

CHAPTER THREE

Methodology

The purpose of this study was to examine the high school experiences of freshmen college students, by gender, race, and type of English class (developmental v. regular). The study investigated the students' perceptions of aspects their high school experience. Specifically, the study explored the role that high school teachers, guidance counselors, parents and students themselves played in the preparation of students for college-level academic work. The following research questions were examined:

1. Is there a significant difference in perceptions about the role high school teachers played in preparing students for college by gender, race, or type of class (developmental v. regular English)?
2. Is there a significant difference in perceptions about the role high school guidance counselors played in preparing students for college by gender, race, or type of class?
3. Is there a significant difference in perceptions about the role that parents played in preparing students for college by gender, race, or type of class?
4. Is there a significant difference in perceptions about the roles that students played in preparing themselves for college by gender, race, or type of class?

Sample Selection

The sample for the study consisted of college students who were enrolled in developmental English classes and regular English classes during fall semester of 1999. This group was targeted for two reasons. First, students enrolled in college developmental courses represented a sample of college students who were required to take certain classes prior to their enrollment in credited classes. College freshman students enrolled in regular English classes represent a sample of students who were not required to take a remedial English class. Second, both samples had recent involvement with their high school teachers, high school counselors and parents with respect to their preparation for college-level academic work.

The researcher identified two sites from which the sample was selected. One institution was a community college that was located in a rural section of a mid-Atlantic state. The second site was a four-year college and was also located in a rural section of the same mid-Atlantic state.

These sites were chosen for two reasons. First, both colleges offered developmental English and general English courses. Students could be accepted into either of the two colleges and be required to enroll in one or more remedial courses. Therefore, both colleges offered the type of English courses relevant to the study.

Second, both colleges are located within a 30 mile radius of each other, so were accessible to the researcher. The colleges offered a sufficient number of developmental English and general English classes to provide a reasonable pool of participants for the study. Students selected for this study were enrolled during the fall, 1999 semester in a developmental or regular English course at one of the two colleges.

The community college offered developmental and regular courses in English. In the fall of 1999 there were 130 students enrolled in developmental English courses and 281 enrolled in regular English courses.

The four year college also offered developmental and regular English courses; there were 195 students enrolled in developmental English classes and 220 students enrolled in regular English classes in the fall of 1999.

The present study relied on mean scores to analyze data. The major factor affecting the standard error of the mean is sample size. As the size of the sample increases, the standard error of the mean decreases (Gay, 1992). Therefore, to reduce sampling error, all students enrolled in both developmental and regular English classes at both schools were invited to participate in this study. This rendered a potential sample of 826 students.

Instrumentation

An instrument was developed for this study that investigated four factors involved in preparing students for college. The questionnaire was designed to elicit data from participants about the role their high school teachers, high guidance counselor, parents, and they themselves played in preparing them for college. A 60-item instrument, the College Preparation Questionnaire (CPQ), was developed. The items were based upon issues identified in the literature about factors that prepared high school students for college-level academic work.

The instrument was divided into five sections. The first section of the survey elicited demographic information from participants that was used in the analysis data (e.g. gender, race). The remaining sections of the CPQ elicited data about the research hypotheses posed in the study.

The next section consisted of 15 items designed to investigate how participants perceived their high school teachers prepared them for college. This section investigated the use of teaching materials, how thorough teachers were in teaching concepts, and the teaching strategies that they believed were effective in the classroom. Other items explored how teachers encouraged participation in the classroom and challenged participants to develop their skills.

The third section of the CPQ consisted of 15 items that solicited responses on the role the high school guidance counselor played in preparing participants for college. These items focused on how the counselor helped respondents prepare for college and the role the counselor played in helping them select classes that would prepare them for college-level academic work. Items asked respondents how the guidance counselor helped students select colleges, and set academic and social goals. Participants were also asked whether they felt their guidance counselor prepared them for admission to college.

The fourth section of the CPQ contained 15 items. This section elicited data on the role parents played in the participants' college preparation. Items examined the extent of parental

involvement in planning the high school program, parental involvement in the participant's high school performance, and parental assistance in preparing the participant for college.

The final section of the CPQ, containing 15 items, examined the participant's own role in preparing for college. The items in this section focused on self-identified weaknesses, use of standardized test results, and involvement in setting goals for college. This section also explored how the participants felt they were responsible for improving their high school performance.

The instrument employed a Likert-type rating scale to elicit participants' responses. After each statement participants were instructed to assign a rating in the range of 1 to 5 that best reflected their opinion about that statement. The participant assigned a rating of 1 (or a number close to 1) if they strongly disagreed with the statement. The participant assigned a rating of 5 (or a number close to 5) if they strongly agreed with the statement. Participants were instructed to assign any number between 1 and 5 for each item, including non-integers (e.g. 2.7, 3.2). This ensured that responses yielded scaled data. Scaled data lends itself to parametric analysis like that employed in the present study (Suskie, 1996). A copy of the instrument can be found in Appendix A.

