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**An analysis of the relationship between community work  
experiences and selected measures of career development of  
Michigan State University students**

**Smith, Jane S., Ph.D.**

**Michigan State University, 1987**

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AN ANALYSIS OF THE RELATIONSHIP BETWEEN  
COMMUNITY WORK EXPERIENCES AND SELECTED  
MEASURES OF CAREER DEVELOPMENT  
OF MICHIGAN STATE UNIVERSITY STUDENTS

by

Jane S. Smith

A DISSERTATION

Submitted to  
Michigan State University  
in partial fulfillment of the requirements  
for the degree of

DOCTOR OF PHILOSOPHY

Department of Administration and Higher Education

1987

## **ABSTRACT**

### **AN ANALYSIS OF THE RELATIONSHIP BETWEEN COMMUNITY WORK EXPERIENCES AND SELECTED MEASURES OF CAREER DEVELOPMENT OF MICHIGAN STATE UNIVERSITY STUDENTS**

by

Jane S. Smith

The purpose of this study was to examine the relationship between the community work experience of Michigan State University students and various measures of career development, major field selection and personal values and skills. The study also examined whether the results of this experience were different for those of different ages, genders, class levels, ethnicity and in traditional and non-traditional occupation areas. The population included all students who participated in community work experiences provided by the MSU Service-Learning Center between September, 1977 and June, 1981. An optical scan computer survey card was distributed yearly to each of the participating students.

The major research question was to determine whether a correlation existed between the experience and selected measures of career development.

The data were analyzed through calculation and comparison of frequency distributions. The relationship between variables was analyzed using analysis of variance, Chi-Square and Kendall's Tau Correlational statistics. A null hypothesis was established for each set of variables

and accepted or rejected at the .05 level of significance.

The major motivations for student participation were to gain experience in a career field and to help people. Younger students became involved to explore career choices, while older students wanted to gain experience in their career field and develop professional contacts. The majority of the participants affirmed, changed or questioned their career choice, and nearly half of the total affirmed, changed or questioned their major.

The experience was extremely important to gaining support from others for career decisions and providing broader knowledge of career and job requirements. Participants gained first hand exposure to the world of work, increased awareness of job requirements and personal values, and how education serves as preparation to career. Courses became more meaningful and students were able to identify courses which would be more useful to their career. They were also able to apply coursework to the community, and community experience to coursework. An increase was noted in awareness of values and skills, and in self confidence.

Women were more apt to cross stereotypic career barriers than were men. The value of the community work experience was confirmed, with the importance of the role of the academic advisor emphasized.

## **DEDICATION**

To my parents, Frank and Marion Schneberger, who taught me the value of education and of hard work.

To my children: Suzan, Tracy, Cameron, Z, Kimberly, and Scott, who provided the encouragement and support along the way and who taught me to believe in myself.

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- The 4,308 MSU students who served as respondents to the survey during this period.

- The many student coordinators who served as linking pins between the volunteers, the University and the community agencies.

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**CHAPTER I**  
**INTRODUCTION**

The selection of an occupation or career represents a significant milestone in the lives of men and women living in America today. The right of choice is one of the factors which sets our society apart from those economic systems where the state determines what an individual will be and do. The Horatio Alger concept, that success is attainable to each individual willing to work for it, has become known as the American dream, and is part of the foundation upon which the American value system is built. The availability of postsecondary financial aid through government grants and loans, and changes in attitude resulting from the women's movement have removed additional barriers limiting free choice. Now, more than ever, the choice rests with the individual.

For some college students, the career decision seems to be an easy one while for others the determination of their life's work is difficult and painful. Those individuals with a strong sense of self-direction seem to be acutely aware of their abilities and interests, and have an innate understanding of the ways in which their skills, aptitudes and value systems will mesh with opportunities in the world of work. Success in coursework reinforces these perceptions. Those individuals who are unsure may flounder aimlessly seeking an appropriate major which will lead them

to a future career. They may sample a wide variety of courses, while searching for an area of interest in which to concentrate; they may attend lectures or programs presented by professionals in various fields; they may seek advice from family, friends, or professionals; they may frequent the library and read extensively about individuals or companies in specific areas of concentration; or they may visit selected worksites. Some persons may require the assistance of guidance or career counselors who can provide them with occupational information and personal insights. By whichever path, or combination of paths, this knowledge is achieved and a tentative decision reached, experience in the real world can provide the opportunity to test the "fit" of a career choice with reality.

For more than twenty years, Michigan State University (MSU) students have participated in exploratory volunteer and service-learning<sup>1</sup> experiences through a program coordinated by a department of the division of Student Affairs. More than 3,000 MSU students from 150 departments in 16 colleges contribute approximately 300,000 hours of community service each year in areas such as government, consumerism, business, health, mental health, corrections, education, recreation, special education, aging, and

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<sup>1</sup>Service-learning is defined as the integration of the accomplishment of a public task with conscious educational growth (Sigmon, 1979, p. 9). It is the giving of service in exchange for the learning which this activity can provide.

communications. These experiences augment and supplement the traditional curriculum and provide students with opportunity to work at jobs which have clearly defined responsibilities, specific time commitments of 5-20 hours per week for one to three terms, and an agreement by the agency to provide training, supervision, and evaluative feedback. The MSU program, which is the oldest and largest in the country, is unique because of its interrelationship with academic units, the career counseling center, the placement office, and community agencies.

### The Problem

Especially during times of fiscal constraint, the University must examine all programs in terms of their value to the educational mission. Questions are raised, with increasing frequency, whether this mission includes educating the student for life or for the sake of education alone. Must education take place in the classroom directed by an educator, or can it also occur in a community setting under the guidance of a practitioner?

Historically, the classroom has been insulated from outside interference. The dissemination of ideas has been its primary goal:

Ideas existed in a kind of Platonic purity. A student learned ideas without sullyng their pristine essence---without responding personally or interpreting them. Measurement of a student's grasp of ideas consisted of comparing the student's version with the original as interpreted by an older academic, who presumably had removed his personality and uniqueness from his understanding of the original text. All students

learned the same things, and they learned them in the same way at the same time (Peterson, 1977, p. 28).

