

Studies Monitoring Disproportionate Impact

Information needed:

1. Must be able to identify each student who follows their *initial* placement recommendation based on the test score and enrolls in the course advised.
2. Enrollment data for courses identifying each student by factors as ethnic group/race, language group, gender, and age.

Persons involved:

Campus researcher, department head, assessment/matriculation coordinator, other campus administrators.

Method:

Disproportionate impact is to be monitored and evaluated periodically. It requires sufficient “head count” to do a reasonable analysis. After 200 to 300 students have enrolled in the target course(s), it becomes appropriate to consider this analysis and evaluation.

Disproportionate impact evaluates the rate of placement of impacted groups into specific classes. When courses represent a sequence, then placement rate evaluation **into the upper level courses** is sufficient (assuming that most students want to be in the upper level courses, etc.) and the goal is to monitor *initial* placement.

The analysis begins by determining the percent of students in an impacted group (gender, race/ethnicity, etc.) recommended into each course over a period of time (one, two, three, etc. years). Evaluation for impact is accomplished by dividing the minority percent placement rate (African American, Hispanic, female, Spanish speakers, etc.) by the majority (white, or male, etc.) percent **in upper level** courses. If a ratio is *less than* 80% then there is evidence of disproportionate impact. For example, if 30 of 100 majority member students are placed into the upper level course and only 20 of 100 minority member students are placed into the same course, then the placement rates are 30 and 20 percent, respectively. Taking the ratio of 20 to 30 gives a placement ratio of 67 which is below 80%, thus providing evidence that disproportionate impact has occurred.

Another way to evaluate the data is to take 80% of the majority placement rate in the upper level course(s) (in the example above, 80% of 30 is 24). If the placement rate for the minority group is less than 24%, then there is evidence of disproportionate impact. In the example, the placement rate for the minority group is 20% which is lower than 24%, so disproportionate impact has occurred.

When the ratio is below 80% or the minority group placement rate is less than 80% of the majority group placement rate **into the upper level course(s)**, the college must consider and

evaluate what the causative factors could be that account for the observed differential placement. Monitoring and documentation must continue over time. As appropriate, steps need to be considered to alleviate the situation. It becomes important to re-evaluate the fairness of the test as a tool to guide placement recommendations.

Common Deficiencies in Disproportionate Impact Studies Submitted by Local Colleges and Preliminary Report Comment Examples

Common Errors or Deficiencies in Evidence Submitted

- 1. Not all required groups (gender, ethnicity, age) are included in the plan or the analyses presented.**
- 2. Disproportionate impact is found for one or more groups, but there is no presentation of the steps taken to explore potential reasons that justify the disproportionate impact or to minimize its impact.**
- 3. Data provided were not collected within the last three-year period.**
- 4. The sample sizes are too small for drawing valid conclusions.**
- 5. An inappropriate design or analysis is used. While several approaches are available and appropriate for use, the simplest and recommended design is to compute and report placement rates across courses (with a focus on upper level courses) for each impacted group and use the standard “80% rule” to make decisions. The focus of the studies should be on placement rates into the upper level courses.**

Comment Example 1: ESL Writing Sample

For a new instrument, no disproportionate impact data need be presented, but a detailed plan or design for how the college will monitor disproportionate impact is required.

Comment Example 2: ESL English Language Essay

Decisions were made based on comparisons of means only. The design most appropriate when writing rubrics are used to place students is to examine and compare the placement rates of different groups into the different courses. Such an analysis is necessary to attain Full Approval.

Comment Example 3: English Writing Sample

For renewal, it is assumed that the College has been monitoring disproportionate impact continuously and if disproportionate impact is found, steps have been taken to explore potential reasons that justify the disproportionate impact or to minimize its impact. Merely indicating, as does the report, that “Further study needs to be conducted to investigate the issue of fairness” is not sufficient for renewal.

Comment Example 4: APS Reading

Disproportionate impact was found for ethnic groups. For renewal, it is not sufficient to just say, “We will continue to collect data and monitor this area.” The college needs to indicate what it is going to do to address the problem or provide evidence that the disproportionate impact is appropriate or justified. Some colleges have been using their consequential validity evidence to demonstrate that while disproportionate impact occurs, students in the impacted groups report that they are satisfied with their placement. It is suggested that the college provide these data.

