SF State Remediation Revisited, February 2016

Fall 2010 through 2014 Cohorts of Full-Time First-Time Freshmen

ACADEMIC PLANNING and DEVELOPMENT • Academic Institutional Research • air.sfsu.edu
Table of Contents

Introduction ........................................................................................................................................ 2
Remediation Need ........................................................................................................................... 2
Completion of Remediation ............................................................................................................. 10
Student Outcomes .......................................................................................................................... 11
Summary of Similarities and Differences between the Earlier and Present Studies ........ 14
Conclusion ........................................................................................................................................ 17
Introduction

In 2012 Academic Institutional Research (AIR) produced a report on remediation among the full-time first-time freshman (FTFTF) cohorts of the Fall terms of 2005 through 2009. In that study, the cohorts were combined for analysis. The present study revisits remediation, comparing the FTFTF cohorts of Fall 2010 through 2014 against each other. Remediation need and completion, academic outcomes, and demographic differences are examined. Additionally, in the present study, overall remediation need and completion trends are shown across ten cohort years, 2005 through 2009 from the original study, and 2010 through 2014, the focus of the present study.

Remediation Need

Roughly half of the 18,013 FTFTF in the Fall cohorts of 2010 through 2014 needed some type of remediation. Although the percentage of students needing remediation in the Fall 2010 cohort was similar to the preceding five cohorts’ percentages, it was markedly higher than the percentages of students needing remediation in the subsequent four cohorts of 2010 through 2014.

In the Fall FTFTF cohort of every year, 2010 through 2014, the need for remediation was statistically significantly different (p<.05) on the basis of various demographic categories. The differences were consistent with those seen in the 2012 study and are summarized below.
Need for Remediation, Fall FTFTF 2010 through 2014, by Demographics

<table>
<thead>
<tr>
<th></th>
<th>Significantly more likely</th>
<th>Significantly less likely</th>
<th>No significant difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>female</td>
<td>male</td>
<td></td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td>Black/African American, Latino</td>
<td>White</td>
<td>Asian, Two or more races</td>
</tr>
<tr>
<td>URM/non-URM</td>
<td>URM</td>
<td>non-URM</td>
<td></td>
</tr>
<tr>
<td>First generation</td>
<td>first generation college</td>
<td>parent(s) attended college</td>
<td></td>
</tr>
<tr>
<td>Pell eligibility</td>
<td>Pell-eligible</td>
<td>Pell ineligible</td>
<td></td>
</tr>
<tr>
<td>EOP</td>
<td>EOP-enrolled</td>
<td>non-EOP</td>
<td></td>
</tr>
<tr>
<td>Geographic origin</td>
<td>local area, other countries</td>
<td>non-local California</td>
<td>other states</td>
</tr>
<tr>
<td>College of major</td>
<td>HSS</td>
<td>LCA</td>
<td>BUS, S&amp;E</td>
</tr>
</tbody>
</table>

The need for remediation by type of remediation is shown below.

There was a sharp drop in the numbers of FTFTF needing dual and English-only remediation between the Fall 2010 and 2011 cohorts (respectively, 956 vs. 660 needing dual and 716 vs. 372 needing English-only remediation). There was an increase in the number of FTFTF who needed math-only remediation (477 vs. 733). Analysis revealed that these changes largely were the result of an increase in the number of students who became exempt from English remediation through the Early Assessment Program (EAP). Would-be dual remediation students became math-only in this way. EAP enables students to avoid needing remediation as FTFTF. High school juniors are tested and receive a college-ready, conditionally-ready, or not-ready score in English or math.
• Those who are college ready do not have to take the respective English Placement Test (EPT) or Entry Level Mathematics (ELM) test and do not need remediation.
• Those who are conditionally ready are required to take a senior-year course, one of a list of pre-determined, approved courses. They are then exempt from the EPT or ELM and do not need remediation if they get a “C” or better in the year-long course.