Students are taught theories, hypotheses, and ideas by the score and yet have few opportunities to test these concepts outside the classroom. Benjamin Bloom points out in Taxonomy of Educational Objectives (p. 125):

If the situations described by the objective... are to involve application... then they must either be situations new to the student or situations containing new elements as compared to the situation in which the abstraction was learned... Ideally we are seeking a problem which will test the extent to which the individual has learned to apply the abstraction in a practical way. This means that the problems should have some relation to the situations in which he may ultimately be expected to apply the abstraction.

The purpose for learning may be lost in the shuffle of textbooks, papers, and tests. A service-learning program, such as the one available through the MSU Service-Learning Center attempts to integrate two types of learning which educator Carl Rogers calls affective and cognitive learning. "On the one hand, there is learning which involves the mind only (cognitive). It does not involve feeling or personal meanings; it has no relevance to the whole person. In contrast, there is such a thing as significant experiential learning (affective)" (Peterson, 1971, p. 5). Bloom further defines these terms as follows:

Cognitive: Objectives which emphasize remembering or reproducing something which was presumably learned as well as objectives which involve the solving of some intellectual task for which the individual has to determine the essential problem and then reorder given material or combine it with ideas, methods, or procedures previously learned.

Affective: Objectives which emphasize a feeling, an emotion, or a degree of acceptance or rejection. Affective objectives vary from simple attention to selected phenomena to complex qualities of character and conscience... Such objectives are expressed as interests, attitudes, appreciation of values and emotional sets or biases (Peterson, 1971, p. 70).

A study which examines the relationship between the service-learning experience and selected measures of career development of participating college students should provide a measure of the value of a service-learning program to a postsecondary institution. A number of questions need to be answered in this regard. Does the experience help the student select a major or gain insight into the value of taking certain courses? Is there a growth in interpersonal and communication skills? Is there an increase in practical knowledge which augments and complements theories learned in the classroom? What is the relationship between career awareness and career decision making? If statistical analysis indicates that there is a positive correlation between the service-learning experience and selected measures of career development, the value of such a program at the postsecondary level can be validated.

### The Program

The Service-Learning Center at Michigan State University provides a broad selection of program choices requiring varying degrees of skills, abilities, and time commitments for students' participation. They may be exploring possible careers, confirming tentative choices, seeking skill or personality development or perhaps wanting

to meet and work with professionals in a field of interest. After an interview with a service-learning professional, the student is given a descriptive sheet on possible program involvements and directed to an orientation session provided by the participating agency representative. An overview of the program is provided and responsibilities and time commitment are identified. Typical involvement consists of four to five hours per week, although some placements may require as many as twenty hours per week. While some students come to the Center on their own, others come at the suggestion of friends or faculty advisors. A number of departments actually require a specific number of volunteer hours prior to admission into specific majors or into a college. Each service-learning program is carefully monitored by a staff member and student coordinator to assure that each experience will be of high quality, and that the overall program will provide a broad spectrum of career development opportunities.

#### PURPOSE

The purpose of this study will be to examine the relationship between the service-learning experience and the following measures of career development: career awareness, career preparation, career decision making, major field selection, personal values, and personal skills. This study will also attempt to determine whether the results of this experience are different for those of different ages, sexes, class levels, or ethnicity; and to compare the results of

the experience in traditional and non-traditional occupational areas.<sup>2</sup>

The major research question is to determine whether a correlation exists between the experience and selected measures of career development. A positive correlation will help to validate the value of the overall program at the postsecondary level. The null hypothesis is that "no relationship exists between the variables". Rejection of the null at the .05 level of significance would mean that the alternate hypothesis, that "a relationship does exist" would have to be accepted.

#### DESCRIPTION OF THE STUDY

This study was initiated in 1978 to evaluate the quality of individual service-learning programs and to examine student perception of the effect of their service-learning experiences upon areas of career awareness and career decision making.

##### Population

The population which was studied included all students who participated in service-learning experiences provided by

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<sup>2</sup>A non-traditional occupation for a woman is defined as one that is stereotypically considered masculine and a non-traditional career for a man is one that is stereotypically considered feminine. Research has shown that perceptions of jobs as masculine or feminine closely parallel the actual number of males and females employed in that occupation (Shiner, 1975). Specific percentages which make a profession or program non-traditional vary from 79% of one sex (Carvell, 1980) to 72% (Hofferth, 1980).

the MSU Service-Learning Center between September, 1977, and June, 1981.

### The Instrument

Members of the staff of the Service-Learning Center and Social Science Research Laboratory developed the optical scan computer card survey instrument which was distributed to all students who participated in a service-learning experience. Students were asked to identify the program in which they had participated and to answer basic demographic questions on age, class level, sex, college, and major field. This information provided a profile on individual participants.

A question was included on the number of terms in which the student participated to determine whether increased participation would increase the effect. It was also important to determine whether the student's participation fulfilled an academic requirement and whether or not the information source was through formal or informal channels. Other questions involved motivation and the student's perception of the effect of the experience on major field selection, career awareness, career preparation and course work. Participants were asked to evaluate the services of Service-Learning Center and those of the community agency. They were also asked to evaluate the experience in general. This survey was repeated each year

for four years (1978-1981). In 1980, additional questions on personal growth were added. (Appendix B).

The optical scan computer card was mailed to each student who had been placed in a volunteer/service-learning experience during the academic year. An explanatory letter and a stamped, pre-addressed envelope were also included. The majority of questions required multiple choice or ranking order answers. Students were asked to fill in the box, adjacent to the answer of their choice, with a lead pencil. Several questions required a narrative answer. Participants were requested to return the completed card anonymously to the Service-Learning Center. When the cards were received, they were grouped together by the program categories and read by an optical scanner at the Social Science Research Laboratory.

#### Data Analysis

To analyze the data, frequency distributions and cumulative frequency distributions were determined for each year, and printed and plotted on a computer printout. Answers were divided into positive and negative categories on a continuum and calculated as percentages. Calculation of the means of students' answers to questions was carried out and a comparison made from year to year.

