Five is 75: Student Success Perspectives, Status, & Highlights

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**Five is 75:**

**Student Success Perspectives, Status, & Highlights**

**Five is 75:** a 5% gain in the overall graduation rate means helping 75 additional students achieve their goals.

We examine traditionally underserved students because these students have been shown to be the least likely to be successful in national studies.

- Students of Color
- Low Income
- First Generation

**Things to notice:**

1. Strong improvement for students of color, particularly men of color
3. Low Income and 1st generation students have shown less improvement overall. This is true for both men and women.
4. There has been a decline in the success rate of women in recent years.

**Discussion Starters:**

1. Do I have any ideas or evidence that may help explain or provide context to these data?
2. Given these data, what would I want to know next?
3. What might I do different to help more students be successful?

Email your thoughts to tkling@bridgew.edu

Data Presentation & Analysis by: Thomas Kling, Department. of Physics & Faculty Fellow, Academic Affairs based on data from IR.
**Five is 75: Broad Analysis of the Success Rates of First-time, Full-time Bridgewater Students**

What does “Five is 75” mean?

Bridgewater’s incoming first-time, full-time freshmen cohorts have included about 1500 students since 2007. A 5% increase in graduation or retention rates means only 75 more students achieving success. While a 5% gain is big jump, it is achievable.

“Five is 75” reminds us that if each department aids 3 students or if every sixth faculty or staff member aids a single student, we can achieve a 5% increase in our graduation rate.

Overall Graduation & Retention Rates: All First-time, Full-time Freshmen

Graduation & Retention Rates for Key Groups of First-time, Full-time Freshmen

Students of Color

1st Year Retention

Continuation to 4th Year

4 & 6 Year Graduation Rates

Because N values for students of color are small, we expect the annual variation in performance to be larger for students of color than white students.

Since 2008, the 1st year retention and continuation to 4th year rates for students of color and white students are very similar.

The gaps in the 4 & 6 year graduation rates continue to close.

Low Income Students

1st Year Retention

Continuation to 4th Year

4 & 6 Year Graduation Rates

The gaps in 1st year retention and continuation to the 4th year for low income students remain consistent and are not improving since 2004.

The graduation gaps are wider than the continuation gaps, which implies that an accumulation of risk factors may be impacting the graduation rates of low income students.

First Generation Students

(data since 2008)

1st Year Retention

4 Year Graduation

In the 2008 cohort, the gap in the 4 year graduation rate is about 5% but the gap in the 5 year graduation rate is 11%! This increase in the graduation gaps between the 4 and 5 year rates is repeated to a lesser degree for low income students.

Analysis by Thomas Kling (tkling@bridgew.edu) based on data from Institutional Research.

The 6-year BSU graduation rate of all students has risen steadily to nearly 58%, while the 4-year rate has stabilized near 29%. The most successful schools in BSU’s peer group graduate over 60% of full-time, first-time freshmen in 6 years and over 35% in 4 years.

It is standard practice to look at 1st Year Retention Rates (which is the same as the % of students who continue to a 2nd year).

It is less standard to look at the % of students who continue to a 4th year. This data is not reported nationally, but it is useful for understanding Bridgewater.*

* Continuation to a 4th year of studies excludes students who have graduated in 3 years or who simply take the fall semester of the 4th year off.

The 1st Year Retention Rate at BSU has stabilized at approximately 80%, which is towards the top of the range of our peer group.

Projections for 6-Year Graduation Rates

With a slight decrease in the rate of students continuing to a 4th year of studies and the flat 4 year graduation rate, we should expect 6-year rates to remain near, or slightly below, 60% for the next few years.

Five is 75: to raise our 6-year graduation rate above the 60% bar, where BSU would become a leader in its institutional classification, means adding 75 graduates.
Five is 75: Missing Student Analysis to Study Men & Men of Color

Many schools have achievement gaps between male and female students, but Bridgewater has typically had larger gaps than other institutions in its peer group. In recent years, Bridgewater has been particularly concerned about the graduation and retention rates for men of color. In data presented in this poster, we show that there is strong evidence that the overall performance of men of color has improved significantly, but that gender differences persist in general. Part of our analysis is based on MiSA (mē-sa) or “Missing Student Analysis.” The goal of MiSA is to identify when students are lost, which may ultimately indicate how to address student success issues. MiSA indicates that men are lost in about equal measures in their first few semesters and after beginning a fourth year of studies but before they graduate. We also note that in recent years, the gender gaps have closed a bit because women are doing worse.

