

Saddleback College

Matriculation Research and Evaluation Component Standard 11

**Proportion of Students of Ethnic, Gender, Age and Disability Groups Placed in
Pre-Collegiate, Associate Degree-Applicable, and Transfer Level Courses in
Reading, Writing, Computation and ESL**

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EXECUTIVE SUMMARY

The purpose of this study is to determine the proportion of students placed in Pre-Collegiate, Associate Degree-Applicable and Transfer level courses in Reading, Writing, Mathematics and ESL when sorted by ethnicity, gender, and age and disability groups. The word “placed” is defined as “enrolled” in this study. The study is intended to be a first step in determining if there were differences in enrollment that would substantiate a disproportionate impact study.

The three largest ethnic groups enrolled in Pre-Collegiate Basic skills, Associate Degree Applicable and Transfer level courses were White (49.8 percent average), Hispanic (26.1 percent average) and Asian (13.7 percent). The proportion of White students was the highest in Degree Applicable and Transfer Level courses, while the proportion of Hispanics was the highest in Pre-Collegiate Basic Skills courses and lower in Degree Applicable and Transfer level courses. The largest percentage of White students was found in Mathematics courses. The largest percentage of Hispanic and Asian students was found in ESL courses.

There was a reverse trend in the proportion of gender in English Writing and Math courses. More females than males enrolled in Pre-Collegiate Basic Skills Math courses (Female 60.1 percent, Male 39.8 percent, 1 percent Unknown). On the other hand, more male students enrolled in Pre-Collegiate Basic Skills English Writing courses (Female 48.5, Male 51.5 percent). At the same time, there were less Female students in the Associate Degree Applicable Math courses (Female 54.2%; Male 45.8%), and even less in Transfer Level Math courses (Female 46.1 percent 53.9%). The opposite occurred in English Writing courses.

Students enrolled in ESL classes were older than students enrolled in Mathematics, English Writing and Reading classes. ESL students were also 5 times less likely to be listed among students with a primary disability. While it is not clear why this occurs without further research, one may speculate that cultural and language barriers may play a role. For example, tests designed to screen for a primary disability are written in English. However, it is difficult to differentiate between a learning disability and a lack of proficiency in English.

The current study raised a number of questions that demand further research. Why do more female students enroll in Pre-collegiate Basic Skills Math courses and more male students enroll in pre-collegiate basic skills English writing courses? Why are there fewer students with a disability among ESL students? Why do more Hispanic students enroll in Pre-collegiate basic skills courses than in the Associate Degree-Applicable and Transfer Level Courses? Is there a possibility of disproportionate impact of the assessment placement tests or procedures?

Since the word “placed” is defined as “enrolled” in this study, and since a person can self-select a course, one can suspect, but cannot assume, a disproportionate impact on the basis of this study. And, although the study considered the proportion of students who had gone through assessment placement sometime in their career at Saddleback College before enrolling in the class, it is impossible to answer the question of the possibility of disproportionate impact without looking at the result of the actual assessment tests and procedures. Thus, further research is needed to eliminate the possibility of disproportionate impact.

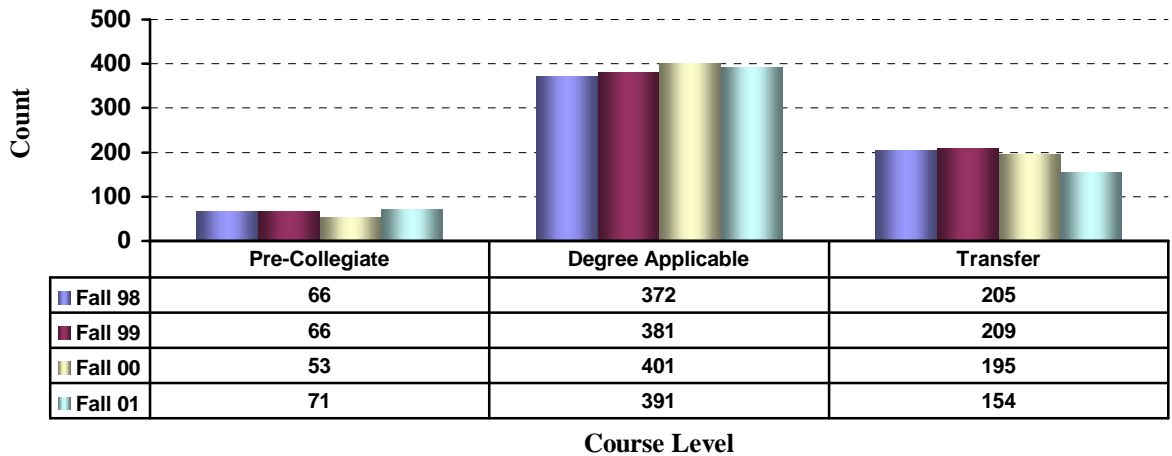
Introduction

The purpose of this study was to determine the proportion of students placed in Pre-collegiate, Associate Degree-Applicable and Transfer level courses in Reading, Writing, Mathematics and ESL sorted by ethnicity, gender, age and disability groups.

Pre-Collegiate Basic Skills courses are “Not transferable/Credit – Not Degree Applicable” (MIS Data Element Dictionary, 2000). This study considers unduplicated headcount of students enrolled in Pre-collegiate, Associate Degree Applicable and Transfer level courses in Mathematics, Writing, Reading and ESL. The percentage of students who have received assessment services for placement as a part of the matriculation process of the college has been calculated for each course level.

Findings - Reading

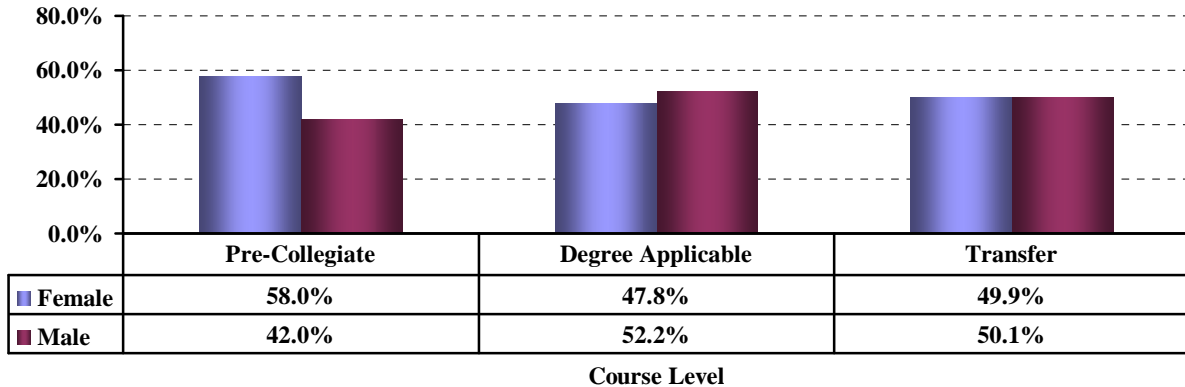
Graph 1. Total Number of Students in Pre-Collegiate, Degree Applicable and Transfer Level Reading Courses over Time (1998-2001)



Source: Saddleback College MIS Data.

Graph 1 shows enrollment in Pre-Collegiate Basic Skills, Associate Degree Applicable and Transfer reading courses over time. Pre-Collegiate Basic Skills reading courses considered in this study included ENG 232 & 333 *Reading Lab*; Degree Applicable reading courses were ENG 220 – *Reading Skills for College* and ENG 221 *Reading Laboratory*; and Transfer Level reading courses included ENG 170 – *Reasoning and College Reading* and ENG 180 – *Speed Reading and Comprehension Training*.

