Bridge to Success: Evaluating OTC’s efforts to improve developmental education

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Demand for Developmental Education

• Majority of incoming students require developmental work in at least one subject area.

• Students who require developmental education are:
  – Significantly less likely to complete a college-level course in that subject.
  – Significantly less likely to graduate.
Bridge to Success

- First implemented in the Fall 2011 term.
- All first-time students who place into two or more developmental subjects participate in the program.
- These students are:
  - Restricted from taking developmental courses online.
  - Required to obtain a release from their advisor to register
  - Required to choose from a list of approved courses until developmental requirements are met.
Bridge to Success

• It is strongly recommended to these students that they:
  – Register for Keys to College Success (CAC 120).
  – Register for Math Study Strategies (TLC 023).
  – Limit course load to 12 credit hours or less.
  – Avoid online courses until developmental requirements are met.

• Resources have also been committed to provide additional support to students in developmental courses.
Evaluation of Early Results

**Control Group:** First-time students from Fall 2010 who placed into two or more developmental subject areas (would have qualified for Bridge had it been in place).

- **Success in Developmental Courses:** Evaluate whether these students completed their developmental courses with a C or better in Fall 2010.
- **Enrollment in Gateway Course:** Evaluate whether those students who completed a developmental course enrolled in and successfully completed the subsequent gateway (first college-level) course in their first academic year (2010-2011).

**Treatment Group:** First-time students from Fall 2011 who placed into two or more developmental subject areas (first cohort to qualify for Bridge participation).

- **Success in Developmental Courses:** Evaluate whether these students completed their developmental courses with a C or better in Fall 2011.
- **Enrollment in Gateway Course:** Evaluate whether those students who completed a developmental course enrolled in and successfully completed the subsequent gateway (first college-level) course in their first academic year (2011-2012).
Evaluation Model Design

- Logistic Regression
- Binary Outcome:
  - Success/Failure in First College Level (Gateway) Course
- Key Variable:
  - Bridge Participation
- Additional Variables:
  - Support Courses: CAC 120 and TLC 023
  - Gender (Female)
  - Ethnicity (White)
  - Developmental Course Level
Math: Logistic Regression Results

Significantly Positive Factor

- Bridge Participation – Two Percent More Likely
- Gender (Female)
- Ethnicity (White)

Significantly Negative Factor

- CAC 120 Enrollment

Not a Significant Factor

- TLC 023 Enrollment

Significance measured at $p < 0.10$
Math Follow-Up Performance

- Completed Developmental Math: 53.41%
- Enrolled in Gateway Math Course (within first academic year): 17.57%
- Completed Gateway Math Course (within first academic year): 8.17%

- Fall 2010 (Pre-Bridge Qualifiers)
- Fall 2011 (Bridge Participants)
### English: Logistic Regression Results

#### Significantly Positive Factor
- Gender - Female

#### Significantly Negative Factor

#### Not a Significant Factor
- Bridge Participation
- CAC 120 Enrollment
- Race - White

Significance measured at $p < 0.10$
English Follow-Up Performance

- Completed Developmental English: 55.74% (Fall 2010), 57.02% (Fall 2011)
- Enrolled in Gateway English Course (within first academic year): 24.44% (Fall 2010), 25.86% (Fall 2011)
- Completed Gateway English Course (within first academic year): 14.63% (Fall 2010), 18.84% (Fall 2011)
Findings

• Positive Effect at Developmental Level.
• Encouraging Initial Effect at Gateway Level.
• Possible Opportunities for Improvement:
  – Additional assistance to those who progress to college level Math.
  – Encourage developmental English completers to enroll in a Gateway course.
Continued Evaluation

• Track students through complete cycle.
• Closer Evaluation of CAC 120 Students.
• Explore Development of TLC 023 type course for college level Math.
• Link Quantitative Results to Qualitative Analysis.
  – Interviews with students and faculties.
Contact Information

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## Math Model Results

### Bridge to Success Developmental Level Evaluation Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridge to Success Program</td>
<td>0.4286024**</td>
<td>0.2145861</td>
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<tr>
<td>Student: Female</td>
<td>0.3149764*</td>
<td>0.1791311</td>
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<tr>
<td>Student: Enrolled in CAC-120</td>
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<td>0.2458288</td>
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<tr>
<td>Student: Enrolled in TLC-023</td>
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<tr>
<td>Student: White</td>
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<tr>
<td>MTH-040</td>
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<tr>
<td>Constant</td>
<td>-2.230864***</td>
<td>0.203256</td>
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</tbody>
</table>

Number of Observations: 1883

LR Chi-Squared: 131.19***

% Correctly Classified: 91.87%

Two-tailed t-test: * p<0.1, ** p<0.05, ***p<0.01

Logistic regression model calculated using STATA
## Bridge to Success Developmental Level Evaluation Model

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<th>Coefficient</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridge to Success Program</td>
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<tr>
<td>Student: Female</td>
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<td>Student: Enrolled in CAC-120</td>
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<td>Student: White</td>
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<td>Constant</td>
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<td>0.1583782</td>
</tr>
</tbody>
</table>

Number of Observations: 1689

LR Chi-Squared: 171.69***

% Correctly Classified: 82.47%

Two-tailed t-test: * p<0.1, ** p<0.05, ***p<0.01

Logistic regression model calculated using STATA