

CHAPTER FOUR

Results

The purpose of this chapter is to report the findings of the study. The chapter begins by describing the data collection procedures. This is followed by a description of the sample. Finally, the data analyses, which are organized around the four research questions presented in this study, are reported.

Data Collection Procedure

The researcher conducted the survey at a two-year community college and at a four-year college. Both colleges offered college freshmen courses in developmental and regular English. The researcher administered the survey to the developmental and regular English classes at the two colleges. Each class was provided the same set of oral directions and all participants were allowed a sufficient amount of time to complete the survey. The surveys were administered between November 15 and December 2, 1999.

Characteristics of the Sample

The demographic characteristics of the participants are summarized in Table 1. A total of 446 respondents completed the survey. Three hundred eighteen (318, 71%) of the participants in the study were enrolled in the four-year college. One hundred twenty eight (128, 29%) were enrolled in the community college. The characteristics of the respondents are reported according to gender, race (minority and majority), the type of high school attended, and the high school curriculum the respondent completed.

Two hundred forty three (243) of the respondents were female and 203 were male participants. This participation rate reflected a reasonably evenly distributed sample of 54% females and 46% males. One hundred twenty five (125, 51%) of the female respondents were enrolled in developmental English courses and the remaining 118 (49%) were enrolled in regular English courses. One hundred one (101, 50%) of the male students were enrolled in developmental English and 102 (50%) were enrolled in the regular English course.

Comparisons between minority and majority students were made. Sixty-five, the equivalent of 15%, of the participants were minority students compared to 381 (85%) who were majority participants. Thirty-four (34, 52%) of the minority respondents were enrolled in developmental English and 31 (48%) were enrolled in regular English courses. Developmental and regular English courses for the majority sample was also evenly divided. One hundred ninety two (192, 50%) of the majority respondents were enrolled in the developmental English course and 189 (50%) were enrolled in the regular English course.

Table 1
Characteristics of the Sample (N=446)

Characteristics Totals	Developmental			General			Developmental			General	
	English Community College		n	English Community College		n	English 4 Year College		N	English 4 Year College	
	n	%		%	n		%	N		%	
Gender											
Female	35	50	35	50	90	52	83	48	243	54	
Male	27	47	31	53	74	51	71	49	203	46	
Ethnic Background											
Minority	15	60	10	40	19	48	21	52	65	15	
Majority	47	46	56	54	145	52	133	48	381	85	
High School Attended											
Public	59	50	60	50	155	53	135	47	409	92	
Private	3	33	6	77	9	32	19	68	37	8	
High School Curriculum											
Coll. Prep	24	50	24	50	72	46	86	54	206	46	
General	38	48	42	52	92	58	68	42	240	54	

Of the sample, 409 (92%) of the students had graduated from a public high school and 37 (8%) were graduates of private high school programs. Of the participants graduating from public high schools, 214 (52%) were enrolled in a developmental English course compared to 195 (48%) who were enrolled in a regular English course. Twelve (12, 32%) participants who graduated from private schools were enrolled in developmental English and 25 (68%) were enrolled in regular English courses.

While attending high school, the participants had completed either a college preparatory curriculum or a regular high school curriculum. Forty-six percent (46%, n=206) of the respondents indicated that they completed a college preparatory curriculum, and 240 (54%) indicated they completed a general high school curriculum. Of the 206 respondents who completed a college preparatory curriculum, 96 (47%) were enrolled in a developmental college English course and 110 (53%) were enrolled in a regular English course. Of the 240 students who completed a general high school curriculum, 130 (54%) were enrolled in developmental English courses and 110 (46%) were enrolled in regular English courses.

Data Analysis

A one-way analysis-of-variance (ANOVA) was conducted to assess whether means on dependent variables were significantly different among groups. Three assumptions regarding the data were explored before conducting the ANOVAs (Green, 2000).

The first assumption underlying a one-way ANOVA is that the dependent variables are normally distributed for each population as defined by the different levels of factors. In the study, 243 of the respondents were female and 203 were male. Two hundred twenty six (226) subjects were enrolled in the developmental courses and 220 subjects were enrolled in the regular English courses. Sixty-five of the respondents were minorities and 381 were majority. Thirty-four minority respondents were enrolled in the development courses and 31 were enrolled in the regular English courses. One hundred ninety two (192) of the majority respondents were enrolled in the developmental courses and 189 were enrolled in the regular English courses. Therefore, data were collected from a sample that was equally distributed in terms of gender, race and the type of course enrollment.