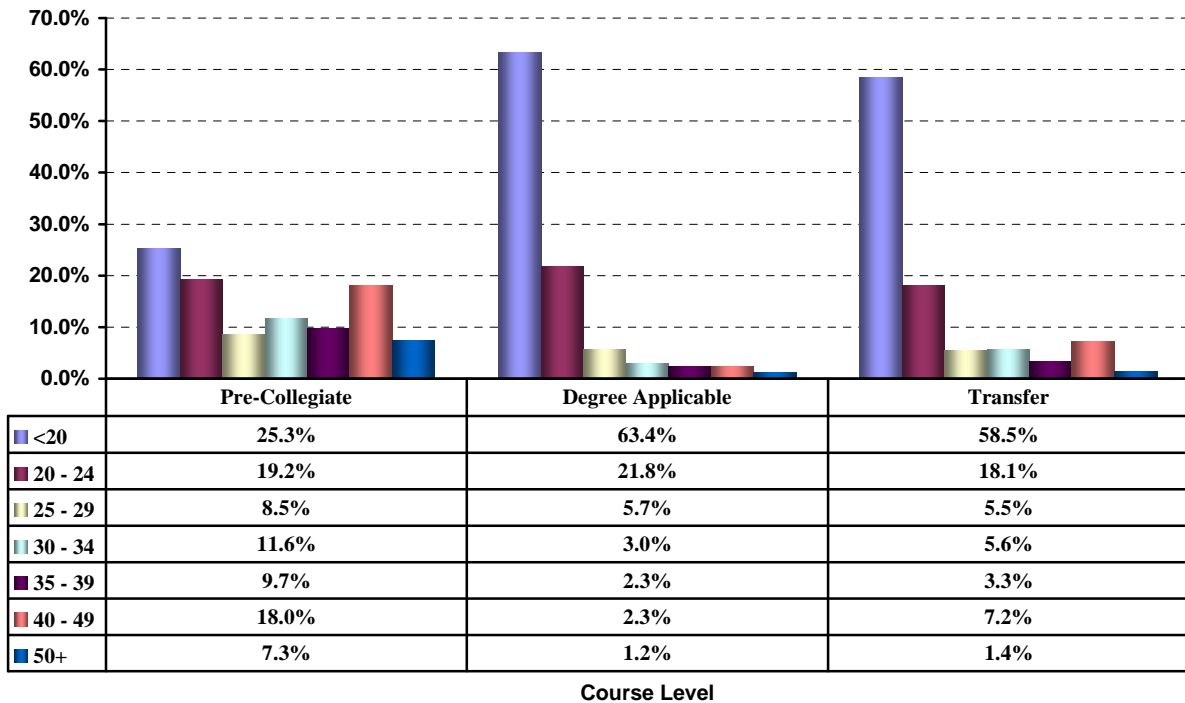
Graph 2. Gender of Students in Reading Courses (Fall 1998-Fall 2001 Average)



Source: Saddleback College MIS Data.

Graph 2 shows the four-year average proportion of male and female students in Pre-Collegiate, Degree Applicable, and Transfer level Reading Courses. More female than male students enrolled in Pre-Collegiate Basic Skills reading courses. However, more male students enrolled in Degree Applicable reading courses than female students. The proportion of male to female students in Transfer level reading courses was about the same.

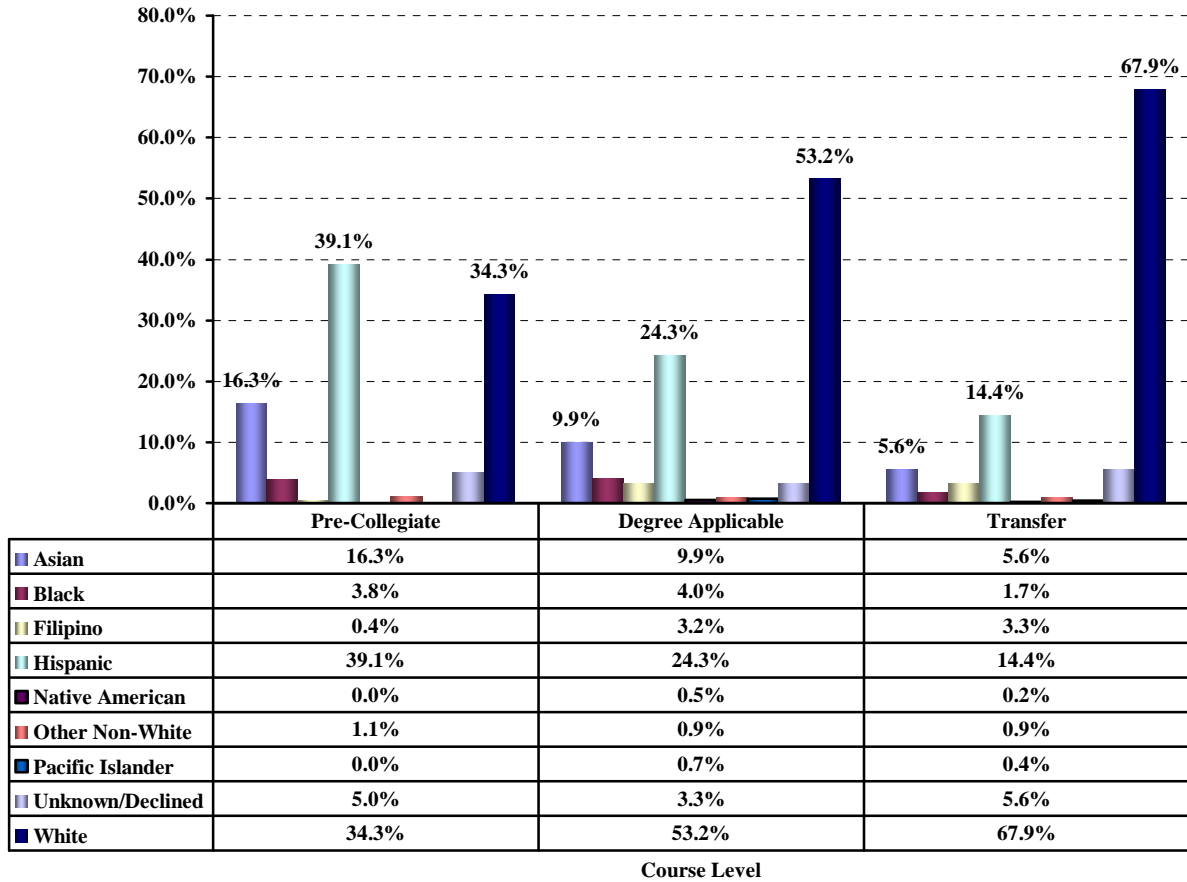
Graph 3. Age of Students in Reading Courses (Fall 1998-Fall 2001 Average)



Source: Saddleback College MIS Data.

Graph 3 shows that the majority of students in Degree Applicable or Transfer level reading courses were younger than 25 years old. Age categories in Pre-Collegiate Basic Skills reading courses were more evenly distributed.

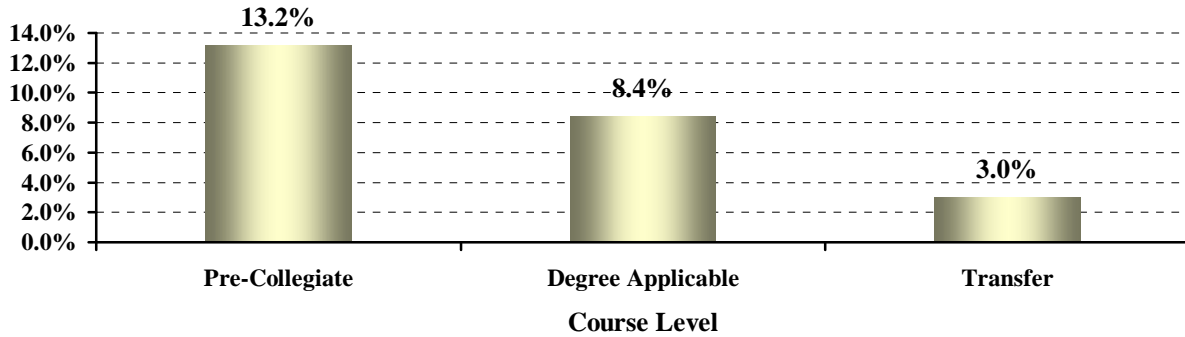
Graph 4. Ethnicity of Students in Reading Courses (Fall 1998-Fall 2001 Average)



Source: Saddleback College MIS Data.

