 20%

- White
  - Completed: 72%
  - Attending 4-yr: 73%
  - Attending 2-yr: 15%
  - Not Attending: 17%

- Asian
  - Completed: 73%
  - Attending 4-yr: 27%
  - Attending 2-yr: 15%
  - Not Attending: 0%
College Readiness and Bachelor Completion at Six Years

- Most: 82% Completers, 32% Attending 4-yr, 18% Attending 2-yr, 12% Not Attending, 0% Not/Least Completers
- More: 68% Completers, 44% Attending 4-yr, 31% Attending 2-yr, 22% Not Attending, 62% Not/Least Completers
- Somewhat: 56% Completers, 58% Attending 4-yr, 40% Attending 2-yr, 31% Not Attending, 46% Not/Least Completers
- Minimally: 42% Completers, 62% Attending 4-yr, 40% Attending 2-yr, 40% Not Attending, 46% Not/Least Completers
- Not/Least: 38% Completers, 62% Attending 4-yr, 40% Attending 2-yr, 46% Not Attending, 46% Not/Least Completers
Region and Bachelor Completion at Six Years

- **Chicago**: 45% Completer, 28% Attending 4-yr, 20% Attending 2-yr, 22% Not Attending
- **Northeast**: 72% Completer, 33% Attending 4-yr, 25% Attending 2-yr, 22% Not Attending
- **Northwest**: 67% Completer, 31% Attending 4-yr, 23% Attending 2-yr, 24% Not Attending
- **West Central**: 69% Completer, 32% Attending 4-yr, 22% Attending 2-yr, 24% Not Attending
- **East Central**: 68% Completer, 36% Attending 4-yr, 24% Attending 2-yr, 26% Not Attending
- **Southwest**: 64% Completer, 38% Attending 4-yr, 24% Attending 2-yr, 26% Not Attending
- **Southest**: 62% Completer, 20% Attending 4-yr, 20% Attending 2-yr, 26% Not Attending
Logistic Regression

- Two separate models (4-yr enrollment and bachelor’s degree completion)
- Included all student and school characteristics included in the framework (see slide 7)
- 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><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female to Male</td>
<td>1.19</td>
<td>1.51</td>
</tr>
<tr>
<td><strong>Race</strong></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><strong>Parental Income</strong></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><strong>College Readiness</strong></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><strong>Region</strong></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
Completion of 2-Yr Students

There are 3 positive outcomes we are able to measure for students who started at a 2-yr college:

- Certificate
- Associates Degree
- Transfer to 4-yr

Though students may have other reasons to attend 2-yr, we do not know their intent. Students could complete more than one outcome.

- Over half completed at least one outcome over the six years.
- More than a quarter obtained an associates, includes transfer (assoc. of arts or science) or terminal (applied assoc.) degrees.
- 38% transferred to a 4-yr, which put them on the road to obtaining a bachelor degree.
The Community College System and the Illinois Articulation Initiative (IAI) make this pathway a viable option to complete a bachelor’s degree.

- 11,076 transferred.
- Small percentage (16%) complete in 4 years.
- More than half complete in six years
- An additional 22% are still attending a 4-yr institution at end of study.
Transfers (2-yr to 4-yr) Time to Bachelor’s by Race

Cumulative Completion

<table>
<thead>
<tr>
<th>Race</th>
<th>Within 4-years</th>
<th>Within 5-years</th>
<th>Within 6-years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asians</td>
<td>11%</td>
<td>36%</td>
<td>50%</td>
</tr>
<tr>
<td>White</td>
<td>19%</td>
<td>46%</td>
<td>59%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>10%</td>
<td>28%</td>
<td>40%</td>
</tr>
<tr>
<td>African-American</td>
<td>5%</td>
<td>16%</td>
<td>26%</td>
</tr>
</tbody>
</table>
Transfers (2-yr to 4-yr) Time to Bachelor’s by College Readiness

Cumulative Completion

<table>
<thead>
<tr>
<th></th>
<th>Within 4-years</th>
<th>Within 5-years</th>
<th>Within 6-years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most</td>
<td>30%</td>
<td>61%</td>
<td>71%</td>
</tr>
<tr>
<td>More</td>
<td>21%</td>
<td>51%</td>
<td>63%</td>
</tr>
<tr>
<td>Somewhat</td>
<td>15%</td>
<td>42%</td>
<td>56%</td>
</tr>
<tr>
<td>Minimally</td>
<td>11%</td>
<td>31%</td>
<td>45%</td>
</tr>
<tr>
<td>Not/Least</td>
<td>8%</td>
<td>28%</td>
<td>40%</td>
</tr>
</tbody>
</table>
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 have less access (proximity) to four-year institutions, so they use the community college system and out-of-state 4-yr institutions more than other areas of the state.

• 2-yr to 4-yr transfer is a viable pathway for bachelor degree completion.
Recommendations for Further Investigation

- Focus on the students who initially enrolled out-of-state in terms of degree completion and employment.
- Determine the impact of concurrent enrollment and employment on time to degree completion.
- Explore potential differences in bachelor’s degree attainment rates among groups based on associate’s degree type and whether they earned an associate’s degree (among those who transfer).
- Explore the interaction of gender, race/ethnicity and socio-economic-status (SES).
- Establish multi-year trends with additional cohorts.