Comment Example 5: ESL Writing Sample

Data were presented for only the level 5 course. That analysis is judged appropriate, but data should be presented for the full range of courses (at least for a couple more of the higher level courses).

Comment Example 6: ESL Writing Sample

The placement rates do not appear to be calculated appropriately. There appear to be 275 males and 273 females placed by the test into one of three courses (p. 9 table). The placement rate for males into ESL 037 is 44.4% (122/275) and for females is 47.6% (130/273). It is the placement rates similarly calculated that need to be compared for each course.

Comment Example 7: CASAS - IRCA

The criterion needs to be identified that resulted in the conclusion that, “there is no Disproportionate Impact.” The “80% rule” is not referenced nor is lack of statistical significance referenced as the criterion. The conclusion needs to be better explained for gender and age. Given that over 98% of the students served are Hispanic, ethnic group Disproportionate Impact is not an issue as stated in the report.

Comment Example 8: Nelson-Denny

The wrong logic and criterion appears to have been implemented. Only data for Reading 171 is presented and it is assumed to be the lower level course, therefore the 80% rule applies only if one uses the ethnic group percentages as the referent group in comparison to the white placement rate. The question becomes “are whites being placed in this lower level course at a lesser rate than are other groups?” or one could use the white placement rate as the referent, but then use a 120% rule as the criterion for the placement rates for the other groups. If they exceed that percentage (120% of 29% = 34.8%), then there is evidence that a disproportionate number are being placed in the lower level course.

Comment Example 9: ESL Placement Test

The method used has no accepted criterion to make a decision on whether the placement rates for comparison groups are sufficiently different to indicate disproportionate impact. For example, the report concludes that there is no ethnicity disproportionate impact, yet 66.8% (824 of 1233) of Hispanic students are placed into ESL 840 in comparison to only 36.6% (81 of 221) of non-Hispanic students. This is a

substantial difference and is larger than the typically used “80% rule” difference to judge disproportionate impact. It is recommended that the disproportionate impact data be reconfigured to look at and compare placement rates which are based on percent of each group placed into each course and that the 80% rule is used in drawing conclusions.

Comment Example 10: Algebra Readiness Test

To address disproportionate impact, two sets of analyses were presented, one addressing differential placement into courses, the other addressing differential success rates once placed into the course. The report places more emphasis in drawing conclusions on the results from the latter set of analyses than from the former. In doing so, different opinions occur on what the college identifies as the important disproportionate impact issues on which to focus their efforts.

For example, there is evidence that disproportionate impact occurs for age groups with students age “19 and younger” being placed into the higher level MATH 200 course at a higher rate than for the other age groups (1st set of analyses). Yet this is not identified as a concern for the college, but rather the concern is that this age group does not appear to be as “successful” in passing the course as the other age groups once the students qualify for the class (2nd set of analyses).

Similarly, there is evidence of placement rate differences for Hispanics, (1st set of analyses) but because the success rate is similar (2nd set), it is concluded that this is not a problem.

Typically in disproportionate impact studies, placement rate differences are a primary or the only source of evidence provided. It is recommended that the college not ignore, but rather explore, reasons for the differential placement of Hispanic students into MATH 200. Likewise, it is noted that the “raw” placement rate for “Black Non-Hispanic” students into MATH 2—is at a lower rate than even for Hispanics. It is assumed that the inclusion of high school GPA in the regression equation was moderating this effect and explains why this group was not flagged.

The above comments are for feedback purposes only and do not require any response or submission of additional data.

Disproportionate Impact Study Examples

Sample 1

Disproportionate Impact Evidence

Disproportionate impact was assessed according to the guidelines prepared for the California Community College Matriculation Conference by Glasnapp and Poggio (2001). In the following analyses, any placement rate less than 80% of the benchmark placement rate identifies potential areas of disproportionate impact. The majority placement rate (e.g., for female, White or young students) formed the benchmark for this study. For each set of analyses, the benchmark is clearly identified

Analyses regarding disproportionate impact were based on all students who were placed into their initial English course from fall 2001 and spring 2004 (including summers). This more recent timeframe provides the opportunity to focus on more recent student demographics. The college has experienced a steady increase in the number and proportion of Hispanic students. A total of 2,587 students were assessed for initial placement into English 50, 55 or 121 during this timeframe.