The proportion of White students was greater in the Associate Degree Applicable and Transfer Level reading courses than in pre-collegiate basic skills courses. There were more Filipino students in Degree Applicable and Transfer level reading courses than in Pre-Collegiate Basic Skills courses (2.8 and 2.9 percent).

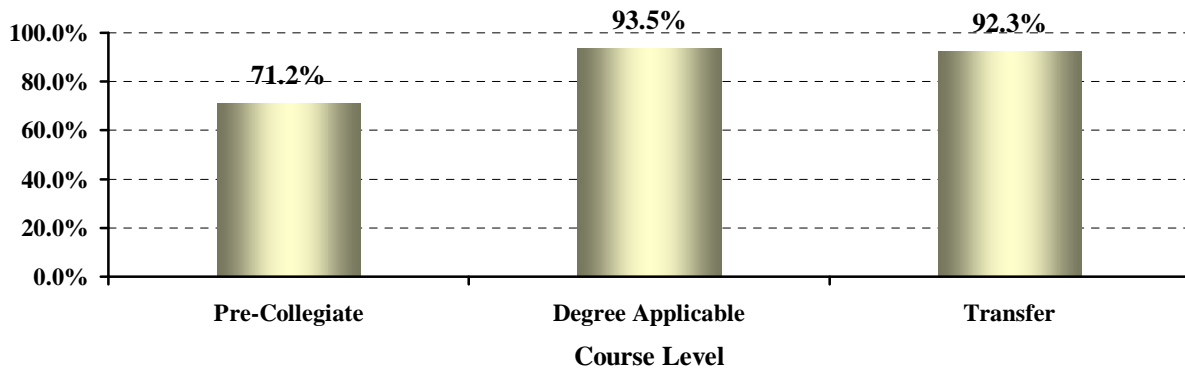
Graph 5. Primary Disability - Percent of Students with Primary Disability in Pre-Collegiate, Degree Applicable and Transfer Level Reading Courses (Fall 1998-Fall 2001 Average)



Source: Saddleback College MIS Data.

The higher the reading course levels, the fewer students with a primary disability were enrolled.

Graph 6. Percent of Students in Reading Courses Who Went Through Assessment Placement Simultaneous in Their Career at Saddleback (Fall 1998-Fall 2001 Average)

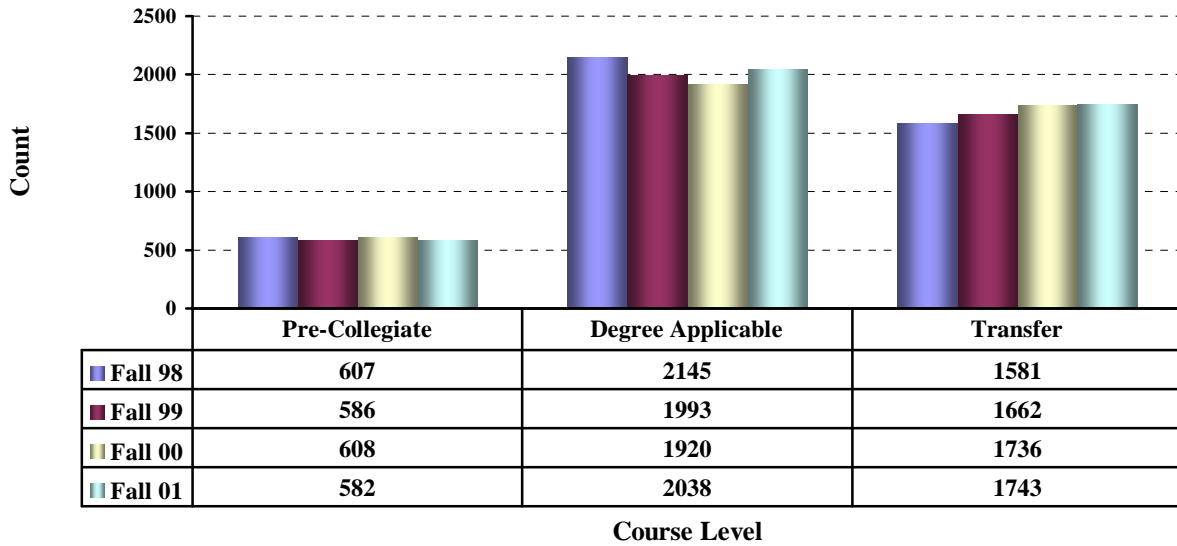


Source: Saddleback College MIS Data.

The proportion of students who went through assessment placement was higher in Degree Applicable and Transfer reading courses. This may be due to the fact that Pre-Collegiate Basic Skills reading courses – ENG 232 and ENG 333 are open-entry, open-exit classes.

Results – Mathematics

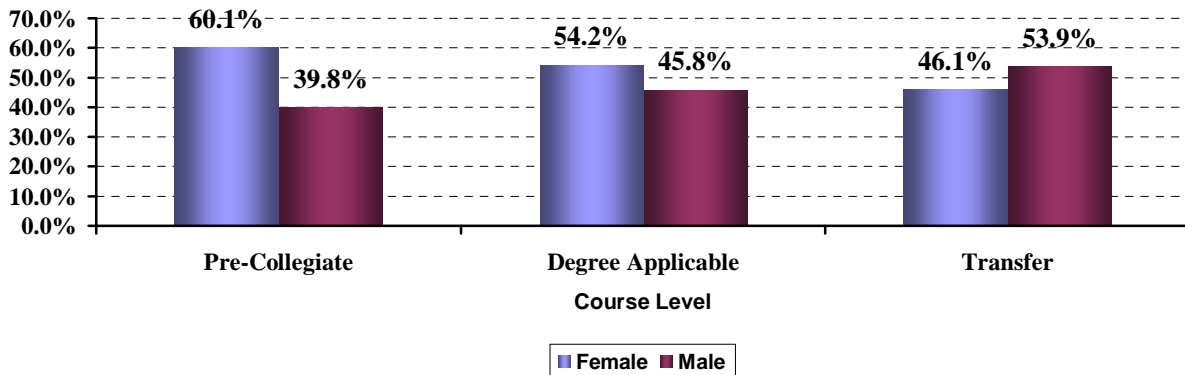
Graph 1. Total Number of Students in Mathematics Courses over Time (Fall 1998-Fall 2001)



Source: Saddleback College MIS Data.

More students enrolled in Degree Applicable and Transfer Math courses than in Pre-Collegiate Basic Skills Mathematic Courses. Pre-Collegiate Basic Skills math courses included: Math 351 – *Pre-Algebra Mathematics*; Degree Applicable math courses included: Math 251 – *Beginning Algebra* and Math 253 – *Intermediate Algebra*; Transfer Level math courses included: Math 7 – *College Algebra*, Math 8 – *College Algebra for Calculus*, Math 11 – *Brief Course in Calculus*, Math 9 – *Finite Math*, Math 10 – *Statistics*, Math 124 – *Trigonometry*, Math 2 – *Pre-Calculus*, Math 3A – *Calculus*, Math 3B – *Calculus*, Math 26 – *Linear Algebra*, Math 3C – *Calculus* and Math 24 – *Elementary Differential Equations*.