**Types of Remediation Needed by Whom**
Among only the FTFTF of 2010 through 2014 who needed remediation, the need for remediation varied significantly by type of remediation needed and by demographic categories. The distribution of need within demographic groups varied by cohort year. The percentage of students needing math-only remediation was notably greater in the Fall 2011 cohort. For the most part, this was the result of a sharp drop in the numbers of students needing English remediation, as explained above. Students changed from needing dual remediation to only needing math remediation.

![Graph showing the percentage of gender needing remediation by type of remediation by FTFTF cohort year.](image)

Female students were significantly more likely than were males to need math-only remediation, while males were significantly more likely than were females to need English-only remediation.
Asian students were significantly more likely than were students in other race/ethnicity categories to need English-only remediation. White students were significantly less likely than were students in other race/ethnicity categories to need remediation in both English and math (dual remediation). They and students of two or more non-Latino races were significantly more likely than were other groups to need math-only remediation.

Because the categories of Native American/Alaska Native and Native Hawaiian/Other Pacific Islander included disproportionately fewer students needing remediation per cohort year (fewer than 30) and because Native American/Alaska Native and Native Hawaiian/Other Pacific Islander students were not significantly more or less likely than were students in other race/ethnicity categories to need one type of remediation over another, they were not included in the chart above.
First generation college students needing remediation were significantly more likely to need dual remediation and less likely to need math-only remediation than were students whose parent(s) attended college.

Students not eligible for Pell grants were significantly more likely than were Pell-eligible students to need math-only remediation.
EOP-enrolled students needing remediation were significantly more likely to need dual remediation and less likely to need math-only remediation than were non-EOP students.

In the three charts above, the more or less sharp decrease in the numbers of FTFTF needing dual or English-only remediation is reflected in the declining percentages from the 2010 to the 2011 cohort of students needing such remediation. As mentioned earlier, the EAP program enables students to avoid matriculating at SF State needing remediation. The percentages of FTFTF in the 2010 and 2011 cohorts who participated in EAP were examined. Overall, there were increases in the numbers of students who were exempt from taking the EPT and ELM (and exempt from remediation) between the Fall 2010 and 2011 cohorts.
Local area students were significantly more likely than were students from other areas to need dual remediation, while non-local California students were significantly more likely than were other students to need math-only remediation.

The abrupt changes in the 2012 cohort among students from other countries are most likely due to the small number of students in this group.

There were only 82 students from other states in the 2010 through 2014 FTFTF cohorts combined who needed remediation, so they were not included in the chart above.
Liberal & Creative Arts majors were significantly more likely than were students with majors in other colleges to need remediation in only math, while Business and Science & Engineering majors were more likely to need English-only remediation.

The colleges of Education and Ethnic Studies were not included in the chart above because of the relatively small numbers of FTFTF with majors in those colleges.
Completion of Remediation

Of the 19,390 FTTF in the Fall cohorts of 2005 through 2014 who needed remediation, 16,760 (86%) completed remediation while 14% did not.

Completion rates varied by the type of remediation that was needed. English-only remediation was significantly more likely, and dual remediation less likely, to be completed than was math-only remediation.

Completion rates for all types of remediation declined in the 2014 cohort.
Among the FTFTF of 2010 through 2014 who needed remediation, the completion of remediation varied significantly by type of remediation needed, as shown above, but by only one demographic category. URM students of the 2010, 2011, and 2012 cohorts were significantly less likely to complete remediation than were the non-URM students, but there were no statistically significant differences in completion by URM status in the 2013 or 2014 cohorts. There were no statistically significant differences in remediation completion by gender, race/ethnicity, first generation/parental college, Pell eligibility, EOP enrollment, geographic origin, or college of major.

**Student Outcomes**

<table>
<thead>
<tr>
<th>Cohort Year</th>
<th>Retained</th>
<th>Not Retained</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>2011</td>
<td>81%</td>
<td>19%</td>
</tr>
<tr>
<td>2012</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>2013</td>
<td>83%</td>
<td>17%</td>
</tr>
<tr>
<td>2014</td>
<td>82%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Roughly eight in ten students who needed remediation persisted to their second year at SF State. Students in the FTFTF Fall cohorts of 2010 through 2014 who needed but did not complete remediation in their first year, however, were subject to an SF State policy making them ineligible to enroll in the first semester of the second year.

