HISTORY OF ACADEMIC BOOT CAMP

The Academic Boot Camp (ABC) was developed by the Minority Engineering Program (MEP) in summer 2005 to improve under-represented minority (URM) retention by simulating the first semester environment during a five-week summer program. The Multicultural Science (MSP) and Technology Diversity Programs (TDP) developed similar programs the next summer. Components of all three Academic Boot Camps include: overview of first semester gateway courses, tours of Purdue facilities, and discussions about other campus support options.

BOOT CAMP ANALYSIS

A five-year study was completed in summer 2014 for the F'08 to F'12 cohorts. This analysis was performed to determine the effect of the program on first semester class performance and first year retention rates. Independent population and matched pair analyses were used to compare the ABC, non-attending URM, and domestic majority students.

DATA

<table>
<thead>
<tr>
<th>1st Semester GPA</th>
<th>Engineering</th>
<th>Science</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ind. Mean</td>
<td>Ind. SD</td>
<td>Matched Ind. Mean</td>
</tr>
<tr>
<td>URM, ABC</td>
<td>2.95</td>
<td>0.49</td>
<td>2.95</td>
</tr>
<tr>
<td>URM, nonABC</td>
<td>2.79</td>
<td>0.48</td>
<td>2.79</td>
</tr>
<tr>
<td>nonURM, nonABC</td>
<td>2.08</td>
<td>0.48</td>
<td>2.08</td>
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</tbody>
</table>

FIRST YEAR RETENTION

ENGINEERING ACADEMIC BOOT CAMP INFLUENCE ON 1st YEAR RETENTION

<table>
<thead>
<tr>
<th></th>
<th>Retained in Purdue Engr Cohort</th>
<th>Voluntarily Withdrew</th>
<th>URM, ABC</th>
<th>nonURM, nonABC</th>
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<tr>
<td></td>
<td>F'08</td>
<td>F'09</td>
<td>F'10</td>
<td>F'11</td>
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<td>Retained in STEM</td>
<td>8,082</td>
<td>3.08</td>
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<td>Retained at Purdue</td>
<td>4,219</td>
<td>2.86</td>
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<tr>
<td>Independent</td>
<td>2,353</td>
<td>2.76</td>
<td>94</td>
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MATCHED PAIRS

Each ABC student for a given college was given an identifying number. These boot camp attendees were then placed in a matrix that provided:

- Ethnicity, Gender, Residency
- Major in Science or Technology (All Engineering students in FYE)
- High School Core GPA
- SAT(Math), SAT(CR), SAT+M+CR, or the SAT equivalent of these ACT scores
- Number of types of involvement in the MEP, MSP, or TDP sponsored programs
- First semester courses

Each ABC attendee in a given college was then matched with a URM student and a Majority student with similar academic and demographic characteristics. Students were grouped into incoming math and chemistry classes for each college. Since these classes were covered in the ABC, this was considered the best first match. The boot camp students were highlighted and similar gendered and residency students were compared to find a match. Ethnicity was matched as closely as possible. However, in some cases, particularly for Black or African American students, there was a lack of similar students to match. Therefore, some variance in the number of each type of race/ethnicity and gender/residency resulted.

STATISTICAL ANALYSES

FIRST SEMESTER PERFORMANCE

Engineering

- Ind. Population Analysis: Domestic Majority > ABC > non-attending URM
- Paired Sample Analysis: ABC = Domestic Majority > non-attending URM

Science

- Ind. Population Analysis: Domestic Majority > non-attending URM > ABC
- Paired Sample Analysis: non-attending URM > ABC = Domestic Majority

Technology

- Ind. Population Analysis: ABC = Domestic Majority, ABC = non-attending URM, Domestic Majority > non-attending URM
- Paired Sample Analysis: ABC = Domestic Majority > non-attending URM

FIRST YEAR RETENTION

Engineering

- Retention in Engineering
- Ind. Population Analysis: ABC = Domestic Majority > non-attending URM
- Paired Sample Analysis: ABC = Domestic Majority > non-attending URM

Science

- Retention in Science
- Ind. Population Analysis: Domestic Majority = non-attending URM > ABC
- Paired Sample Analysis: URM > ABC = Domestic Majority

Technology

- Retention in Technology
- Ind. Population Analysis: No Significance
- Paired Sample Analysis: No Significance