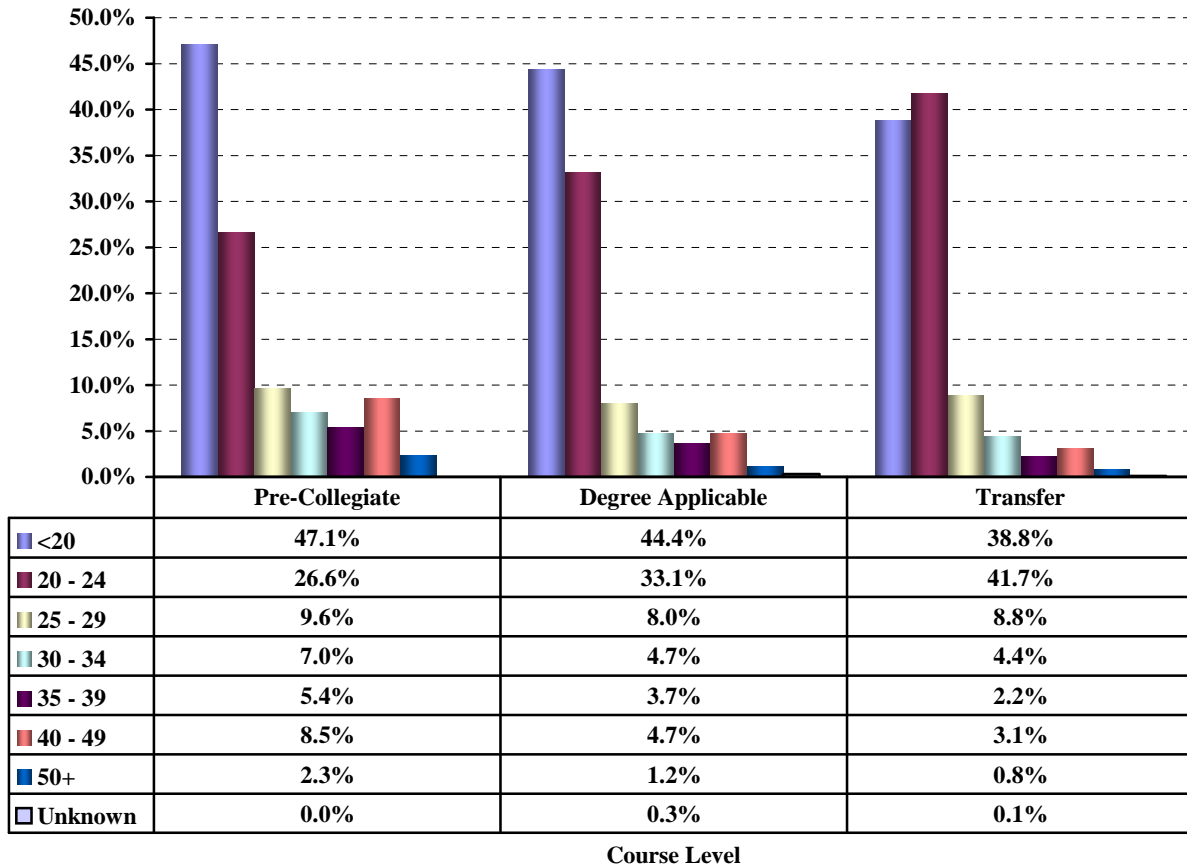
Graph 2. Gender of Students in Mathematics Courses by Course Level (Fall 1998-Fall 2001 Average)



Source: Saddleback College MIS Data.

Graph 2 shows the proportion of male and female students in Pre-Collegiate Basic Skills, Associate Degree Applicable and Transfer Level Math courses. The proportion of female students decreased in Degree Applicable and Transfer Level math courses. The proportion of male students increased.

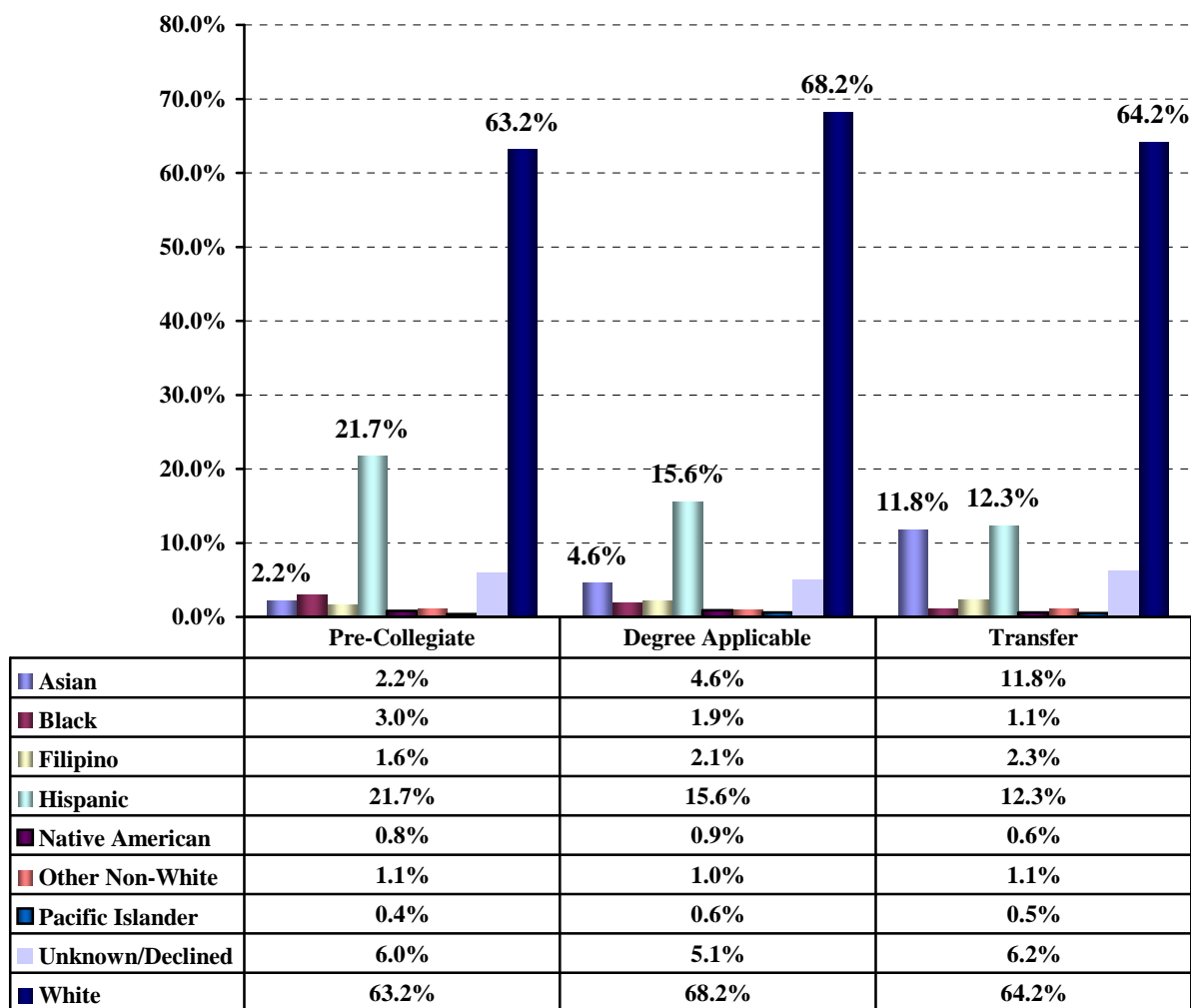
Graph 3. Age of Students Mathematics Courses by Course Level (Fall 1998-Fall 2001 Average)



Source: Saddleback College MIS Data.