In addition, the answers to questions were examined using contingency tables employing cross tabulation of categories of subgroups (i.e.: gender, race, class level and age) and through the Chi Square ( $\chi^2$ ) statistic.

Correlations were also determined using Kendall's Tau. In addition, use of a statistical technique known as analysis of variance (ANOVA) allowed for testing for systematic differences.

A null hypothesis was established and examined at the .05 level of significance for each set of dependent and independent variables. For each analysis in which the null hypothesis was tenable, it was concluded that the independent variable does not affect the dependent variable. For each instance in which the null hypothesis was not tenable, then the alternate hypothesis was accepted, and it was concluded that the independent variable did affect the dependent variable.

The following null hypotheses were examined using the Chi Square and Kendall's Tau statistic with age, gender, class, or ethnicity each inserted separately as the independent variables (IV).

- . (IV) has no effect on whether or not volunteer work was required or recommended by an academic unit.
- . (IV) does not affect the participant's motivation to apply for a volunteer position.
- . (IV) does not affect the effect of the experience on career plans.
- . (IV) does not affect the effect of the experience on major selection.
- . (IV) has no effect on the participant's perception of the importance of the volunteer experience in relation to support from others on career decisions.

- . (IV) has no effect on the participant's perception of the importance of the experience in broadening knowledge of career and job requirements.
- . (IV) has no effect on the participant's perception of the effect of the experience in focusing career choices.
- . (IV) has no effect on the participant's perception of the importance of the experience in providing first hand exposure to the work environment.
- . (IV) has no effect on the participant's perception of the importance of the experience in the participant becoming known to people in the field who could recommend him/her to a potential employer.
- . (IV) has no effect on the participant's perception of the importance of the experience to the participant becoming aware of how the education experience is serving as a preparation for career.
- . (IV) has no effect on the participant's perception of the importance of the experience to the participant gaining awareness of the relationship between job requirements and personal values.
- . (IV) has no effect on the use of research and investigation skills in volunteer work.
- . (IV) has no effect on the use of communication and persuasion skills in volunteer work.
- . (IV) has no effect on the use of organizational management skills in volunteer work.
- . (IV) has no effect on the use of design and planning skills in volunteer work.
- . (IV) has no effect on the use of information management skills in volunteer work.
- . (IV) has no effect on the use of technical skills in volunteer work.

The following null hypotheses were examined using the analysis of variance statistical technique with age, gender, class level, and ethnicity each inserted separately as the independent variables (IV).

- . Whether or not volunteer work was recommended by an academic unit is the same for each (IV).
- . The nature of the academic unit requirement being "required by major" is the same for each (IV).
- . The nature of the academic requirement being "required as part of major" is the same for each (IV).
- . The nature of the academic requirement or recommendation being "suggested by advisor" is the same for each (IV).
- . The nature of the academic requirement being "course requirement" is the same for each (IV).
- . The motivation to apply for a volunteer position to complete part of a course requirement is the same for each (IV).
- . The motivation to apply for a volunteer experience to gain independent study/internship/field experience credit is the same for each (IV).
- . The motivation to apply for a volunteer position to gain admission into the major is the same for each (IV).
- . The motivation to apply for a volunteer position to gain admission into graduate or professional school is the same for each (IV).
- . The motivation to apply for a volunteer position to explore a possible career choice is the same for each (IV).
- . The motivation to apply for a volunteer position to gain experience in a career field is the same for each (IV).

- . The motivation to apply for a volunteer position to develop professional contacts is the same for each (IV).
- . The motivation to apply for a volunteer position to help people is the same for each (IV).
- . The motivation to apply for a volunteer position to have something to do with leisure time is the same for each (IV).
- . The effect of the volunteer experience on career plans is the same for each (IV).
- . The effect of the volunteer experience on major plans is the same for each (IV).
- . The importance of the volunteer experience in providing support for others for career decisions is the same for each (IV).
- . The importance of the volunteer experience in broadening knowledge of career and job requirements is the same for each (IV).
- . The importance of the volunteer experience in focusing career choices is the same for each (IV).
- . The importance of the experience in gaining first hand exposure to the world of work is the same for each (IV).
- . The importance of the experience to becoming known to people in his/her field, who could recommend him/her to potential employers is the same for each (IV).
- . The importance of the experience in becoming aware of how education experience is serving as preparation for career is the same for each (IV).
- . The importance of the volunteer's experience in gaining awareness of the relationship between job requirements and personal values is the same for each (IV).
- . The effect of the experience in making some of the volunteer's courses more meaningful is the same for each (IV).

- . The experience affecting the volunteer's motivation to learn, participate and achieve in his classes is the same for each (IV).
- . The experience affecting the volunteer's ability to apply coursework knowledge/skills to the community is the same for each (IV).
- . The experience helping the volunteer identify courses which s/he could take which would be useful to his/her career is the same for each (IV).
- . The experience affecting the volunteer's ability to apply community knowledge/skills to coursework is the same for each (IV).
- . The volunteer being forced to better plan his/her time as a result of participating in the experience is the same for each (IV).
- . The volunteer increasing his/her ability to be responsible for himself/herself as a result of the experience is the same for each (IV).
- . The volunteer learning to problem solve is the same for each (IV).
- . The volunteer developing an awareness of the situational/personal differences in others as a result of the experience is the same for each (IV).
- . The volunteer increasing his/her acceptance of the differences in others as a result of the experience is the same for each (IV).
- . The volunteer developing his ability to cooperate with others as a result of the experience is the same for each (IV).
- . The use of research and investigation skills is the same for each (IV).
- . The use of communication and persuasion skills is the same for each (IV).
- . The use of organizational management skills is the same for each (IV).
- . The use of design and planning skills is the same for each (IV).

- . The use of information management skills is the same for each (IV).
- . The use of technical and manual skills is the same for each (IV).