Of only the students in the combined 2010 through 2014 cohorts who completed remediation, 91% were retained one year after matriculation, an improvement from the 87% of the combined 2005 through 2009 cohorts who were retained.

To put all of this in perspective, 19% of all Fall 2010 FTFTF (regardless of need for remediation) did not return in Fall 2011. Only 6% of the entire cohort did not return because of incomplete remediation.
Below are shown the continuation and graduation rates of the students in the Fall 2008 cohort who completed remediation in comparison to those who did not need remediation.

Not only were the one-, two-, and three-year continuation rates of students who completed remediation higher than those of students who did not need remediation but the six-year graduation rate of students who completed remediation was higher than that of students who did not need remediation (55% vs. 53%).
Among only the students who completed or did not need remediation, the one-year continuation rate of those not needing remediation was significantly lower than were those of the students who completed dual or English-only remediation but not significantly lower than those of the students who needed only math remediation.

Students who did not need remediation had a significantly higher four-year graduation rate, however, than did the students who completed remediation.
Although the four-year graduation rates of students who completed remediation were lower than those of the students who did not need remediation, the six-year graduation rates of students who completed dual or math-only remediation were about equal to that of students who did not need remediation. Furthermore, the six-year graduation rate of students who completed English-only remediation was significantly higher than those of students who completed dual or math-only remediation or who did not need remediation at all.

Recall that English-only remediation in the Fall 2008 FTFTF cohort accounted for slightly more than one quarter of the need for remediation. Yet English-only remediation had a 92% completion rate vs. 86% for math only and 78% for dual remediation. One-year continuation of the three groups completing remediation was highest (although not statistically significantly so) among those completing English-only remediation.

### Summary of Similarities and Differences between the Earlier and Present Studies of Remediation

In AIR’s 2012 study of remediation, the Fall FTFTF cohorts of 2005 through 2009 were combined for analysis. The present study revisits remediation, comparing the FTFTF cohorts of Fall 2010 through 2014 against each other.

In the present study, overall remediation need and completion trends are shown across the ten cohort years.

In the cohort years considered in the first study (2005-2009), remediation was needed by six in ten FTFTF. In the last four of the five cohort years considered in the current study (2010-2014), only five in ten FTFTF needed remediation.
By demographics:

- In both sets of cohort years, the groups of FTFTF who were significantly more likely than were other groups of students in the same categories were: female, Black/African American, Latino, URM, first generation college-attending, Pell-eligible, enrolled in EOP, HSS majors, or from the local area.
- Groups of students no longer significantly more likely to need remediation than others included Asian students and BUS majors. In the current study, high school GPA was not included, and non-local, non-Southern California geographic origin was divided into more specific groups.

By type of remediation needed:

- The distribution of the types of remediation needed by the Fall 2010 cohort closely resembled that of the 2005 through 2009 cohorts, but there was a sharp drop in the numbers of FTFTF needing dual and English-only remediation between the Fall 2010 and the 2011 through 2014 cohorts. There was an increase in the number of FTFTF who needed math-only remediation (477 vs. 733). Analysis revealed that these changes largely were the result of an increase in the number of students who became exempt from English remediation through the Early Assessment Program (EAP).

Types of remediation needed by whom:

In the earlier study, this was examined by considering all five FTFTF cohorts combines, but in the current study the more recent five cohorts are considered individually.