Most of the students in Pre-Collegiate, Degree Applicable and Transfer math courses were younger than 25 years of age. The proportion of students <20 decreased with each level, while the 20 –25 age group increased.

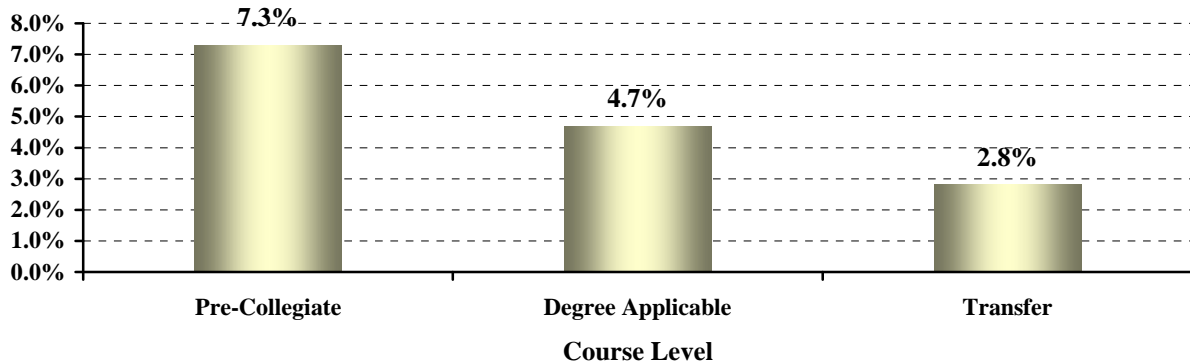
Graph 4. Ethnicity of Students in Mathematics Courses (Fall 1998 - Fall 2001 Average)



Source: Saddleback College MIS Data.

The most notable change in the proportion of ethnicity was observed among Asian, Hispanic, and White ethnic groups. There were five times more Asian students in Transfer level Math courses than in Pre-Collegiate Basic Skills courses. The four-year average proportion of Asian students in Pre Algebra was 2.2 percent, 4.6 percent in Beginning and Intermediate Algebra, and 11.8 percent in Transfer level math courses. On the other hand, there were 1.7 times more Hispanics in Pre-Collegiate Basic Skills math courses than in Transfer level math courses. White students, however, constituted the largest group in any course level (See Table 2 for more details).

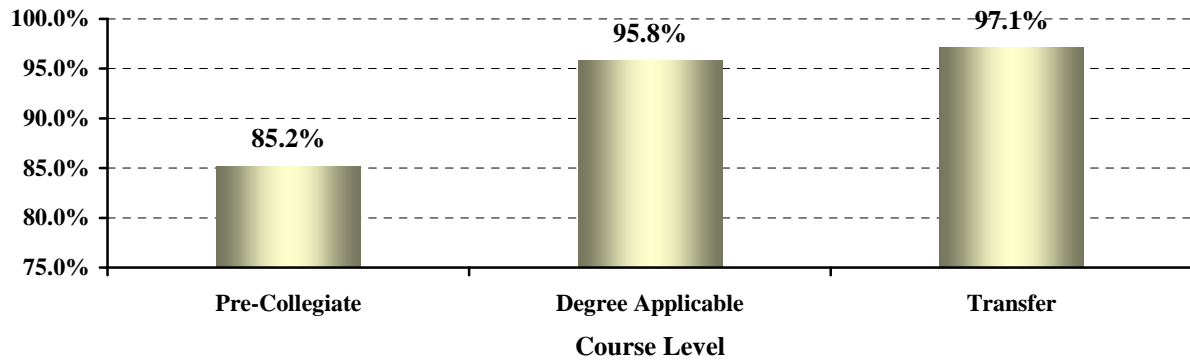
**Graph 5. Percentage of Students With Primary Disability in Mathematics Courses
(Fall 1998-Fall 2001 Average)**



Source: Saddleback College MIS Data.

The proportion of students belonging to a primary disability group declined with each course level. In Pre-Algebra 7.3 percent of students had some kind of a primary disability. The percentage declined to 4.7 in Degree Applicable courses, and to 2.8 in Transfer level courses.

**Graph 6. Percentage of Students in Mathematics Courses Who Went Through
Assessment Placement Testing (Fall 1998-Fall 2001 Average)**

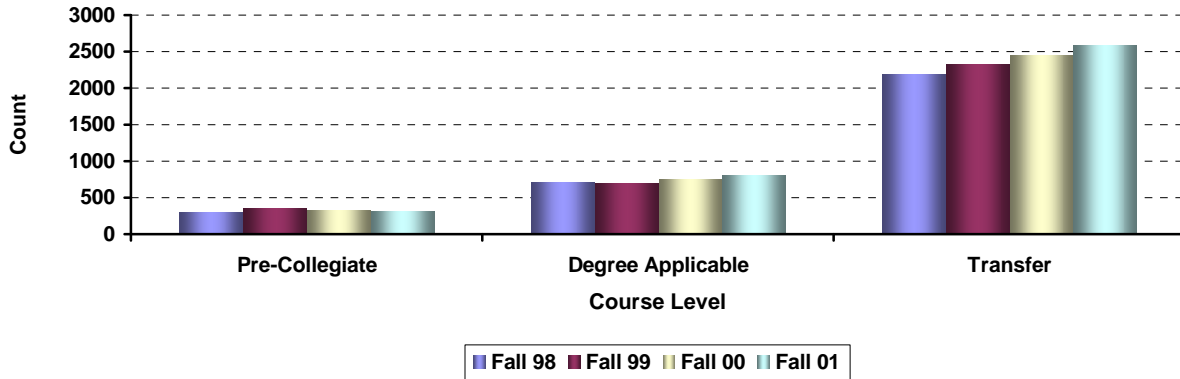


Source: Saddleback College MIS Data.

The percentage of students who went through assessment placement services increased in Degree Applicable and Transfer level Math courses.

Results – Writing

Graph 1. Total Number of Students in Pre-Collegiate, Degree Applicable and Transfer Level Writing Courses over Time (Fall 1998-Fall 2001)

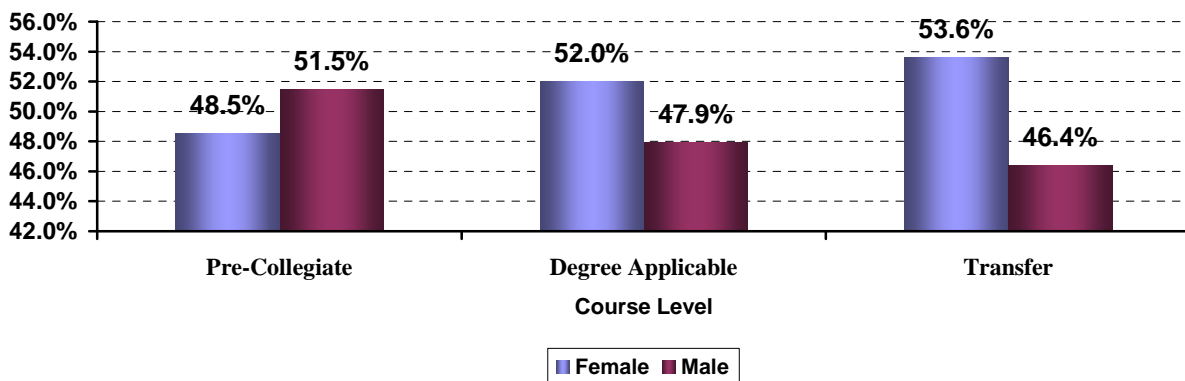


Source: The Research Data Warehouse of the South Orange County Community College District.