The second assumption relates to whether the variances for the type of courses students are enrolled in are the same for all populations. The sample sizes in the study were relatively equal. Fifty-one percent (51%) of the female respondents were enrolled in developmental English courses and 49% were enrolled in regular English courses. Fifty percent (50%) of the male respondents were enrolled in the developmental English courses, and 50% were enrolled in regular English courses. In comparing minority to majority subjects, 52% of the minority respondents were enrolled in developmental English courses and 48% were enrolled in the regular English courses. Of the majority respondents, 50% were enrolled in the developmental English and 50% in regular English courses. These relatively equal distributions suggest that the standards for the second assumption related to ANOVAs were met in this study.

The third assumption underlying one-way ANOVAs relates to whether the study represents a random sampling of the population and whether the variables are independent of each other. Of the 446 respondents, 100% responded to items involving the high school teacher, parents and self-efficacy. Ninety-nine percent of the respondents completed items related to the role of the guidance counselor. A test of equality of error variance was calculated to determine if error variance of the variables was equal across the groups. In comparing the respondents' perceptions by gender and race, the results yielded a non-significant $F=1.414$, $p=.197$ for high school teachers, and a non-significant score of $F=1.115$, $p=.352$ for guidance counselors. The parent and self-efficacy tests yielded a non-significant F score of 1.347 , $p=.226$, and $F=.637$, $p=.725$, respectively. These findings suggest that the error variances were non-significant, hence the standards for the third assumption about ANOVAs were met.

Given this understanding of the assumptions underlying one-way ANOVAs, a series of ANOVAs was conducted to evaluate the relationship between main effects (gender, race, type of English class) and the participants' perceptions of the impact their high school teachers, high school guidance counselors, their parents and they themselves had on their preparation for college. The same computations were conducted to explore all interactions of the main effects: gender and race, gender and course, race and course, and gender, race and course.

A total of 28 ANOVAs were conducted: seven ANOVAs for each of the four scales (high school teachers, high school guidance counselors, parents, self). A total of 12 significant differences were revealed through the ANOVAs. Six (6) of these were related to main effects and the remaining 6 related to two-way interaction effects. Given the structure of the rating scale on the instrument, higher scores reflect more positive perceptions of teachers, counselors, parents or self.

Results Regarding the Role of the High School Teachers

The first hypothesis posed in the study examined whether there were differences by gender, race, or type of course on scores related to the roles that high school teachers played in preparing participants for college. Seven ANOVAs were conducted to test main and interactive effects and significant differences were revealed in five of the seven tests. These results are reported in Table 2. There were significant differences by three main effects: gender, race and type of course. In terms of gender, male respondents reported higher mean scores (3.1) than the female respondents (3.0). By race, the data revealed that minority participants reported significantly higher scores (3.1) than majority participants (3.0). The results in terms of type of course revealed that those in regular English courses reported significantly higher scores (3.1) than those in developmental English courses (2.9).

Table 2
Results of ANOVAs on the Effect of High School Teachers (N=446)

Effect	N	%	M	sd	df	F	Sig
Gender					1	7.3	.007*
Female	243	54	3.0	.63			
Male	203	46	3.1	.57			
Race					1	3.9	.045*
Minority	65	15	3.1	.69			
Majority	381	85	3.0	.59			
English Courses					1	4.1	.042*
Developmental	226	51	2.9	.66			
Regular	220	49	3.1	.53			
Gender and Race					1	6.7	.010*
Female Minority	34	14	2.9	.65			
Female Majority	209	86	3.0	.63			
Male Minority	31	15	3.3	.65			
Male Majority	172	85	3.0	.55			
Gender and Courses					1	6.6	.010*
Female Developmental	125	51	2.8	.68			
Female Regular	118	49	3.1	.55			
Male Developmental	101	50	3.0	.64			
Male Regular	102	50	3.1	.51			
Race and Course					1	.08	.771
Minority Developmental	34	52	3.0	.74			
Minority Regular	31	48	3.2	.61			
Majority Developmental	192	50	2.9	.65			
Majority Regular	189	50	3.1	.52			
Gender - Race - Course					7	1.4	.197
Female Minority Developmental	20	59	2.7	.55			
Female Majority Developmental	105	50	2.9	.69			
Female Minority Regular	14	41	3.2	.66			
Female Majority Regular	104	50	3.1	.54			
Male Minority Developmental	14	45	3.5	.73			
Male Majority Developmental	87	51	3.0	.60			
Male Minority Regular	17	55	3.3	.58			
Male Majority Regular	85	49	3.0	.49			

*=significant at the .05 level

Tests on two of the two-way interaction effects also yielded significant differences. There were significant differences related to the interaction between gender and race and gender and type of course. In terms of gender and race, the female minority respondents reported the lowest mean score (2.9) while the male minority participants reported the highest mean scores (3.3). In the analysis of gender and type of course, females in developmental courses reported the lowest overall mean score (2.8) for the effect of high school teachers while the male and females in regular English classes reported the highest mean scores (3.1).