### THEORY

Psychologists and educators, as well as career development theorists, have investigated the question of career choice extensively in an effort to understand the process by which some individuals make their career choice, so that they will be able to assist others in their career decision. Although many psychologists agree that children go through a series of overlapping stages of emotional, intellectual, physical and moral development, there is widespread disagreement on how the "What do I want to be when I grow up" decision is finally made. Although theories of career development overlap and intertwine in many ways, they may be categorized into four groups: trait factor, sociological, self-concept, and personality approaches.

It was important to have a thorough understanding of each of these theories in order to develop the service-learning programs and to design the survey instrument by which students could evaluate them. To summarize these approaches:

- . Trait Factor: an individual's abilities may be matched with vocational opportunities;
- . Sociological: career choices are made by chance;
- . Personality: an individual's personality factors can be matched with those of persons already in the chosen field;

- . Self-Concept: a person tries to implement his self-concept through his choice of occupation.

The trait factor, sociological and personality approaches will be reviewed more thoroughly in Chapter II. It is the self-concept theory which will provide the basis for this study in determining the role which experience can play in the developmental process of career choice. This theory contends that as a person matures, he gains a greater awareness of himself and his environment, of what he likes and what he dislikes, of what he does well and what he does badly, and what values are meaningful to him. He selects a career which allows him to fulfill this self concept. The service-learning experience is intended to provide the student with the opportunity to gain an increased awareness about a specific field, and to determine whether or not he likes the work, is capable of doing the work, and is compatible with those already involved in that field.

The Self-Concept theory grew from the early work of Buehler (1933) and later involved extensive research by Ginzberg (1951) and Super (1957). Ginzberg believed that career choice is a developmental process which can be delineated only as a result of understanding how internal and external forces in a person's life act and react upon each other. His basic assumption was that an individual never reaches the ultimate decision at a single moment in time but rather makes a series of decisions over a period of years. Initially, he believed that this was an irreversible

process, characterized by a series of compromises the individual makes between wishes and possibilities. Later he toned down this notion of irreversibility and changed the concept of compromise to that of optimization (Ginzberg, 1963, p. 24).

Basically, Ginzberg believes that the process of occupational decision making can be divided into three periods: **fantasy**, **tentative**, and **realistic**. He further subdivides the **tentative** period into four stages: **interest**, **value**, **capacity**, and **transition** and the **realistic** period into three stages: **exploration**, **crystallization**, and **specification** (Ginzberg, 1963, p. 60).

Ginzberg and his associates note that, initially, a child's choices are arbitrary and lack reality; later he becomes aware of what he likes to do, and then is cognizant of things he does more skillfully than others. In time, the individual realizes that some activities have more intrinsic or extrinsic value than others. As the young adult integrates his likes and dislikes in relation to his values, he begins to implement tentative choices. It is in this **exploration** stage that world of work experiences, whether paid or volunteer, will be of greatest value (Ginzberg, 1973). At this point of job entry or early college years, feedback of vocational behavior is particularly important, according to Ginzberg. The results of this feedback lead to the **crystallization** phase and eventually to the **specification** stage. Thus, it would seem

logical to assume that a service-learning experience can provide the feedback necessary to assist a student in making a career choice.

In conceptualizing his theory of career development, Donald Super was influenced by the self-concept theory illustrated in the writings of Carl Rogers, H. D. Carter, and E. S. Bordin, who theorized that behavior is a reflection of an individual's attempt to implement his self-descriptive and self-evaluative thought (Osipow, 1963, p. 131). Charlotte Buehler's writing in developmental psychology, which suggested that life consisted of a series of distinctive stages, also influenced Super's work. Ginzberg had concluded that choice of occupation was a result of a compromise between interest, needs, aptitudes, values, and external reality. Although Super had been conducting research in the area of career development for many years, it was his criticism of Ginzberg's conclusion that led Super to formalize his theory in a statement to the American Psychological Association in 1953. His book, The Psychology of Careers, was published in 1957.

Super's theory suggests that a person strives to implement his self-concept by selecting a career he views as the one most likely to permit him self-expression (Super, p. 85). He views career choice as a developmental process. Vocational behaviors and decisions are a result of the particular stage of life development in which that person is at the time. He identifies two major stages of career

development; exploratory and establishment. Decisions are evaluated and modified by the following process: formation, crystallization, specification, implementation, and stabilization (Super, p. 177-184).

Super notes that curriculum in the early years of high school and college is exploratory in content and purpose. Students try out different subjects which require different ability levels, and appeal to different interests, thus learning about themselves and occupational opportunities (Super, 1957, p. 85). He observes that many students, even those in graduate or professional school, still need a great deal of orientation to themselves and their prospective fields of work. Believing that part-time and vacation jobs are primarily a means of earning money rather than a means of exploration and orientation, Super recommends a volunteer or paid experience, related to an occupation and in the intended field of interest, to provide this exploratory opportunity (Super, p. 88). Super describes the value of experience in the exploratory stage as follows:

...It provides youth with an opportunity to develop mature work habits ... to mix with adults ... try out adult roles and test the reality of his self-concept ... only if part-time or vacation work experience has some bearing on the student's vocational aspirations and plans, does it provide him with the opportunity to test his aptitudes, interests, and skills to find out whether or not he likes that kind of work.... He learns about some of the kinds of situations in which that type of work is carried on, some of the kinds of people, equipment,

activities and problems associated  
with that type of work (Super, p. 89).

The service-learning experience is designed to provide the college student with a unique opportunity to participate in a real-life work situation in the career environment of his choice. This study will attempt to measure the relationship between that experience and the student's career awareness and development.

Various studies have been undertaken in recent years in the attempt to evaluate and measure the effect of career decision intervention on students' programs at institutions at the secondary and postsecondary level. Some are of particular note for purposes of this study. Heck and Weible (1978) examined first year college students' perceptions of career choice based on exploratory field experiences. They noted that participants gained increased knowledge of self and an in-depth knowledge of a career. In examining the impact upon career choice of high school juniors, involved in an experimental career education project, Baird (1979) concluded that the program was equally beneficial for persons of different races, parents' occupation levels, and sexes, and that persons of all career maturity levels were affected in a positive and consistent manner.