Graph 1 shows enrollment in Pre-Collegiate Basic skills, Degree Applicable and Transfer Level writing courses. More students enrolled in Degree Applicable and Transfer level Writing courses. The enrollment in all level writing courses has increased over time.

Pre-Collegiate Basic Skills included ENG 300 – *Beginning Writing*. Associate Degree Applicable courses included ENG 200 – *Fundamentals of Composition*. Transfer Level courses included ENG 1A & 1B – *Fundamentals of Composition I & II*, ENG 3 – *Introduction to Creative Writing*, ENG 7 – *Creative Writing: Scriptwriting*; ENG 104 – *Writing Short Stories*, EGN 107 – *Writing the Fiction and/or Nonfiction Book*.

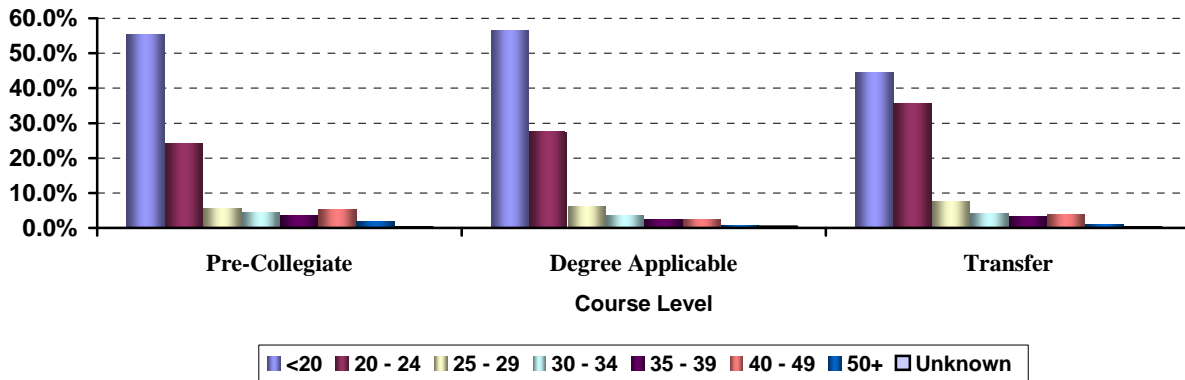
Graph 2. Percentage of Students in Pre-Collegiate, Degree Applicable and Transfer Level Writing Courses by Gender (Fall 1998-Fall 2001 Average)



Source: Saddleback College MIS Data.

The gender proportion in English Writing courses was opposite to the gender proportion in Math courses (See Page 12). In Math courses, the proportion of female students dropped in Degree Applicable and Transfer level math courses. In English Writing courses, it increased.

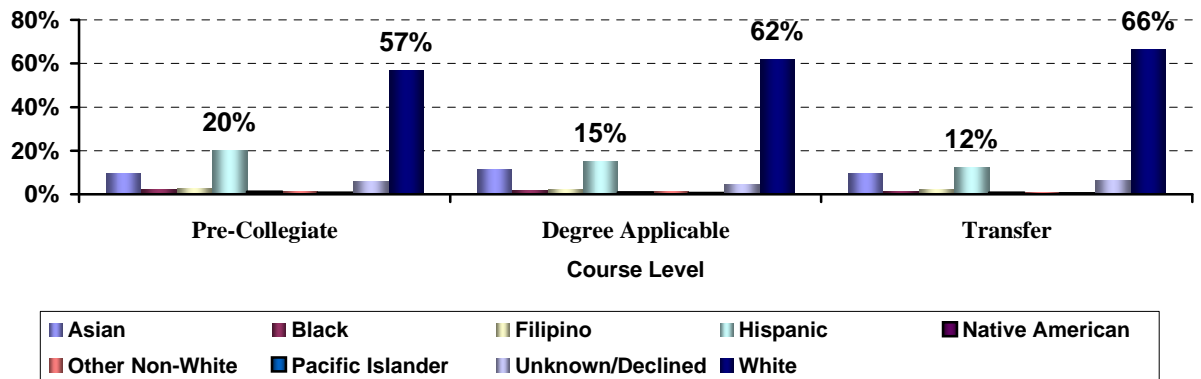
Graph 3. Percentage of Students in Pre-Collegiate, Degree Applicable and Transfer Level English Writing Courses by Age (Fall 1998-Fall 2001 Average)



Source: Saddleback College MIS Data.

Graph 3 shows the age of students in Pre-Collegiate, Degree Applicable and Transfer Level Writing courses. The majority of students in English writing courses were younger than 25 years old (80 percent). The 20-24 year old group increased in Degree Applicable and Transfer level courses. This may be due to the fact that most of the transfer level courses have prerequisites. By the time prerequisites are cleared, some students become 20 and older.

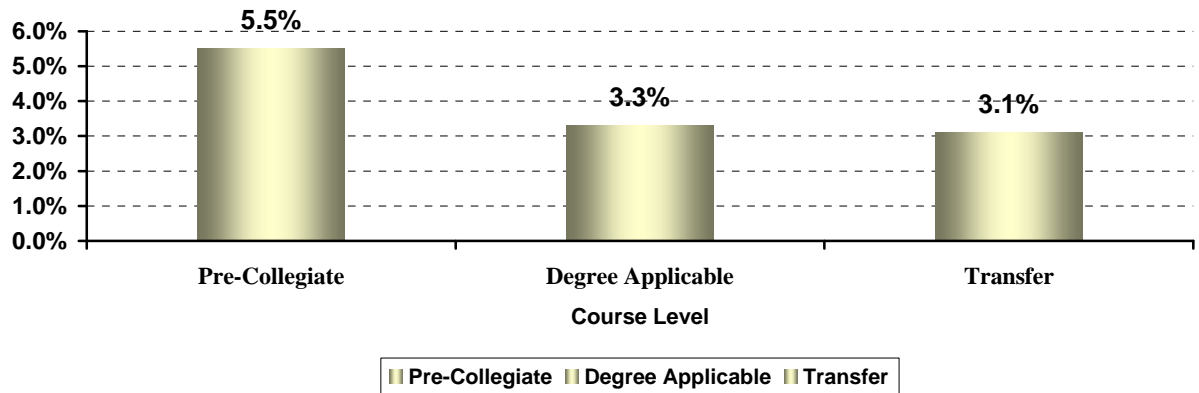
Graph 4. Percentage of Students in Pre-Collegiate, Degree Applicable and Transfer Level English Writing Courses by Ethnicity (Fall 1998-Fall 2001 Average)



Source: Saddleback College MIS Data.

Graph 4 shows the proportion of students of different ethnic groups in English Writing Courses. The proportion of White students increased in Degree Applicable and Transfer level English Writing courses. At the same time, the proportion of Hispanic students decreased in Associate Degree Applicable and Transfer Level courses from 20 percent in Pre-collegiate Basic Skills, to 15 percent in Degree Applicable and 12 percent in Transfer level courses.