A. Gender

(NOTE: This is an example of an incorrect analysis. The placement rate of males should have been used as the “majority” group. As females are placed into the upper level course at a higher rate (56% to 44.6%), there is no evidence of disproportionate impact.)

Slightly more females than males were placed into this sequence of English courses. Therefore, the EEOC 80% rule was applied to the placement rate of female students. The following table shows *no indication of disproportionate impact for gender* in English 50, 55 or 121.

Placement Recommendations by Gender

Gender	English 50	English 55	English 121	Total Eligible	
				%	N
Females	10.5%	33.5%	56.0%	100%	1,290
Males	16.0%	39.4%	44.6%	100%	1,191
80% of Placement Rate for Females (majority)	8.4%	26.8%	44.8%		

B. Age Group

Younger students comprise the vast majority of students in the general student population at this College, and across all of the courses within this study. Therefore, we used 80% of the placement rates for students between the ages of 17-19 as the standard for comparison. While there are relatively fewer students 40 years old or more who were placed into English 55, we see that they were placed into English 121 in relatively high proportions. The following table shows *no indication of disproportionate impact for age* in English 50, 55 or 121.

Placement Recommendations by Age Group

Age Group	English 50	English 55	English 121	Total Eligible	
				%	N
17-19	9.4%	37.2%	53.3%	100%	1,136
20-24	14.3%	38.7%	46.9%	100%	733
25-29	19.2%	34.8%	46.0%	100%	250
30-39	21.9%	29.9%	48.3%	100%	201
40+	14.8%	26.1%	59.2%	100%	142
80% of the majority (17-19 yrs. old) Placement Rate	7.5%	29.8%	42.6%		

C. Ethnicity

1. Placement evidence

Hispanic students comprise the vast majority (over 70%) of students in the general student population at this College, and across all of the courses within this study. However, for English courses in general, White students are considered the traditional majority. In response to preliminary feedback from the University of Kansas, 80% of the placement rate for White students was used as the standard for comparison. While there are relatively few “other, non-White” students who were placed into English 55, we see that they were placed into English 121 in relatively high proportions. For English 121, it appears that there may be disproportionate impact for Asian, Black and Hispanic students and those whose ethnicity is unknown, because their placement rates into English 121 are lower than the standard.

Placement Recommendations by Ethnic Group

Ethnicity	English 50	English 55	English 121	Total Eligible	
				%	N
White	4.4%	24.5%	71.1%	100%	204
Asian	13.5%	36.3%	50.2%	100%	215
Black, non-Hispanic	16.3%	36.7%	46.9%	100%	49
Hispanic	13.9%	38.0%	48.1%	100%	1,821
American Indian-Alaskan Native	14.3%	21.4%	64.3%	100%	14
Pacific Islander	0.0%	50.0%	50.0%	100%	4
Filipino	8.3%	33.3%	58.3%	100%	36
Other, non-White	16.0%	16.0%	68.0%	100%	25
Unknown	15.0%	37.2%	47.8%	100%	113
Average Placement Rate	11.3%	32.6%	56.1%		
80% of the Placement Rate for White students	3.5%	19.6%	56.9%		

2. Student and faculty perceptions of placement

This College periodically surveys faculty and students in order to gain insight into how each population feels about the appropriateness of its assessment instruments and placement procedures. In Fall 2004, students and faculty in English course sections were surveyed about the placement process. These sections included day and evening classes, and those taught by fulltime and part-time instructors. (Only five sections were excluded from the survey: three met one night a week at an off-site location, and the remaining two started later in the semester.) Approximately five weeks into the semester, instructors were asked to rate each student in the classes they teach. During the same period, students independently rated the extent to which they felt they were enrolled in a course that was appropriate for their current skill level. The guidelines provided to students and faculty were very similar (see examples in Appendix A at the end of this report).

Over 1,500 students were included in this analysis. These students were enrolled in their first English course at the College. Students who had participated in English courses in previous semesters were not included. All faculty (full-time and part-time) in the English Department participated in the evaluation of their students. This involved:

- 8 faculty across 10 sections of English 50,
- 16 faculty across 25 sections of English 55, and
- 27 faculty across 39 sections of English 121.