A number of research studies have included evaluation of Experience-Based Career Education (EBCE) projects. Monkowski (1979) examined the final year of the Lincoln, Nebraska public school program focusing on student outcomes,

parent evaluation, and community sites. Stead and others (1977) conducted a similar study of the Appalachian Maryland EBCE program with results indicating that students who participated in the project made substantial gains in career skills and career decision making. Rask (1977) examined the effect of an internship program on rural gifted and talented students, while Bonnet and Richert (1980) studied a career exploration course of the Indianapolis Public Schools which combined classroom learning and community experience. In both studies, results indicated that students perceived the experience as a successful one in providing an increase in career awareness and skills.

At West Virginia University, Markiewicz (1979) compared the effectiveness of the use of Holland's Self Directed Search, a decision making program, and a vocational tour on the career development of high school students. He found that the results were different for males than for females. With the rise of the women's movement, and the increase in the number of both men and women in non-traditional occupations, a number of studies have focused on sex differences in career decision making. In a paper presented to the Conference for Educating Women in Science, Hanson (1975) observed that women need more "exposure" to non-traditional fields. Jackson's (1980) research with academically gifted females concurred with this finding.

Many studies have been conducted on various facets of career decision making in a wide variety of specific populations. Few programs exist today at the postsecondary level which offer the wide spectrum of career related opportunities as those which are available through the Service-Learning Center. Therefore, this study, carried out over a four year period, should provide information which has not been available heretofore.

### OVERVIEW OF THE STUDY

In Chapter II, literature is reviewed regarding theories of human development, theories of career decision making and recent studies of the effect of experience on secondary and postsecondary students. In Chapter III, a detailed description of the sample, instrumentation, statistical hypotheses, and experimental design is provided. An analysis of the results is contained in Chapter IV, while conclusions and implications for further research are included in Chapter V.

## CHAPTER II

### LITERATURE REVIEW

Theories of career development overlap and intertwine in many ways. Over a seventy-five year period, individuals, who have studied the subject of careers, have developed their own theories, building upon the research of earlier theorists. One cannot understand or appreciate any one concept without having a thorough knowledge of each of the others. In addition, an understanding of the broad spectrum of career development theories was necessary in order to develop the service-learning programs for Michigan State University students. This knowledge was also essential in preparing the survey questions with which to analyze and evaluate the relationship between these experiences and selected measures of career development of student participants.

The theories of career development may be categorized into four main groups: trait-factor, sociological, personality, and self-concept (Osipow, 1973, p. 9). To summarize these approaches:

- . Trait Factor: an individual's abilities may be matched with vocational opportunities;
- . Sociological: career choices are made by chance;
- . Personality: an individual's personality factors can be matched with those of persons already in the chosen field;
- . Self-Concept: a person tries to implement his self-concept through his choice of occupation.

Although it is the self-concept theory which provides the main framework and foundation for this study, there are portions of other theories which are significant as well. Therefore, a brief summary of the contributions of the major theorists in each approach is presented and the relationship to this study is identified. In addition, a discussion and an analysis of relevant dissertation studies and journal articles are provided.

### THE TRAIT-FACTOR THEORY

The trait factor theory is the oldest approach to career development. This model asserts that matching the individual's abilities with vocational opportunities will solve the problem of vocational choice. Significant contributions to this theory have been Parsons' early efforts in vocational counseling in 1909, and Kitson's 1925 personnel study of psychologists, although this has been outdated by the major changes occurring since that time.

Frank Parsons, a prominent Boston citizen and law lecturer at Boston University in the early 1900's, is considered to be the first modern practitioner in the field of career counseling and guidance, and the founder of the trait-factor approach. He became active in the Boston Civic Service House, a community settlement, and upon discovering that many of the young people who used these facilities were in dire need of vocational guidance, developed a series of vocational lectures, and soon began to give individual counseling. In 1907, he founded the Vocation Bureau of

Boston, the first of its kind in the United States. While gravely ill, he devoted almost all of his energy toward completing Choosing a Vocation, a book which was put in final order by his disciple, Frank Albertson, and printed in 1909. He declared:

. . . The wise selection of the business profession, trade, or occupation to which one's life is to be devoted, and the development of full efficiency in the chosen field are matters of the deepest moment to young men and to the public. These vital problems should be solved in a careful, scientific way, with due regard to a person's aptitude, abilities, ambitions, resources and limitations, and the relations of these elements to the conditions of success in different industries. (Parsons, 1909, p. 3)

Parsons states that three factors are involved in career choice: 1) clear self-understanding of aptitudes, abilities, interests, ambitions, resources and limitations; 2) knowledge of different lines of work with their requirements, conditions of success, advantages, disadvantages, compensation, opportunities, and prospects; and 3) the relationship between the two. He clearly defines the role of the counselor in the vocational guidance process in terms of personal investigation and industrial investigation. He was also the first person to make career exploration a part of the vocational guidance process. (Prediger, 1974, p. 235)

The vocational testing movement emanated from the trait-factor approach. E. K. Strong (1943) and G. F. Kuder

(1939) developed two of the best known instruments to measure interests. In the Strong Vocational Interest Blank (SVIB), individuals are asked to indicate what it is they like to do. These responses are then matched with a scale developed from the responses of members of particular occupations. The Kuder Preference Record (KPR) measures interests in the following areas: outdoor, mechanical, computational, scientific, persuasive, artistic, literary, musical, social service, and clerical. Occupational psychologists believe that those engaged in a particular occupation have a characteristic pattern of likes and dislikes different from those in other occupations. Thus, vocational counselors can utilize these tests to help individuals select appropriate occupations. Interests are determined by many factors and, although they change with age, become relatively stabilized in post adolescence (Roe, p. 85). Osipow (1973, p. 260) notes that efforts to advise men and women toward non-traditional occupations have been complicated by the difficulty in developing appropriate measurement scales due to the paucity of men and women already in those occupations.

