Disproportionate Impact
Fall 1992

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Introduction

Previous studies of Fall 1989 and Fall 1991 at Los Angeles Harbor College, have shown some disproportionate impact. In addition, English as a Second Language (ESL) placement had not previously been examined. to meet matriculation guidelines, periodic evaluation of disproportionate impact is required. Due to previous findings, the evaluation of 1992 data was refined and carefully examined. The data has been evaluated not only in the previous areas of English and Math, but also with regard to essay writing scores, reading scores, and placement levels. Algebra Readiness, Elementary Algebra, Intermediate Algebra, and Pre-Calculus levels were examined with new district cross-tabs. ESL placement was examined, as well as ESL essay scores and a review of district conclusions regarding the shortened Second Language English Placement (SLEP). Each area is discussed separately, although the English and ESL placements are constructed from the essay and reading scores.

By examining groups in greater detail than past years, it was hoped that the source of and disproportionate impact would be clear. As a result, it was clear that the disproportionate impact found in English 101 placement by ethnicity, was due not to the locally generated essay test, but to the State approved reading test. In fact, the essay test had a lessening effect on overall English placement disproportionate impact.

In addition, disparities in Math and ESL placement disproportionate impact were explained by very small numbers in particular groups in less frequently used tests. Future studies may choose to combine semesters of testing to create a truer picture of these tests (assuming there are no serious confounding variables).
English Essay Test

The Fall 1992 writing scores of the English Essay Test (currently on probationary approval by the State) were examined for disproportionate impact with regard to sex, race, and age. A total of 1,815 students were examined. Figures 1, 2, and 3 show the percents of each group’s scores. For confounding reasons and since the ethnic category of “unknown” was very close to the cut off of <2% of the population recommended for reliability, this category was eliminated. The ethnic category of “other” was also eliminated since it was well under the 2% suggested limit at just over 1%. In addition, the category of “55 years and over” was eliminated due to a small n of 5 (less than 0.3% of the student population). In no case was any disproportionate impact (a difference of greater than 20% between groups) found.

Figure 1.

English Essay Test Scores by Gender (Fall 1992)

As seen in Figure 1, there are some differences between males and females, with slightly higher scores for females. However, the differences are well within matriculation guidelines. The greatest difference of 9.6% is found in the category of a score of 5. There were totals of 1,072 females and 743 males.

Figure 2 shows the percentage of each ethnic group receiving each possible writing score. The total number of students receiving a writing score were: Asian,
English Reading Test

The ETS-APS Reading Form A reading scores were examined for disproportionate impact. The Fall 1992 students categorized numbered 1,815, the same students who were examined with regard to their English essay scores. Total numbers of students in each demographic category remain the same as those stated in the first part of this chapter under the heading of English Essay Test.

There is no indication of disproportionate impact in any of the categories measured. Due to the wide range of scores, only a most unusual demographic could give any indication of disproportionate impact when evaluating reading scores alone. Figures 4, 5, and 6 show the overall percents of demographic categories by reading score.

Figure 4.

English Reading Test Scores by Gender (Fall 1992)

In Figure 5 it can be seen that Whites tended to have much higher reading scores than other ethnic groups. Asians, Blacks and Hispanics had nearly the inverse of the Whites' scores. The differences do not show a statistical difference beyond matriculation guidelines due to the limitations of a wide range.

Figure 6 shows a tendency for younger students to score lower on the reading test compared to older students. There is no indication of a significant disproportionate impact, however.
Figure 6.
English Reading Test Score
by Age (Fall 1992)
Figure 8.

English Placement by Ethnicity (Fall 1992)

The only indication of disproportionate impact found with regard to English is in the area of English 101 placement and ethnicity. Whites show a disproportionate placement in English 101 in comparison to Asians, Blacks, and Hispanics. This disproportionate impact is a result of reading test scores and not essay test scores.
In *Ethnic L.A.*³, Pearlstone states that "Of the almost 600,000 children enrolled in the Los Angeles Unified School District (LAUSD) in 1988, more than 500,000 were non-White." They speak about 96 different languages. "The district has the nation's largest number of limited-English-speaking students." The 1990 census figures show a growth in non-English speaking homes in Los Angeles. These problems in English reading scores are perhaps more evident due to the college's extremely ethnically diverse campus. The challenges of meeting the needs of these diverse groups remain a priority for Harbor College.