An ANOVA was calculated to analyze the interactions between gender, race and type of course. This result on the perception of the role of the high school teachers in preparing students for college yielded a non-significant difference.

Results Regarding the Role of the High School Guidance Counselor

Seven ANOVAs were run to test the hypothesis that there would be no significant difference by gender, race or type of class in respondents' perceptions about the effect of high school guidance counselors in preparing them for college. The results of these tests are reported in Table 3.

The results revealed significance differences in four of the seven ANOVAs conducted. The first two significant differences related to main effects of gender and race. In terms of gender, males reported a higher mean score (2.5) than female respondents (2.4). In terms of race, minority respondents held a more favorable perception (2.7) of high school guidance counselors when compared to majority participants (2.4).

There were also two significant differences by interaction effect. In the gender and race interaction, male minority respondents reported the highest mean score (3.2) and female minority respondents reported the lowest mean score (2.3). The results of the interaction between gender and course revealed males enrolled in developmental English courses had the most favorable impression (2.6) of guidance counselors when compared to the other three respondent groups (2.4). An ANOVA also was calculated to analyze the three-way interaction between gender, race and course. This result on the perception of the role of the high school guidance counselor in preparing students for college yielded a non-significant difference.

Results Regarding the Role of the Parents

The third hypothesis investigated the role parents played in preparing participants for college. In the seven ANOVAs calculated on these factors, only one was significant; the interaction between gender and race. The male minority participants reported the highest mean score (3.6) and the female minority participants reported the lowest mean score (3.1). This data is reported on Table 4.

Table 3
Results of ANOVAs on the Effect of High School Guidance Counselors (N=441)

Effect	n	%	M	sd	df	F	Sig
Gender					1	6.9	.008*
Female	240	54	2.4	1.05			
Male	201	46	2.5	1.19			
Race					1	6.2	.013*
Minority	64	15	2.7	1.23			
Majority	377	85	2.4	1.09			
English Courses					1	.02	.873
Developmental	223	50	2.5	1.09			
Regular	218	50	2.4	1.15			
Gender and Race					1	8.5	.004*
Female Minority	33	51	2.3	1.08			
Female Majority	207	49	2.4	1.06			
Male Minority	31	15	3.2	1.25			
Male Majority	170	85	2.4	1.14			
Gender and Courses					1	4.5	.033*
Female Developmental	123	51	2.4	1.00			
Female Regular	117	48	2.4	1.12			
Male Developmental	100	50	2.6	1.18			
Male Regular	101	50	2.4	1.19			
Race and Course					1	.37	.541
Minority Developmental	33	52	2.7	1.22			
Minority Regular	31	48	2.8	1.26			
Majority Developmental	190	50	2.5	1.06			
Majority Regular	187	50	2.4	1.12			
Gender – Race – Course					7	1.12	.352
Female Minority Developmental	19	58	2.0	.84			
Female Majority Developmental	104	50	2.5	1.01			
Female Minority Regular	14	42	2.7	1.26			
Female Majority Regular	103	50	2.4	1.10			
Male Minority Developmental	14	45	3.5	1.15			
Male Majority Developmental	86	51	2.5	1.13			
Male Minority Regular	17	56	2.9	1.30			
Male Majority Regular	84	49	2.3	1.15			

*=significant at the .05 level

Table 4
Results of ANOVAs on the Effect of Parents (N=445)

Effect	n	%	M	sd	df	F	Sig
Gender					1	.93	.335
Female	242	54	3.4	.97			
Male	203	46	3.3	.92			
Race					1	.01	.929
Minority	65	15	3.3	1.10			
Majority	380	85	3.4	.92			
English Courses					1	.33	.566
Developmental	226	51	3.4	.94			
Regular	219	49	3.3	.96			
Gender and Race					1	6.29	.012*
Female Minority	34	14	3.1	1.10			
Female Majority	208	86	3.5	.94			
Male Minority	31	15	3.6	1.07			
Male Majority	172	85	3.3	.88			
Gender and Courses					1	2.23	.135
Female Developmental	125	52	3.4	.99			
Female Regular	117	48	3.4	.96			
Male Developmental	101	32	3.4	.87			
Male Regular	102	50	3.3	.97			
Race and Course					1	1.90	.169
Minority Developmental	34	52	3.2	1.22			
Minority Regular	31	48	3.5	.96			
Majority Developmental	192	50	3.4	.87			
Majority Regular	188	50	3.3	.96			
Gender – Race – Course					7	1.35	.226
Female Minority Developmental	20	58	2.8	1.21			
Female Majority Developmental	105	50	3.5	.90			
Female Minority Regular	14	42	3.5	.82			
Female Majority Regular	103	50	3.4	.98			
Male Minority Developmental	14	45	3.7	1.09			
Male Majority Developmental	87	51	3.3	.82			
Male Minority Regular	17	55	3.5	1.09			
Male Majority Regular	85	49	3.2	.94			