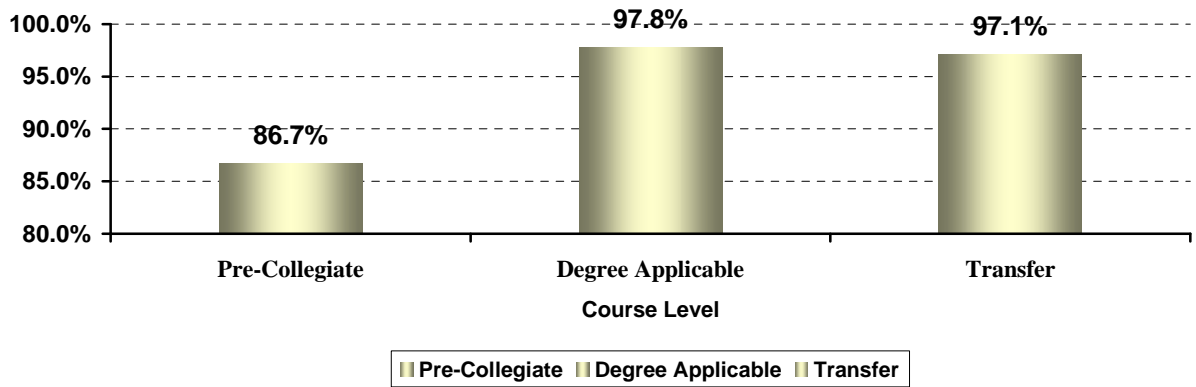
Graph 5. Percentage of Students in Pre-Collegiate, Degree Applicable and Transfer Level English Writing Courses by Primary Disability (Fall 1998-Fall 2001 Average)



Source: Saddleback College MIS Data.

The Proportion of students with a primary disability declined in Associate Degree Applicable and Transfer level English Writing courses. In Beginning Writing, 5.5 percent of students had some kind of a primary disability. The percentage declined to 3.3 percent in Degree Applicable courses, and to 3.1 percent in Transfer level courses.

Graph 6. Percentage of Students in Pre-Collegiate, Degree Applicable and Transfer Level English Writing Courses by Placement Testing (Fall 1998-Fall 2001 Average)

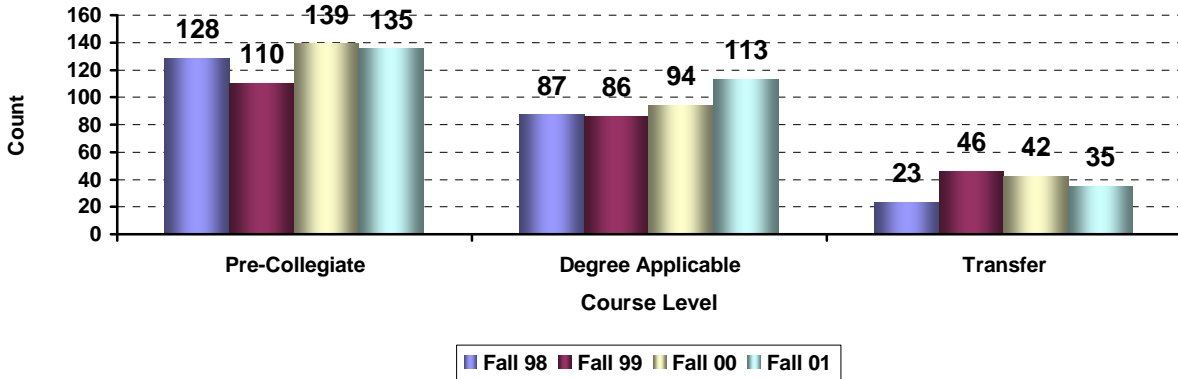


Source: Saddleback College MIS Data.

The percentage of students who went through assessment placement services increased in Degree Applicable and Transfer level Math courses.

Results – ESL

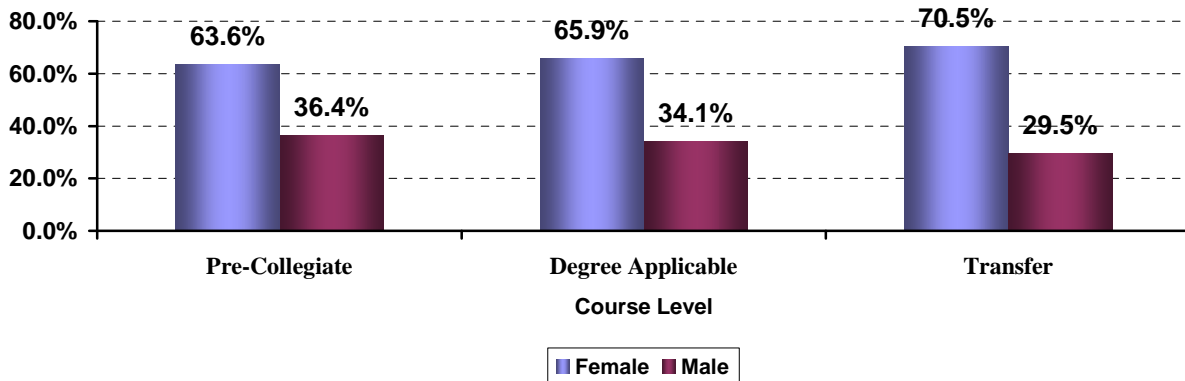
Graph 1. Number of Students in Pre-Collegiate, Degree Applicable and Transfer Level ESL Courses over Time (Fall 1998-Fall 2001)



Source: Saddleback College MIS Data.

Graph 1 shows the number of students that were enrolled in ESL courses by course level. More ESL students enrolled in Pre-Collegiate Basic Skills ESL courses than in Degree Applicable and Transfer level ESL courses. This might be because of uneven numbers of courses in each of the categories (see Table 4 for more details).

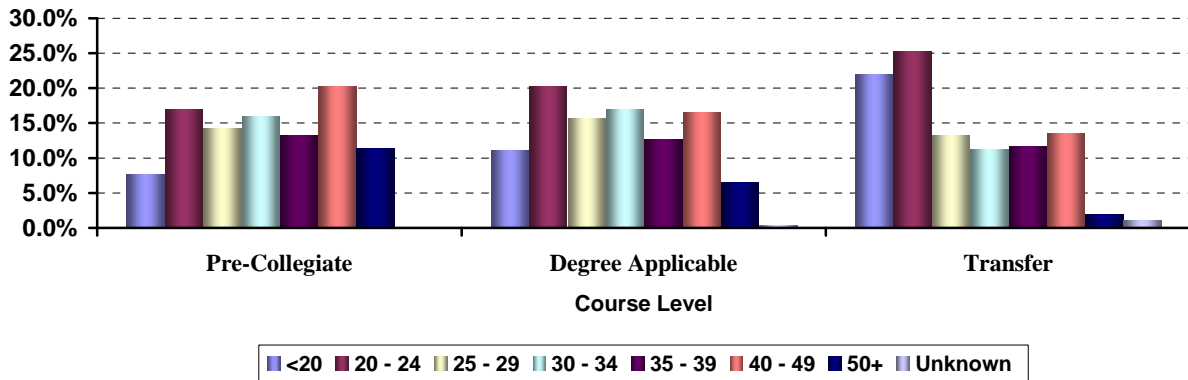
Graph 2. Percentage of Students in Pre-Collegiate, Degree Applicable and Transfer Level ESL Courses by Gender (Fall 1998-Fall 2001 Average)



Source: Saddleback College MIS Data.

Graph 2 shows distribution of gender in ESL courses. There were more female than male students enrolled in ESL courses at each level.

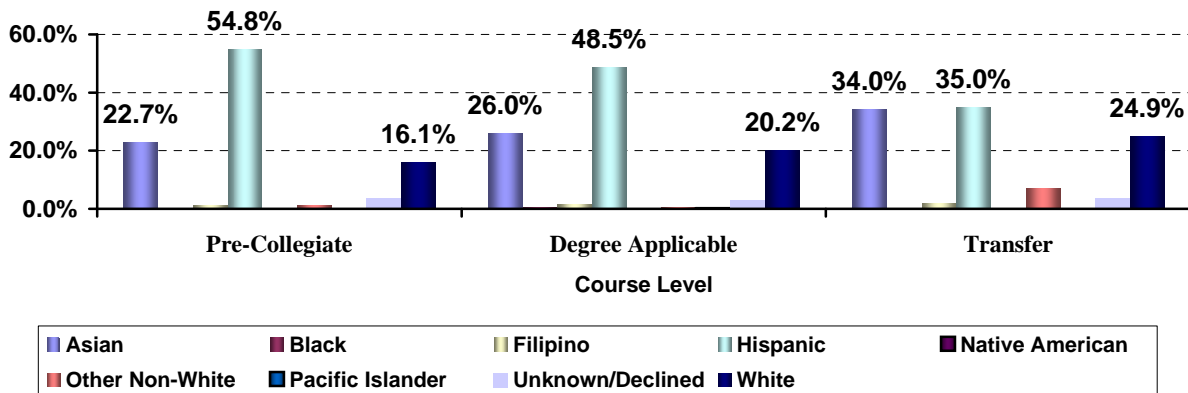
Graph 3. Percentage of Students in Pre-Collegiate, Degree Applicable and Transfer Level ESL Courses by Age (Fall 1998-Fall 2001 Average)



Source: Saddleback College MIS Data.