Similarities between the early cohorts and more recent cohorts include:

- Female students were significantly more likely than were males to need math-only remediation, while males were significantly more likely than were females to need English-only remediation. (In the earlier cohorts combined, female students were more likely than were males to need dual remediation.)
- Asian students were significantly more likely than were students in other race/ethnicity categories to need English-only remediation. White students were significantly more likely than were other groups to need math-only remediation. Black/African American and Latino students were significantly more likely than were students in other race/ethnicity categories to need remediation in both English and math.
- First generation college students needing remediation were significantly more likely to need dual remediation and less likely to need math-only remediation than were students whose parent(s) attended college.
• Pell-ineligible students were significantly more likely than were Pell-eligible students to need remediation in math alone. Pell-eligible students were significantly more likely than were Pell-ineligible students to need dual remediation, although this was not found in three of the five more recent cohorts when examined individually.

• EOP-enrolled students needing remediation were significantly more likely to need dual remediation and less likely to need math-only remediation than were non-EOP students.

• Liberal & Creative Arts majors were significantly more likely than were students with majors in other colleges to need remediation in only math, while Business and Science & Engineering majors were more likely to need English-only remediation. In the 2005 through 2009 cohorts, Health & Social Sciences majors were more likely than were other majors to need dual remediation. This was seen in the combined 2010 through 2014 cohorts but not in each individual year.

• Local area students were significantly more likely than were students from other areas to need dual remediation, while non-local California students were significantly more likely than were other students to need math-only remediation.

Completion of remediation:

In both five-year periods, overall remediation completion rates varied from about 84% to 89%, English-only remediation was completed at the highest rates, and dual remediation had the lowest completion rates. URM students in both five-year time periods were significantly less likely than were non-URM students to complete remediation. In the more recent five cohorts, the statistically significant differences by geographic origin were no longer seen.

One-year retention of students who completed remediation rose from 87% in the earlier cohorts combined to 91% in the more recent cohorts combined.

The Fall 2005 and Fall 2008 FTFTF patterns of six-year graduation rates by type of remediation needed (including none needed) were the same, with English-only remediated students graduating at higher six-year rates than did students who did not need remediation. The actual six-year rates for all four remediation categories, however, were higher in the more recent cohort, with an impressive increase in the graduation rate among those who completed dual remediation (41% to 52%).

Unlike the earlier study, National Student Clearinghouse information on post-SF State enrollments and degrees earned was not obtained for the more recent five cohorts examined in the current study.
Compared to the previous study, the groups of students needing remediation and completing it were strikingly similar. The most notable changes found were higher one-year retention rates (87% to 91%) among completers of remediation and higher six-year graduation rates (41% to 52%) among completers of dual remediation.

**Conclusion**

There was a sharp decrease in the incoming freshman need for remediation in the Fall 2011 cohort. Concurrently, among students needing remediation, there were a sharp increase in the percentage of students needing only math remediation and decreases in the percentage needing dual remediation. This is attributable largely to the Early Assessment Program (EAP). EAP enables students to avoid needing remediation as FTFTF by testing out of or taking specific year-long courses as high school seniors.

Groups of students significantly more likely to need any kind of remediation were very similar to those identified in the 2012 report and included females, Black/African American and Latino students (therefore also URM students), first generation college students, Pell-eligible students, EOP enrollees, students from the local area, and Health & Social Sciences majors.

Similarly, the likelihoods of various groups of students significantly more likely to need particular types of remediation were consistent with those mentioned in the 2012 AIR report on remediation. Please see pages 4 through 9 of the present report for detailed information.

Remediation completion rates improved from the 2009 to the 2010 cohort but changed from year to year after that point, most recently with a sharp drop in dual remediation completion in the 2014 cohort.

Student continuation and graduation rates were compared across the cohort years by remediation need. Roughly eight in ten students who needed remediation continued into their second year at SF State. Among only the students who complete remediation, one-, two-, and three-year continuation rates and six-year graduation rates exceeded those of students who did not need remediation. The higher six-year graduation rate is attributable to the relatively higher six-year graduation rate of those who needed remediation in only English (62%), although the rates of the dual- and math-only-remediated students were only one percentage point lower than the 53% six-year graduation rate of the Fall 2008 FTFTF who did not need any remediation.