

CHAPTER THREE

METHODOLOGY

Introduction

This study was conducted to investigate the relationship between part-time employment and school engagement; academic achievement; academic behaviors; family and peers. This chapter presents the methods used to answer the research questions adopted to explore the concepts presented, and test the hypotheses suggested in Chapter One. The chapter provides an explanation of the sampling, instrumentation data collection procedures, scale development, measures, and a description of the analysis procedures.

Research Design

The study was conducted using quantitative research methods. Quantitative research is essential for providing statistical descriptions, relationships, and explanations (McMillan & Schumacher, 2001). Quantitative methods provide numerical data for examining relationships and differences among variables. It is also invaluable for testing and validating already constructed theories about how and why phenomena occur. In addition, large numbers can be analyzed and the analysis is independent of the researcher.

Instrumentation and Sampling

Survey Instrument

The Work, School, and Social Experiences of High School Students Survey (WSSSES) (Appendix B) was compiled and adapted for the study and provided the self-reported quantitative data from high school students. The consideration to conduct a survey always poses the question, “The pencil or the mouse” (Mertler & Earley, 2003)? Web-surveys are extremely popular and

provide many advantages for data collection over paper-pencil surveys. These include cost effectiveness, speed of data collection, easy transfer of data to analysis software, accessibility for convenient samples, and sometimes higher response rates (Matz, 1999; Mertler, 2003). Nevertheless a paper and pencil survey format was selected primarily because high school students must be provided with easy access to a survey, flexibility for completion, easy navigation, and minimum risks to technological malfunctions, in order to provide valid responses. Studies have also concluded that there are no significant differences between the pattern of responses and the psychometric qualities of web surveys and identical paper-pencil surveys (Matz, 1999; Saphore, 1999). In fact, overall response rates for paper and pencil surveys (43%) were reported to be higher than web surveys (33%) (Matz, 1999; Mertler & Earley, 2003).

Items in this high school survey focused on demographics, work behavior, academic experiences, work experiences, and relationships with family and peers. Items were adapted from the School Relationships and Experiences Survey (SRES, Dika & Singh, 2002), the Emotional Autonomy Scale (EAS) constructed by Steinberg and Silverberg (1986), the COPE test (Carver, Scheier, & Weintraub, 1989), and the National Educational Longitudinal Study (NELS: 1988). The planning, construction, and editing of the survey took approximately six months before the pilot stage. Results of the pilot study are reported below.

Population and Sample

The sample frame was N=4,218 high school students from southwest Virginia in grades 9 through 12 and the sample of 1402 students was obtained through purposeful sampling. The non-probability (non-random selection) sample was taken from three high schools in three school divisions of southwest Virginia: Franklin County, Martinsville City, and Salem City. The

principals of the three high schools expressed that they were willing to participate in the survey, and were representative of rural, suburban, and urban high schools with large populations of high school students. The initial contact was made through requests to the school superintendents of each school division via the Chair of the Department of Educational Leadership and Policy Studies at Virginia Tech. Final negotiations were made through the program chair of Educational Research and Policy Studies. School and community profiles are discussed in Chapter 1 and presented in Appendix A.

School location and ethnicity were also factors in the selection of schools. One school was selected based on its large minority population (42.5%). The other two schools are predominantly White (86% and 89% respectively) which is similar to the percentage recorded by the state of Virginia (72.3% White; US Census Bureau, 2003). Previous studies on part-time employment have used predominantly White samples. This study used a larger sample of minority students which facilitated the examination of the relationship between part-time work and ethnicity.

Procedures

Pilot Studies

Through snowball sampling (Bogdan & Biklen, 1992) the survey was piloted at two high schools in Southwest Virginia. A pilot study is important for pre-testing a research instrument because it can indicate if there are ambiguous items which need to be changed or removed, whether the sampling frame and technique are effective, and an estimated time for completing the survey (Baker, 1994; Peat et al., 2002).

The first pilot study was conducted during the week of March 13-18, 2005 with students (n=20) in grades 9 to 12 at the Blacksburg High School, in Blacksburg, Virginia. There was 100% response rate but 33% of the students had not been employed outside of the home. The survey questions were reviewed to improve clarity, readability, interpretability, and navigation. Wording and order of questions were addressed to clear up misconceptions, ambiguities, and replications. For example, some students' response to question 16 (use of free time) indicated that they would participate in all of the activities listed if they were not employed. These options were changed to indicate frequency of activities. Some items in questions 18 and 19 were repetitious and were removed and the remaining items were combined to form a new question 17 which replaced earlier question 18 and 19. Some questions were inadequate and were removed or replaced.

The second pilot study was conducted during the week of April 4-8, 2005 at Salem High School in Salem, Virginia. All surveys (N=1,407) which were handed out were returned. On this occasion, item response and completion time for surveys were monitored. The survey was estimated to take a maximum of thirty minutes for students who were not in remedial reading. This time included time for instructions to be read by teachers. Final adjustments were made and the survey was prepared for administration.

At the beginning of March, 2005, with the help of the Department Chair and the committee advisor, three superintendents were contacted and letters were sent (Appendix F) to request permission to collect data in three school divisions: Franklin County, Martinsville City, and Salem City. Copies of the survey were sent to the superintendents and three weeks later permission was granted by the three superintendents to approach the respective principals with

requests to conduct the research. By May 20, 2005, letters were sent to the principals of Franklin County High School, Martinsville High School, and Salem High School. Immediately following this, meetings were arranged with principals to discuss the nature of the research, the sample of students to be used, and to finalize dates for administering the survey. A package was created for each school and contained a hard copy of the survey, written information to the principal (Appendix G) on the general nature of the survey, letters of consent to be sent to parents, and assent forms for students (Appendices D & E). A copy of the survey was also sent electronically to each principal for prior approval. The principals requested that a copy of the survey be sent for examination by officials of the Department of Education and/or the school board in each district.