Age Groups were more evenly distributed in ESL classes than in Writing, Math or Reading. The largest age group in Pre-Collegiate Basic Skill ESL courses was 40-49. The proportion of young people increased in Degree Applicable and Transfer level ESL courses.

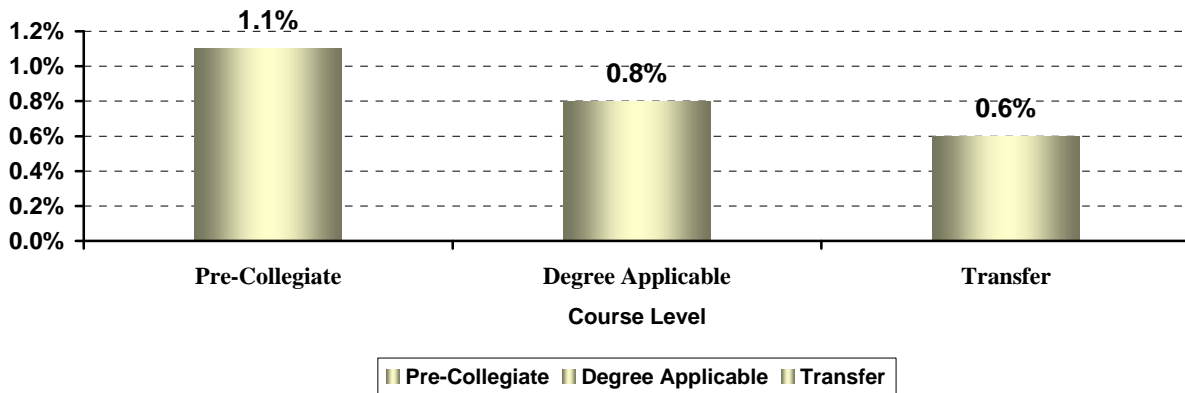
Graph 4. Percentage of Students in Pre-Collegiate, Degree Applicable and Transfer Level ESL Courses by Ethnicity (Fall 1998-Fall 2001 Average)



Source: Saddleback College MIS Data.

Hispanics constituted the largest ethnic group of students enrolled in ESL courses. The proportion of Hispanic students dropped in the Associate Degree Applicable and Transfer level ESL. The proportion of White and Asian students rose.

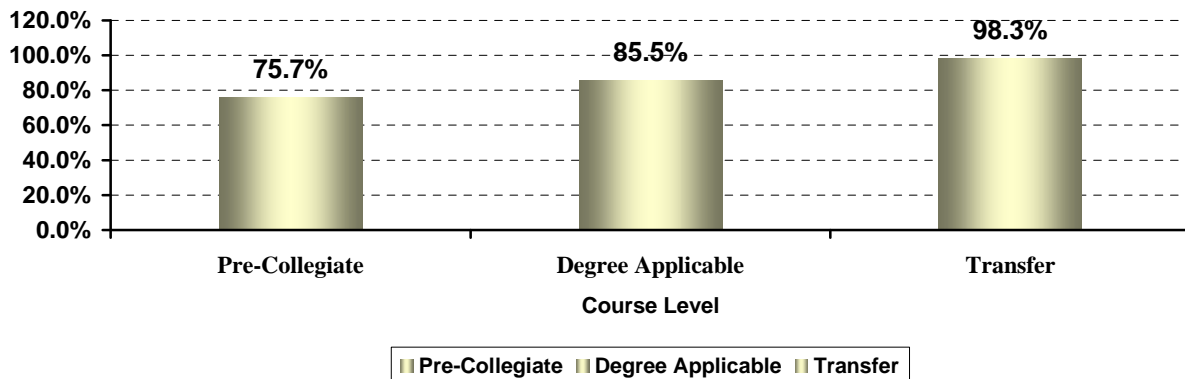
Graph 5. Percentage of Students in Pre-Collegiate, Degree Applicable and Transfer Level ESL Courses by Primary Disability (Fall 1998-Fall 2001 Average)



Source: Saddleback College MIS Data.

Compared to other students, ESL students had about a 5 times lower percentage of students with a primary disability. Further study is needed to determine the cause of this.

Graph 6. Percentage of Students in Pre-Collegiate, Degree Applicable and Transfer Level ESL Courses by Placement Testing (Fall 1998-Fall 2001 Average)

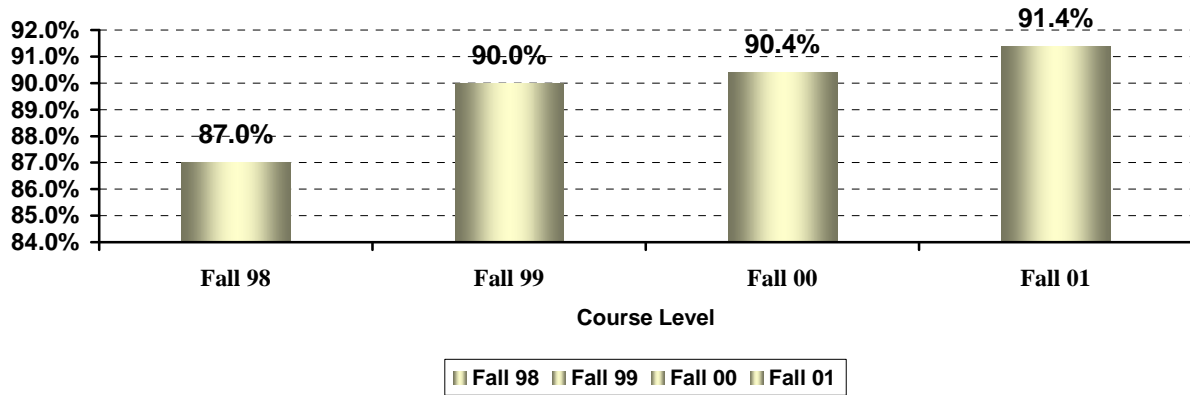


Source: Saddleback College MIS Data.

Graph 6 shows the percentage of students enrolled in ESL courses who had gone through assessment testing before enrolling in the course.

Results – Assessment Placement

Graph 6. Percentage of Students in Pre-Collegiate, Degree Applicable and Transfer Level ESL Courses by Placement Testing (Fall 1998-Fall 2001 Average)



Source: The Research Data Warehouse of the South Orange County Community College District.

The percentage of students who went through assessment placement increased from 87 percent in 1998 to 91.4 percent in 2001.

Discussion and Conclusion

This study raised a number of questions that demand further study. Why does the proportion of Hispanic students drop in the Associate Degree-Applicable and Transfer Level Courses? Is it because of the disproportionate impact of the assessment placement? Or is it because of some other reason? Why do more female students enroll in Pre-collegiate Basic Skills Math courses and more male students enroll in pre-collegiate basic skills English writing course? Why are there fewer students with disability among ESL students? To answer those questions further study is needed.

Appendix