In general, responses from students and instructors indicate that each group felt students were appropriately placed in their first English course at the college. Across all classes, 94% of the students felt they were ready for the class material (ratings of A, B, or C) and 82.5% (N=1,248) agreed that “I am in the right class.” Similarly, the instructors felt that 91.1% of their students were ready for class material (ratings of 5, 4, or 3) and 76% (N=1,509) were in the right class.

The analysis of placement recommendations presented above (section D.1) suggested that the current cut scores may disproportionately impact Asians, Blacks, Hispanics, Pacific Islanders, and students whose ethnicity is unknown (in English 121), and perhaps other, non-White students in English 55. To gain additional insight into this, the college examined the student and instructor evaluations of student placement in further detail. These analyses revealed that students and faculty feel that the English assessment process results in appropriate placement recommendations for the vast majority of students in English 50, 55 and 121. This pattern holds true when examining patterns for our different ethnic groups, with some exceptions for our smaller ethnic groups. Further details are reflected in the following tables.

Student Opinion of Placement Recommendation by Ethnicity, for English 50

ETHNICITY	Should have been in a lower class	Some material may be too difficult	In the right class	May be a little bored with the material	Should have been in a higher class	Total	
						%	N
White, non-Hispanic			42.9%	28.6%	28.6%	100	7
Asian		11.8%	64.7%	11.8%	11.8%	100	17
Black, non-Hispanic			100.0%			100	5
Hispanic		5.8%	79.0%	7.2%	8.2%	100	138
American Indian, Alaskan Native							0
Pacific Islander							0
Filipino				100.0%		100	1
Other, non-White			100.0%			100	1
Unknown		8.3%	80.6%	11.1%		100	36
Total		6.3%	77.1%	9.3%	7.3%	100	205

Faculty Opinion of Placement Recommendation by Student Ethnicity, for English 50

ETHNICITY	Should have been in a lower class	Marginal writer for the class	In the right class	Above average writer for the class	Should have been in a higher class	Total	
						%	N
White, non-Hispanic			62.5%	37.5%		100	8
Asian		12.5%	75.0%	12.5%		100	24
Black, non-Hispanic		16.7%	66.7%	16.7%		100	6
Hispanic		4.0%	76.9%	18.5%	0.6%	100	173
American Indian, Alaskan Native							0
Pacific Islander							0
Filipino			100.0%			100	1
Other, non-White			100.0%			100	1
Unknown		9.8%	68.3%	22.0%		100	41
Total		5.9%	74.8%	18.9%	0.4%	100	254

In English 50, 93.7% of all students felt that they had the necessary skills and knowledge to succeed in the class with normal effort. All the Black, non-Hispanic and 100% of other, non-White students felt that they were in the right class. Instructors for English 50 indicated that students in these two ethnic groups were ready for the class material, and that none of them should have been placed in a higher class. The data further suggest that the standards for appropriate placement were met for students of other ethnic backgrounds. Only 11.8% of Asian students and 8.2% of Hispanic students felt that they should have been placed in a higher class (in comparison, 28.6% of White students felt that they belonged in a higher class). English 50 instructors felt that far fewer (less than 1%) of their students belonged in a higher class.

Student Opinion of Placement Recommendation by Ethnicity, for English 55

ETHNICITY	Should have been in a lower class	Some material may be too difficult	In the right class	May be a little bored with the material	Should have been in a higher class	Total	
						%	N
White, non-Hispanic		9.1%	59.1%	4.5%	27.3%	100	22
Asian	2.2%		77.8%	15.6%	4.4%	100	45
Black, non-Hispanic			100.0%			100	6
Hispanic	0.6%	3.1%	80.2%	8.4%	7.8%	100	358
American Indian, Alaskan Native			100.0%			100	3
Pacific Islander			100.0%			100	2
Filipino			40.0%	20.0%	40.0%	100	5
Other, non-White			50.0%	50.0%		100	2
Unknown		1.4%	85.1%	6.8%	6.8%	100	74
Total	0.6%	2.7%	79.7%	8.7%	8.3%	100	517