Validity/Reliability

The instrument used in this study was non-standardized and designed specifically for this research. While this limited the possibility of establishing reliability and validity of the instrument, some strategies were taken to enhance its validity and reliability.

A valid instrument accurately measures what it was designed to measure; therefore, inferences made from the instrument are accurate (Suskie, 1996). Field testing the items on the CPQ in relationship to the research questions posed in the study established the content validity of the instrument. A panel of 10 experts, professional educators and guidance counselors, were asked to review the instrument. These experts read through the items and compared the items to the research questions. The panelists rated the instrument both on the clarity of the instructions as well as the individual items. The experts analyzed the items to assure that the statements addressed the areas that were being researched. Items that were difficult to understand or were deemed to be too vague were rewritten based upon the comments of the experts. This enhanced the content validity of the instrument.

Reliability refers to whether an instrument consistently measures what it is designed to measure over time and populations (Gay, 1992).

To enhance the reliability of the CPQ, the instrument was pilot tested with 16 college students who had been enrolled in college English courses. The pilot sample was administered the CPQ twice in a two-week time period. The student responses were calculated to determine which responses were similar on both administrations. The pilot sample was also asked to provide comments on the readability of the statements and the clarity of the instructions. Comments regarding the readability of the statements and or clarity of the instructions were used to rewrite

statements or the instructions. The oral responses from the sample group did not result in any changes to the statements or the instructions.

Two estimates of reliability were computed for the instrument; test-retest and item analysis. One estimate, test-retest, was determined to be $r=0.87$ expressed as a Pearson Product Moment correlation. For the item analysis coefficient alpha was calculated for each of the instrument's four subscales (teachers, parents, counselors, and student). All items within each subscale were correlated with a total score for each subscale. All the correlations were greater than .52, thus it was determined that no items needed to be eliminated from the instrument. Because these values were obtained from a pilot sample, they are likely to be an overestimate of the population coefficient alpha.

Data Collection Procedures

Prior to the collection of data, the researcher received approval to conduct the study from the Institutional Review Board for Research Involving Human Subjects at the institution with which the researcher was affiliated. The directors of the remedial programs and English departments at the selected colleges also endorsed the project prior to any contact with the participants.

Meetings were held with the teachers of remedial and general English classes at each of the campuses involved in the study.

The purpose of these meetings was to explain the nature of the study and the involvement that would be required of the teachers. The teachers were provided a copy of the CPQ and instructions on how the instrument was to be administered. The CPQ was administered to all students who participated in this study. An explanation was provided to participants how to complete the CPQ as well as how to determine a numerical rating for each statement.

The instrument was completed anonymously. Participants did not put their names or any type of information on the instrument that would allow the researcher to identify them individually.

The participants were given 30 minutes to complete the questionnaire; no student required more than 20 minutes to complete the CPQ. Upon completing the instrument the participants returned the instrument to the researcher. The CPQ was administered between the second week of November and the first week of December 1999. This time period was selected for three reasons. First, it was sufficiently far enough into the fall semester for teachers to have established expectations for their classes. This helped maximize the response rate. Second, students who were not serious about their college education would have had time to drop out of the courses. Third, it was early enough in the fall semester that freshman could recall their high school experiences with some degree of accuracy.

Data Analysis Procedures

Data were analyzed in a way that permitted the researcher to respond to the research questions posed in this study. The research questions were examined through a series of analyses of variance (ANOVAs), which tested for significant differences between group means.

The study was designed to explore the differences in responses to the CPQ by race, gender, and type of class. To analyze the data for differences by race, the researcher took several steps. First, responses were divided into two groups. The majority group consisted of responses from all participants who reported themselves as Caucasian. The minority group consisted of responses from all participants who self-reported their race as anything other than Caucasian (e.g. African-American, Hispanic).

Next, the mean scores for each of the four scales on the CPQ (Teacher, Counselor, Parents, Self) were calculated for each group. For example, the Teacher Scale was comprised of items 1-15 on the instrument. The group mean for majority respondents on these 15 items was calculated as was the group mean for minority respondents.

Once the group means had been calculated for each group on each scale, ANOVAs were conducted to explore significant differences between those means. All hypotheses were tested at the $p < .05$ level of significance.

Then, attention was turned to the differences on the CPQ by gender. Respondents were divided into two groups, males and females. Then, group means on each of the four scales of the CPQ (Teacher, Counselor, Parent, Self) were calculated for each group. Finally, ANOVAs were conducted to examine significant differences between group means by gender ($p < .05$).

Finally, the researcher examined the differences by type of English class. Participants were assigned to two groups: those in developmental English classes and those in regular English classes. Group means for each of the four scales on the CPQ were calculated for each group. These means were compared through a series of ANOVAs ($p < .05$).

In summary, differences were explored for all three main effects in the study (gender, race, type of class). Additionally, tests were conducted to explore significant differences by all two-way interactions (gender and race, gender and type of class, race and type of class) and the three-way interaction effect (gender, race and type of class).

The objective of this study was to elicit data from students in remedial and general English colleges classes about their high school experiences. The methodology described in this chapter was deemed sufficient to achieve that objective and to respond to the research questions posed in this study.