#### THE SOCIOLOGICAL MODEL

According to supporters of the sociological model of career choice, circumstances beyond the control of the individual contribute to the choice he makes. Thus, "chance" or "being in the right place at the right time" may be more significant than any amount of systematic planning

or vocational counseling. Even in America, there are class strata in the social organization. Hollingshead's classic study of Elmtown's Youth (1949) provides data that show that the occupational aims of most lower class adolescents are consistent with their social class. Caplow (1954) notes that "career heredity" may occur for children whose families own businesses or farms. Sewell and Shah (1968) conclude that race, father's occupation, sex, marital status, family income, place of residence, and family status affect career possibilities, as well as educational opportunities.

Because the opportunity to attend college has become available to all segments of the population through financial aid, the education, which opens the doors to many careers, is no longer reserved for children of the privileged classes. Removal of financial barriers, which formerly limited occupational choice, has resulted in a broadening of the pool seeking entrance into various careers, and increased the effect of ability and interest as determining factors. Thus, the effect of career heredity may have been minimized. Children of doctors, lawyers, and accountants may not have the ability or interest in following in their parents' footsteps. A service-learning experience can provide these individuals with the opportunity to explore careers far removed from those of their parents. An experiential opportunity in a hospital may be just the catalyst needed for a bright child of the slums to spark an aspiration to become a physician.

Miller and Form (1949) propose that socialization is a process with three developmental phases: 1) Pre-work socialization where family, school, play, and peer group provide awareness of available roles; 2) entry into labor force with limitations created by education, local or national opportunities, occupational awareness, and social stereotypes; and 3) socialization into the job where the individual may succeed in meeting the role prescriptions of the position, may suffer bearable conflict, or may fail and realize the need to change to a different field. A service-learning experience in the early phases of college life may allow a student to test whether or not he can succeed in meeting these role prescriptions within the limits of bearable conflict. If not, he may come to the realization that this is not the field for him.

Caplow (1954) notes that often educational decisions are made rather casually, committing a person to a certain course of action which eliminates other possibilities. The social concept theorists believe that parents exert a great deal of initial influence over their childrens' educational and career decisions. The value of testing early in the collegiate experience of the "fit" of this initial choice through a service-learning experience should not be underestimated.

#### THE PERSONALITY APPROACH

Personality approach theorists such as Small (1953), Schaeffer (1953), Roe (1957) and Holland (1959) believe that

people in specific careers have distinguishable personality characteristics from those in other careers. Career assistance may be provided by analyzing an individual's personality characteristics and matching them with the predominant personality factors of those already in that career.

Small (1953) proposes that certain aspects of vocational choice are a result of ego strength. He contends that a person with a healthy ego is in close contact with reality, will be able to delay gratification longer than a person with a weak ego, and will express more realistic first occupational preferences.

Basing his concept on Maslow's theory,<sup>1</sup> Schaeffer (1953) concludes that job satisfaction is directly related to need satisfaction. Thus jobs which offer opportunities for fulfilling unmet needs of self-esteem and self-actualization are motivational in nature. This would emphasize the importance of selecting jobs which can provide these opportunities.

Through her ten year research on the personality traits of artists and the characteristics of eminent scientists, clinical psychologist Anne Roe developed and published a formal personality theory of career choice in

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<sup>1</sup>Abraham Maslow developed his theory on the hierarchy of needs, in 1954, which contends that man is motivated by a series of unmet needs: physiological, safety, love, self-esteem and self-actualization in ascending order. The lower level needs are prepotent and must be met before the higher level needs becomes motivators.

1957. Her theory contends that each person inherits a unique predisposition toward the expenditure of his psychic energy. This genetic difference, combined with the effect of childhood experiences and parental influences, molds the general vocational orientation of the individual. Roe's findings indicate that there are major personality differences between social scientists and physical-biological scientists, specifically reflected in their interaction with people and things. These differences are exhibited in the general style which an individual develops in satisfying his needs and thus have major occupational implications.

Roe states that:

. . . People in service occupations are primarily oriented toward **persons** and probably come from a home which generated a loving, overprotecting environment, while scientists tend **not** to be oriented towards persons and come from a cold home atmosphere, where rejection and avoidance predominated. (Osipow, p. 18)

Roe identifies eight classes of occupations: service, business, organization, technology, outdoor, science, general cultural, and arts and entertainment. The groupings of programs available through the Service-Learning Center generally match these categories.

John Holland, dissatisfied with developmental and self-concept theories of career choice, theorized that a person's vocational interests are "simply another aspect of the personality". (Holland, 1966, p. 3). The choice of an occupation, therefore, represents an individual's attempt to

implement his broad, personal behavioral style and reflects a person's motivation, knowledge, personality and ability. (Holland, p. 4). By having people express their feelings for or against a variety of occupational titles, Holland developed a Vocational Preference Inventory (VPI) which can be used to identify personality types and thus vocational orientation. Through his research, he grouped the finite number of work environments into six categories and also categorized people as being one of six types with the same names as the environment. These are:

1. Realistic
2. Investigative
3. Social
4. Conventional
5. Enterprising
6. Artistic

Each type becomes a complex cluster of personal attributes which is the result of heredity and cultural and personal forces, such as parents, peers, social class, other adults, and the physical environment. People seek out vocations which represent the closest fit to their personalities, allowing them to exercise their skills and abilities, and express their attitudes and values. Because Holland's contention is that the adequacy of an individual's vocational decision depends on his knowledge of himself and the world of work, (Holland, 1959) this concept is of special note to this study. Service-learning programs allow students to measure their attitudes and values with those already in the field and test their career interest through

these experiences.

### THE SELF-CONCEPT THEORY

The self-concept theory grows out of the early work of Buehler (1933) and involves research carried out by Ginzberg (1951), Super (1957) and Tiedeman and O'Hara (1963). It states that a person strives to implement his self-concept through his choice of occupation. Work allows a person to achieve self-actualization and makes it possible for one to play a role appropriate to that self-concept (Harkness, 1976, p. 27).