The Basics of the Missing Student Analysis

- Assume two groups (say men and women) should persist and graduate at the same rate.
- From cohort size, and expected rate, compute an expected number of students who persist or graduate.
- Identify the number of missing students who did not persist or graduate.
- Divide the total number of missing graduates into students who did not persist to a 4th year, and those who did persist, but did not graduate.

Worked Example: 2007 Men and Women

63% of women graduated in 6 years, but only 49% of men

86 more men should have graduated: 14% of 616 FT-FT native men

46 / 86 = 53% of the problem

25 men were lost before the 2nd year
21 more men were lost before the 4th year

88% of 4th year women graduated, but only 76% of 4th year males graduated.

40 / 86 = 47% of the problem

2006 Cohort: 39 more men should have graduated. There should have been 13 more men retained to the 4th year (33% of the problem), so 26 men who were retained to a 4th year of studies did not graduate (67% of the problem).

MiSA tells us that a significant fraction of our Five is 75 goal can be accomplished by helping all men, as well as women of color, who are retained to the 4th year graduate.

Analysis by Thomas Kling (tkling@bridgew.edu) based on data from Institutional Research.
Five is 75: Low Income Students & First Generation Students

Unlike students of color, there have been only very minimal closings in the achievement gaps for low income and first generation students. A MISA (mē-sa) analysis of these students indicates that it is not retention in early years that is the problem. Rather the problems in the graduation rates appear to arise after several successful years of study. This may be due to the accumulation of advising or financial issues. Low income & 1st gen students represent nearly two out of three BSU native undergraduates each year. Gender gaps remain, but first gen & low income women also underperform women who are not first gen or low income.

Overall Graduation & Retention Rates: All Groups

Men: 1st Year Retention
Women: 1st Year Retention

While significant improvements in 4-year and 6-year rates are seen since 2004, low income and students of color remain behind. The gap for students of color is closing, but the gap for low income students in the 6-year rate is a little wider than the gap in the 4-year rate.

Low Income Students by Gender

Men: the 6-year graduation rates for men have traditionally been very low, but we do see small improvements in their continuation and 4-year graduation rates since the 2007 cohort.

Women: the 6-year graduation rate improved in 2007, but the 4-year graduation rates fell the following two years. The continuation rates look steady since 2006, so there may be hope there will not be a drop in the overall 6-year graduation rates.

First Generation Students by Gender

Data on first generation college students has been collected since 2008, meaning that this May (2014) will be the first year we will have 6-year graduation rates. The overall percentage of first generation students has been declining since 2008, driven in large part by fewer men coming from first generation families.

The rate by which first generation students continue to the 4th year has remained fairly consistent, with first generation women about 5% points less likely to remain into a 4th year than non-first generation women. First generation men show very little difference in continuation rates to the 4th year after the 2008 cohort.

Men: about a 3% gap between 1st gen men and non-1st gen men in the 4 year graduation rate.


Both 1st gen men and women have 5-year graduation rates that are 11% points lower than non-1st generation counterparts.

Five is 75: The first year retention of 1st gen students is fine. Difficulties arise later in the college careers of 1st gens.

Analysis by Thomas Kling (tkling@bridgew.edu) based on data from Institutional Research.
This poster attempts to provide context for the data related to student success. First, we examine the sizes of various populations at Bridgewater, and the associated uncertainties due to those population sizes. Then we use the IPEDS Data Center to examine data that is publicly available on other public universities in Massachusetts or in our group of official peer institutions. We find that Bridgewater's overall gender gap is large compared to most state public universities and our peer group, that we do a good job with first year student retention, but that our graduation rates are solid, but not exceptional compared to our peer group.

5 is 75: A 5% gain in the overall population is 75 students, but, a 5% gain for each subgroup is:

- 7 Low Income Men
- 12 Low Income Women
- 5 Men of Color
- 8 Women of Color
- 13 First Gen Men
- 22 First Gen Women

Comments on Cohort Size, Expected Scatter in Rates

- The uncertainty in the retention or graduation rates can be estimated as proportional to \(1/\sqrt{N}\).
- Given that the overall cohorts are about 1500 students, differences in graduation rates in the overall cohorts less than 3% are likely to not be significant.
- For groups like men of color, with about 100 to 150 students, we should expect annual variations in the 8 to 10% range.
- When looking at increases or decreases in rates, one has to be very careful to look for multiple year trends, which, because they have larger N values, have smaller uncertainties.