The researcher then negotiated by telephone, the dates for administering the survey. She subsequently organized a team of five Ph.D. students from Virginia Tech to administer and collect the surveys at each school on the dates that had been scheduled by each principal. However, by the end of May, the researcher was informed that the Standard of Learning examinations (SOLs) were scheduled to begin and the data collection process would have to be postponed to the Fall semester.

In July, 2005 new negotiations started with the high school principals for new dates to administer the survey in September, 2005. After visits to the schools and several phone conversations, final dates for survey administration were determined on August, 18th and 19th, 2005. Because of distance, time constraints, and the need to minimize costs and school interruptions; instructions had to be revised to have the surveys administered by the classroom teachers in two schools instead of by the planned research team. Letters to teachers (Appendix G) indicated that the work experiences of students must be based on semester hours worked and

not on work done during the summer months as well as the need for full responses to all relevant sections of the survey.

Following instructions from the two principals, surveys, consent and assent forms, and instruction sheets were packaged in envelopes and boxed according to the daily schedule of classes (N=800) and delivered to Martinsville High School on August 23, 2005; and Franklin County High School (N=350) on September 16, 2005. The principal of Franklin County High School selected 250 students from grades 11 and 12 since many of these students were known to have been employed. The Principal of Martinsville High School promised to survey all students who attended school on the day the survey was administered. Principals were given guidelines against possible duplication of student responses. Students from these two schools completed the surveys in their regular classes under the supervision of their class teachers. Completed surveys were returned to the envelopes and unused surveys were returned to the box.

The final set of surveys were packaged in envelopes containing 25 surveys each and taken to Salem High School (N = 700) on September 20, 2005. The researcher and a peer graduate student assisted the staff of the Department of English in administering the surveys to all students who came through the Department of English on that day. The completed surveys were returned to the envelopes and those that were unused were placed in the box. Each school was presented with a gift of a Sanyo DVW-7100 DVD/VCR Combo and a “thank you” card for participation in the survey. All surveys were collected on or before September 20, 2005.

Survey Responses

The surveys were administered to students in classes which were selected by the principals. The principals and the researcher agreed that the survey will be administered to the students who were present on that day in the selected classes.

Franklin County High school was in the process of conducting a total of four surveys and the principal agreed to make available 12 to 15% of the approximately 1100 students in grades 11 and 12. The total number of students registered at the school was 2200. The teachers administered 262 of the 350 surveys that were delivered. There were 260 usable surveys since two surveys had to be discarded because of extensive missing data. Martinsville High School offered surveys to 80 to 100% of students. The teachers administered 547 of the 800 surveys that were delivered. Salem High School completed 598 of the 700 which were delivered to them. Hence a total of 1402 usable surveys were returned.

Generalizability of the Study

Sample selection is invaluable to the validity and reliability of a study. Random samples provide the best representation of the population. However, in the absence of randomization, the sample must be “information rich” to provide answers to the research questions and directly related to the variables being studied (Patton, 2001). Although the sample in this study cannot be representative of high schools throughout the nation, it is representative of a typical group of high school students in grades 9 to 12. The school profiles described in Chapter 1 show that the sample does not include large groups of gifted students, special needs students, or affluent students.

Analysis Procedures

A data template was created using Remark Office OMR 5.5 software and the template was transferred to SPSS 14.0 where the data was entered and initial analysis conducted. Some negative variables were reverse recoded to facilitate data analysis. GPA current and GPA expected (Q. 6. What best describes your GPA?) were reverse coded from 1 = A (3.75 – 4.00) to 6 = C- or less (below 1.75) into 6 = A (3.75 -4.00) to 1 = C- or less (below 1.75). Grades current and grades last semester (Qs. 19 & 20. What best describes the grades you expect to get this year?) were reverse coded from 1 = mostly As to 5 = mostly below D, into 5 = mostly As to 1 = mostly below Ds.

The variables father's occupation and mother's occupation (Q. 8.) Which of the categories below comes closest to describing the current job of your father, stepfather, or male guardian; and your mother, stepmother, or female guardian?) were recoded based on Duncan's Total Socioeconomic Indicator ratings (Stevens & Cho, 1985). The recoded values range from 16 = Professional such as minister, dentist, doctor, and lawyer to 1 = full-time homemaker. A parental occupation score was created using the mean of mother's and father's occupation. A parental education score was also created using the mean of mother's education and father's education (Q. 7. - How far in school did your parent's go?). The variable work intensity (Q. 10. How many hours do/did you work each week on your current or most recent job?) was recoded to four levels of work intensity: 1 = low intensity (1 -10 hours); 2 = moderate intensity (11- 20 hours), 3 = high intensity (21 – 30 hours), 4 = very high intensity (over 30 hours). Finally, a composite score socioeconomic status (SES) was created by summing parent's education and parent's occupation.

Descriptives, frequencies, and crosstabulations were conducted to determine demographic profiles (age, gender, ethnicity, program and grade) and to determine the current nature of high school student employment (Question 1). Independent samples t-tests and ANOVA tests were conducted to observe race, and gender differences among students in the sample who had never worked, and those who have worked during the school year. Hierarchical linear regression analyses were conducted to determine the relationship of part-time employment to school related factors, parental relationship and peer relationships.

Summary

This chapter presented the research sample and methodology for conducting the proposed study and the intended analyses for answering the research questions and testing the hypotheses. Results of the data analyses are presented in Chapter IV with discussion and implications of the study for future research in Chapter V. The time line for the study is displayed in Table 4 of the Appendix.