Chapter 2

English as a Second Language
ESL Placement

In Fall 1992, 151 students were assessed and placed by the ESL placement tests. Students were placed in one of the following categories: Developmental Communications 76, English 84, English 85, English 86, or Referral to ENL. There were an insignificant number of Whites(1), Black(0), Other(1), Unknown(4), 55 and over age(2), and ENL Referral(3) categories. Therefore, these categories will not be found in the following figures.

Figure 13.

ESL Placement
by Gender (Fall 1992)

English Placement Level

Figure 13 clearly shows no disproportionate impact of ESL Placement by gender.

Figure 14 shows no disproportionate impact by ethnicity with the exception of English 85 between Asians and Hispanics, probably due to error with small sample sizes. This exception is extremely close to the 20% guideline, at 24.4%. There is no disproportionate impact with regard to Whites generalizable from this data due to the extremely low numbers of Whites.
Summary

No disproportionate impact with regard to ESL testing and placement was found that could not be accounted for by error involving small sample sizes. It is recommended that future reports examine combined semester samples in order to decrease error. Age differences will be carefully monitored in English 85. However, 1991 data did not have disproportionate impact in English 85.
Algebra Readiness Test Placement

In response to matriculation mandates and some borderline results of Fall 1991 math disproportionate impact findings, Fall 1992 math placement was examined. The Algebra Readiness Test places students in Math 105, Math 112, and Math 113, 114, 115. The category of Other placement consists of too small a placement group to include in the following figures. In addition, the groups of Other and Unknown ethnicity, as well as students 55 years of age and older, consisted of too small of numbers to be included in these figures.

Figure 16.

Algebra Readiness Test Placement by Gender (Fall 1992)

Figure 16 clearly shows no evidence of disproportionate impact with regard to gender.
Future district printouts will be examined carefully and the suggestion of combining semesters to decrease error has been made. In addition, the Algebra Readiness Test has received State approval from the Chancellor's office, which implies that this disproportionate impact is "justified" according to the State's definition. Cut scores at the local college level are examined in a separate document.

Figure 18.

Algebra Readiness Test
Placement
by Age (Fall 1992)

![Bar chart showing placement levels by age for Math 105, Math 112, Math 113, and Math 115. Different bars represent age groups: Under 20, 20-24, 25-34, and 35-54.](chart.png)
Figure 20 shows no disproportionate impact in the Elementary Algebra Test placement with regard to ethnicity.
Intermediate Algebra Test Placement

In Fall 1992, 112 students were tested and placed by the Intermediate Algebra Test. Placements were made into Math 113-115, Math 120, 125 and Other. No disproportionate impact with a dominant culture group was found in any category.

Figure 22.

Intermediate Algebra Test Placement by Gender (Fall 1992)

Figure 22 shows that there is no disproportionate impact with regard to gender in placement according to the Intermediate Algebra Test. There were more males (60%) that females (40%) tested.
The 35-54 years old group was omitted due to a very small number of students in this category (4). There were no students in the 55 and over category. There is no disproportionate impact with regard to age at any Intermediate Algebra Test placement level.

**Pre-Calculus Test Placement**

The total number of students taking the Pre-Calculus Test for placement was 33 in Fall 1992. It was not possible to determine disproportionate impact with this small number. The Pre-Calculus Test places students in Math 125, 140, Math 260, and Math 265. A description of the data found is clearer than the figures due to the small sample size.
Approximately 61% (20) of those tested were Asian, followed by Hispanic (21%; 7), White (3) and Black (2). Only Asian and Hispanic groups are shown in Figure 26 due to the extremely small numbers of White and Black samples.

Figure 26.

**Pre-Calculus Test Placement**
**by Ethnicity (Fall 1992)**

<table>
<thead>
<tr>
<th>Percent</th>
<th>Math 125, 240</th>
<th>Math 260</th>
<th>Math 265</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Math Placement Level*