*=significant at the .05 level

Results Regarding the Role of Self-Efficacy

The last hypothesis posed in the study investigated whether there were differences by gender, race or the type of course on scores related to the participants' self-efficacy. Seven ANOVAs were conducted to test main effects and interaction effects. Results revealed significant differences in one main effect (race) and one interaction effect (gender and race). These results are reported in Table 5. The differences reported by race indicated that minority participants' mean score (3.4) was significantly higher than that of the majority participants (3.2). In the interaction between gender and race, the highest mean score was reported by the male minority participants (3.5), while the lowest mean score was reported by the majority males (3.0).

Overall Mean Scores by Main Effect

The researcher also thought it would be interesting to explore mean scores on each scale of the instrument by each main effect. These results are reported in Table 6.

For females, Parents and Self were rated as the most influential factors in preparing students for college (3.3). The mean score reported by females for teachers was 3.0 while the mean score for guidance counselors was 2.4. The responses from males followed a similar, albeit slightly different pattern. The mean score on the Parents scale was the highest (3.4) followed by the scores on the Self (3.2), Teachers (3.2), and Counselors (2.8) scales.

In terms of race, the minority participants reported the highest mean score on the Self scale (3.4), followed by Parents scale (3.3), the Teachers scale (3.2) and the Counselors scale (2.8). Majority participants rated Parents as most influential (3.4), followed by Self (3.2), Teachers (3.0) and Counselors (2.4).

In examining mean scores by type of course, those in developmental classes rated Parents as the most influential (3.4) closely followed by Self (3.2). These were followed by mean scores for Teachers (2.9) and Counselors (2.5). Those in regular English classes rated both Parents and Self equally (3.3). These scores were followed by the score for Teachers (3.1) and finally the score for Counselors (2.4).

In general, either Parents, Self, or Parents and Self received the highest marks across groups of participants. Teachers were consistently rated as less influential than Parents and Self by all groups and Counselors were rated as the least influential by all groups.

The results of the study suggest some interesting trends with respect to the roles that high school teachers, high school guidance counselors, parents and students themselves play with respect to preparing students for college. These trends, and their implications for future practice and research are discussed in the final chapter of the study.

Table 5
 Results of ANOVAs on the Effect of Self-Efficacy (N=446)

Effect	n	%	M	sd	df	F	Sig
Gender					1	1.07	.301
Female	243	54	3.4	.77			
Male	203	46	3.1	.78			
Race					1	2.45	.044*
Minority	65	15	3.4	.75			
Majority	381	85	3.2	.80			
English Courses					1	1.83	.177
Developmental	226	51	3.2	.80			
Regular	220	49	3.3	.79			
Gender and Race					1	9.53	.002*
Female Minority	34	14	3.3	.70			
Female Majority	209	86	3.4	.78			
Male Minority	31	15	3.5	.79			
Male Majority	172	85	3.0	.76			
Gender and Courses					1	1.88	.171
Female Developmental	125	51	3.3	.79			
Female Regular	118	49	3.5	.74			
Male Developmental	101	50	3.1	.80			
Male Regular	102	50	3.1	.78			
Race and Course					1	.12	.733
Minority Developmental	34	52	3.3	.84			
Minority Regular	31	48	3.5	.64			
Majority Developmental	192	50	3.2	.79			
Majority Regular	189	50	3.3	.80			
Gender – Race – Course					7	.64	.725
Female Minority Developmental	20	59	3.1	.74			
Female Majority Developmental	105	50	3.4	.79			
Female Minority Regular	14	41	3.5	.59			
Female Majority Regular	104	50	3.5	.76			
Male Minority Developmental	14	45	3.6	.91			
Male Majority Developmental	87	51	3.0	.75			
Male Minority Regular	17	55	3.5	.70			
Male Majority Regular	85	49	3.1	.78			

*=significant at the .05 level

Table 6
Summary of Mean Scores by Effect and Scale

Effect	Teachers	Counselors	Parents	Self
Gender				
Female	3.0	2.4	3.3	3.3
Male	3.2	2.8	3.4	3.2
Race				
Minority	3.2	2.8	3.3	3.4
Majority	3.0	2.4	3.4	3.2
Courses				
Developmental	2.9	2.5	3.4	3.2
Regular	3.1	2.4	3.3	3.3