The 1933 work of Charlotte Buehler defines the psychological life stages as:

- |                        |          |
|------------------------|----------|
| 1. Growth Stage        | 0-14     |
| 2. Exploratory Stage   | 15-25    |
| 3. Establishment Stage | 25-45    |
| 4. Maintenance Stage   | 45-65    |
| 5. Decline             | After 65 |

These processes not only have vocational impact but relate to all parts of life and living (Super, 1957, p. 72).

The philosophy of educator Carl Rogers is apparent from the following quotation:

...There is one other ....attitude which I hold  
 ....It is my belief in the fundamental pre-  
 dominance of the subjective. Man lives es-  
 sentially in his own personal and subjective  
 world, and even his most objective function-  
 ing, in science, mathematics, and the like,  
 is the result of subjective purpose and sub-  
 jective choice (Rogers, 1959, p. 191).

Roger's theory of education is based on the premise that the human being is basically a trustworthy organism, capable of evaluating the outer and inner situation, understanding

himself in its context, making constructive choices as to the next steps in life, and acting on those choices (Rogers, 1977, p. 15). His writings have had great influence on the self-concept theorists.

Eli Ginzberg, a professor of economics and director of The Conservation of Human Resources at Columbia University, and his colleagues investigated the determinants of occupational choice and the economics of human resources. He characterizes the right of the individual to choose his work as one of the outstanding characteristics of our capitalistic culture (Ginzberg, 1963, p. 3). The choice affects both the individual and society.

..."Most parents try both directly and indirectly to provide their children with a scale of values. They try to teach them about various goals in life, about prestige which attaches to different occupations and the importance of disciplined work. Our society, for its part, has appreciated the importance of a broad educational system to which rich and poor have access-----Certainly the action of parents and of educators influence the way in which individuals choose their occupations" (Ginzberg, p. 5).

Many parents would like to help their children, but Ginzberg notes there is much of the world about which they too are ignorant. Parents believe they know their children, but they also recognize that these children are changing rapidly in many ways. Consequently, parents and children alike have looked to experts for help.

Ginzberg discounts the accident theory of career choice stating:

. . . In explaining their occupational choices as accidents, most people seem to mean that they were affected by something beyond their control - an unplanned exposure to a powerful stimulus. But the point which this theory overlooks is that in the life of every individual there are countless such occurrences, only a few of which so stimulate the individual that he responds in a manner which has important consequences. The other exposures pass unnoticed and never merge from the background of events in the individual's life (Ginzberg, p. 19).

He states that not only can a person find expression for specific interests in a large number of different occupations, but also that there are remarkable differences in the emotional make-up among members of the same occupation. His theory stems from the belief that career choice is a **developmental process** which can be delineated only as a result of understanding how internal and external forces in a person's life act and react on each other. His basic assumption is that an individual never reaches the ultimate decision at a single moment in time, but rather makes a series of decisions over a period of many years.

Ginzberg and his associates note that the four important ingredients involved in the adequacy of an individual's choice are: reality testing, development of a suitable time perspective, ability to defer gratification, and ability to accept and implement compromises. Another critical factor is the impact of significant role models at appropriate times. Initially, Ginzberg and his associates

believed that this was an irreversible process, characterized by a series of compromises the individual makes between his wishes and his possibilities. As an example, when a person majors in engineering in college, his chances of selecting law as a career are minimized.

According to Ginzberg, the way in which an individual reaches occupational decisions, as he matures, hinges on the individual's understanding of what he likes and dislikes, of what he does well and what he does badly, and what values are meaningful to him. Individuals also become increasingly aware of their environment, developing new ways of analyzing those aspects which have a direct bearing on them.

Basically, Ginzberg believes that the process of occupational decision-making can be divided into three periods: **fantasy**, **tentative**, and **realistic**. He further subdivides the **tentative** period into four stages: **interest**, **value**, **capacity**, and **transition**, and the **realistic** period into three stages: **exploration**, **crystallization**, and **specification**. The **fantasy** period occurs between six and eleven years of age and may carry over into early adolescence; the **tentative** period coincides with early and late adolescence; and the **realistic** period occurs in early adulthood. The **tentative** and **realistic** periods of which Ginzberg speaks would occur during the college years. Students who are unsure of themselves may test their tentative choice experientially through a service-learning opportunity.

Ginzberg and his associates note that, initially, a child's choices are arbitrary and lack reality, later he becomes aware of what he likes to do, and then cognizant of things he does more skillfully than others. An Associated Press article bears this out. Not one of the twenty-six Vicksburg, Michigan high school seniors who were asked "what they wanted to be when they grew up" in 3rd grade had the same choice nine years later. Such selections as "policeman" had changed to "chemist" while that of "veterinarian" had become "broadcaster" (Lansing, State Journal, May 24, 1979, p. B-2).

As Ginzberg puts it:

....By virtue of their age and limited knowledge and experiences, pre-adolescents and adolescents are unable to make a final decision about an occupation. Despite this fact, adolescents are forced to make a host of decisions which have relevance for their ultimate choice (Ginzberg, p. 73).

In time, the individual realizes that some activities have more intrinsic or extrinsic value than others. The **realistic** period begins with the **exploration** stage in which the young adult integrates his likes and dislikes in relation to his values and begins to implement tentative choices. It is at this point of job entry or early college years that feedback of vocational behavior is particularly important, according to Ginzberg. The results of this feedback lead to the **crystallization** phase and eventually to the **specification** stage. It is in this **exploration** stage,

that world of work experiences, whether paid or volunteer, will be of greatest value (Ginzberg, p. 95).

Ginzberg's statement of the problem which college freshmen face is as follows:

- . . .The deliberateness and concern with which the college freshmen group are exploring the various aspects of their choice arises out of several facts. Many are still undecided between strong interests; others have real doubts whether they possess the capacities to succeed in the field of their special interest; and almost all are conscious of their limited knowledge of the world of work.
- . . .They wanted to learn more about the external world, and instead of acquiring an insight into the reality of the marketplace, they are immersed in academic subjects which are related tenuously, if at all, to specific vocations . . . College, instead of answering questions, has added to them (Ginzberg, p. 101-105).