Faculty Opinion of Placement Recommendation by Student Ethnicity, for English 55

ETHNICITY	Should have been in a lower class	Marginal writer for the class	In the right class	Above average writer for the class	Should have been in a higher class	Total	
						%	N
White, non-Hispanic	3.6%	10.7%	60.7%	17.9%	7.1%	100	28
Asian		8.3%	78.3%	11.7%	1.7%	100	60
Black, non-Hispanic			77.8%	22.0%		100	9
Hispanic	1.2%	6.5%	79.1%	11.5%	1.6%	100	494
American Indian, Alaskan Native	33.3%		66.7%			100	6
Pacific Islander			50.0%	50.0%		100	2
Filipino			71.4%	28.6%		100	7
Other, non-White			66.7%	33.3%		100	3
Unknown	1.2%	8.3%	70.2%	19.0%	1.2%	100	84
Total	1.4%	6.8%	76.9%	13.1%	1.7%	100	693

In English 55, 100% of the Black, non-Hispanic and 100% of the Pacific Island students felt that they were in the right class. Instructors for English 55 indicated that students in these two ethnic groups were ready for the class material, and that none of them should have been placed in a higher class (i.e. English 101). The data further suggest that the standards for appropriate placement were met for students of other ethnic backgrounds. Only 4.4% of Asian students and 7.8% of Hispanic students felt that they should have been placed in a higher class (in comparison, 27% of White students felt that they belonged in a higher class). English 55 instructors felt that far fewer (1.7%) of their students belonged in a higher class (and at most, 7.1% of their White, non-Hispanic students).

Student Opinion of Placement Recommendation by Ethnicity, for English 121

ETHNICITY	Should have been in a lower class	Some material may be too difficult	In the right class	May be a little bored with the material	Should have been in a higher class	Total	
						%	N
White, non-Hispanic		5.0%	85.0%	5.0%	5.0%	100	40
Asian		17.6%	71.6%	6.9%	3.9%	100	102
Black, non-Hispanic			100.0%			100	7
Hispanic	0.2%	7.3%	88.2%	3.4%	0.9%	100	536
American Indian, Alaskan Native		50.0%	50.0%			100	2
Pacific Islander			100.0%			100	2
Filipino			100.0%			100	21
Other, non-White			100.0%			100	3
Unknown		10.3%	82.1%	6.4%	1.3%	100	78
Total	0.1%	8.6%	85.7%	4.0%	1.5%	100	791

Faculty Opinion of Placement Recommendation by Student Ethnicity, for English 121

ETHNICITY	Should have been in a lower class	Marginal writer for the class	In the right class	Above average writer for the class	Should have been in a higher class	Total	
						%	N
White, non-Hispanic	2.0%	2.0%	70.0%	24.0%	2.0%	100	50
Asian	0.8%	13.6%	75.2%	10.4%		100	125
Black, non-Hispanic			62.5%	37.5%		100	8
Hispanic	0.1%	9.9%	76.7%	12.5%	0.7%	100	718
American Indian, Alaskan Native			66.7%	33.3%		100	3
Pacific Islander			66.7%	33.3%		100	3
Filipino		12.0%	64.0%	24.0%		100	25
Other, non-White		14.3%	71.4%	14.3%		100	7
Unknown	1.0%	7.9%	75.2%	14.9%	1.0%	100	101
Total	0.4%	9.7%	75.6%	13.7%	0.7%	100	1,040

In English 121, 100% of the students in three ethnic categories (Black, non-Hispanics, Pacific Islanders, Filipinos) and other non-Whites felt that they were in the right class. Instructors for English 121 indicated that students in these groups were ready for the class material, and that none of them should have been placed in a lower or higher class. The data also suggest that the standards for appropriate placement were met for students of other ethnic backgrounds. As one might expect, students and instructors indicated that higher proportions of students in English 121 than English 55 might have some difficulty with the material. However, very few students (<1%) were judged to belong in a lower class.

In conclusion, while placement evidence suggested potential disproportionate impact for some ethnic groups, detailed analyses of faculty and student opinions about placement recommendations revealed substantial support that the process places students at a level deemed appropriate by both populations.

Sample 2

Plan for Minimizing Disproportionate Impact

In addition to continuing to monitor disproportionate impact at least every two years through the Office of Institutional Research, the College will continue to support programs aimed at increasing English achievement, especially for the groups who are being disproportionately impacted. Specifically, through its Title V funded “Step-Up” program, the College offers mentoring, tutoring, and academic counseling to Latino and other underrepresented students in local high schools, helping them to increase their college readiness. The College also facilitates collaborative efforts between college faculty and the faculty of local high schools, and it provides feedback to local high school English teachers about their students’

performance in English classes at the College, to help them assess the effectiveness of their instructional methods.