Overall Graduation and Retention Rates: MA Public Universities and Peer Institutions

Gender Gap Notes:

- The 2007 gender gap at Bridgewater is 14%, so the 6% difference in 2006 is not "turning a corner."
- The gender gap in the completion rate (students who begin at BSU and finish a 4-year degree anywhere) appears to be worse. Or it can open up if women improve and men stay the same. Our goal should be to help both men and women improve in their performance.
**Five is 75: Students from Multiple Underserved Populations**

Here we examine students who fall into more than one underserved category in the first-time, full-time freshmen populations. Our data is most complete since 2008, and remarkably, there are significant changes in student performance between the 2008 and 2009. Given the role of the Project Compass grant and the timing of its early activities, it is likely that the improvements seen in the 2009 cohort relative to the 2008 cohort represent real changes due to activities by Bridgewater faculty, staff, and administrators. Looking at the 2009 cohort, we see very little difference in 1st Year Retention across groups, but substantial differences in graduation rates, driven in large part by income.

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**Overall Graduation Rates: 2008 and 2009**

Notes: LI indicates Low Income (Pell Eligible). We do not report data on the 2008 L.I. Men of Color because only 15 people were in this group.

The graduation rates of many groups improved dramatically between the 2008 and 2009 cohorts. The differences in the rates for Low Income Women of Color and 1st Gen Women of Color are roughly 1 sigma changes.

The 4-year graduation rate for all students was 28% & 29% in 2008 & 2009, respectively.

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**Students of Color & Low Income**

**4-Year Graduation Rates (2009 Cohort)**

Within the non-Pell eligible or Pell eligible categories, white students have an average 4-year graduation rate that is about 1 point higher than students of color averaging across gender.

Across the income categories, non-Pell eligible students have graduation rates over 7% points higher than Pell-eligible students for both white students and students of color averaging across gender.

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**First Generation & Students of Color**

**4-Year Graduation Rates (2009 Cohort)**

For students who are not 1st generation, white students have a 4-year graduation rate that is 12% points higher than students of color. But, for 1st generation students, students of color have a 4-year graduation rate that is 3% higher than white students.

For white students, 1st generation students lag white students who are not 1st generation by about 10% points.

Unexpectedly, 1st generation students of color have graduation rates that are 5.4% points higher than non-1st generation students of color in the 2009 cohort.

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**First Generation & Low Income**

**4-Year Graduation Rates (2009 Cohort)**

Women who are not first generation, including low income women who are not first gen, graduate at higher than 30%.

Adding 1st gen status produces a large drop-off in graduation rate for women (over 10% points), and a smaller drop-off for men (about 2% points).

**Five is 75:** Target groups: low income students, particularly low income men; all students of color, particularly those who are not 1st gen, and 1st gen students, particularly women.

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**Groups Doing Relatively Well**

<table>
<thead>
<tr>
<th>2009 First-Time, Full-Time Freshmen Cohort</th>
<th>N</th>
<th>4 Year Graduation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-1st Gen, White Women</td>
<td>318</td>
<td>37.4%</td>
</tr>
<tr>
<td>Non-Eligible, Non-1st Gen Women</td>
<td>328</td>
<td>36.6%</td>
</tr>
<tr>
<td>Non-Eligible, Men of Color</td>
<td>32</td>
<td>34.5%</td>
</tr>
<tr>
<td>Low Income, Non-1st Gen Women</td>
<td>64</td>
<td>33.9%</td>
</tr>
<tr>
<td>Non-Eligible, White Women</td>
<td>577</td>
<td>32.4%</td>
</tr>
<tr>
<td>Non-Eligible, Non-1st Gen Men</td>
<td>266</td>
<td>30.4%</td>
</tr>
<tr>
<td>1st Gen, Men of Color</td>
<td>43</td>
<td>30.2%</td>
</tr>
<tr>
<td>Non-Eligible, White Men</td>
<td>284</td>
<td>29.9%</td>
</tr>
<tr>
<td>Non-Eligible, White Men</td>
<td>411</td>
<td>29.0%</td>
</tr>
</tbody>
</table>

Every group of low income students, except low income, non-1st gen women, fall below the 25% four year graduation rate level.

Income seems to level certain other factors – see the group for low income starting with non-1st gen men.

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**Analysis by Thomas Kling (tkling@bridgew.edu) based on data from Institutional Research.**