In 1972, Ginzberg made three conceptual changes in his original theory: 1) He modified his assertion that career decision making was done in adolescence or early adulthood and stated that it was a life-span phenomenon; 2) He modified his notion of irreversibility; and 3) He changed the concept of compromise to that of optimization.

In forming his theory of career development, Donald Super was influenced by the self-concept theory illustrated in the writings of Carl Rogers, H. D. Carter, and E. S. Bordin, who theorized that behavior is a reflection of an individual's attempt to implement his self-descriptive and self-evaluative thought (Osipow, p. 131). Charlotte

Buehler's writings in developmental psychology, which suggested that life consists of a series of distinctive stages, also influenced Super's work. Although he had been conducting research in the area of career development for many years, it was his criticisms of Ginzberg's conclusion that led Super to formalize his theory. In a statement to the American Psychological Association, in 1953, Ginzberg stated that choice of occupation was a result of a compromise between interest, needs, aptitudes, values, and external reality. Super did not concur with Ginzberg. Super's book, The Psychology of Careers, published in 1957, suggests that a person strives to implement his self-concept by selecting a career he views as the one most likely to permit him self-expression. He views career choice as a **developmental** process where vocational behaviors and decisions are a result of the particular stage of life development in which that person is at the time. He identified two of the major stages of career development as **exploratory** and **establishment**. Decisions are evaluated and modified by the following process: **formation, crystallization, specification, implementation, and stablization.**

Super notes that curriculum in the early years of high school and college is exploratory in content and purpose. Students try out different subjects which require different ability levels, and appeal to different interests, thus learning about themselves and occupational

opportunities. He observes that many students, even those in graduate or professional school, still need a great deal of orientation to themselves and their prospective fields of work. Believing that part-time and vacation jobs are primarily a means of earning money, rather than a means of exploration and orientation, Super recommends a volunteer or paid experience, in the intended field of interest, to provide this exploratory opportunity (Super, p. 88). Super describes the value of experiences such as ones offered through the Service-Learning Center, in the exploratory stage as follows:

. . . It provides youth with an opportunity to develop mature work habits . . . to mix with adults . . . try out adult roles and test the reality of his self-concept . . . only if part-time or vacation work experience has some bearing on the student's vocational aspirations and plans, does it provide him with the opportunity to test his aptitudes, interests, and skills to find out whether or not he likes that kind of work. . . . He learns about some of the kinds of situations in which that type of work is carried on, some of the kinds of people, equipment, activities and problems associated with that type of work (Super, p. 89).

David Tiedeman's concepts are built on the work of Super, Roe, and Ginzberg. He contends that:

. . . Career development is conceived as the process of fashioning a vocational identity through a differentiation and integration of the personality as one confronts the problem of work in living.

. . . The career affords both opportunity for expression of hope and desire and limitation upon life (Tiedeman, 1963, p. 4.)

Tiedeman notes that life is a progressive polarization between self and environment. Through a career, a person seeks to "accommodate the environment to suit himself while simultaneously being progressively incorporated by the environment." Thus, career development is a balance between self and the environment as the individual works out a synthesis between self and the reality opportunities and limitations of the world (Kroll, 1970, p. 17). Tiedeman and O'Hara state that career development is "part of the emerging cognitive structure of self in relation to the world" (Tiedeman and O'Hara, 1960, p. 16).

Tiedeman believes that career development consists of relevant personal experiences which fashion a "work identity" (Tiedeman, p. 2). Reflection upon the experience cannot change the event, but will change the meaning of the event for the person and will precondition future experience. As the service-learning volunteer evaluates the experience, he can decide whether he enjoyed the work, the environment, and those with whom he worked. This evaluation can help him to decide whether this field is the one for him, or whether he should seek additional experiences in other areas.

Tiedeman states:

....Career development is self-development viewed in relation to choice, entry and progress of educational and vocational pursuits (Tiedeman, p. 46).

....Thus a person continuously develops an attitude toward himself and his situation in life which is called ego identity. I am what I learn; I am what I do (Tiedeman, p. 12).

Tiedeman hypothesizes that those people, whose own meaning is most consistent with that found in the world of work, will find greatest satisfaction and success in their work (Tiedeman, p. 51). Vocational guidance, he feels, should be the catalytic agent which focuses these two worlds. He contends that early development of sameness and continuity takes place in the family and school environment, but that entrance into the world of work is "cold water shock". He would seem to be advocating a service-learning experience when he states, "Prior knowledge of the world of work must be introduced into the students' frame of reference" (Tiedeman, p. 55).

#### RECENT STUDIES AT SECONDARY AND POSTSECONDARY LEVEL

Various studies have been undertaken in recent years in the attempt to evaluate and measure the effect of career decision intervention programs on students at institutions at the secondary and postsecondary level. Some are of particular note for purposes of this study.

Heck and Weible (1978) examine first year college students' perceptions of career choice based on exploratory field experiences. They note that participants gained increased knowledge of self and an in-depth knowledge of a career. In a five phased project designed to determine more effective specific occupational programs at the

post-secondary level, Barnard (1978) identifies the advantages of allowing students the opportunity to sample specific job related experiences. Townsend (1981) describes a theoretical and programmatic model of career development at the University of Delaware, which contains a strong experiential component. This has been incorporated into the regular curriculum. At Greenfield Community College in Massachusetts, thirty interested freshmen participated in a 1973 six credit sociology-of-work course supplemented by extensive, full-time volunteer work placements. Of the 26 individuals who completed the course, 24 were helped substantially in focusing their occupational plans. Weaver (1980) describes a liberal arts career internship which helps students initiate early career planning and focus career decisions. At Radford University, a 1980 study by Millet and Dean reports that most students participating in experiential programs, with career awareness objectives, indicate successful and meaningful experiences, and a growth in career awareness. Lamb and McKay (1980) evaluated a cooperative education program which employs students full-time and part-time in fields directly related to their curriculum of study, during enrollment at a postsecondary institution. In general, the authors support the value of experiential programs at the postsecondary level. They identify personal growth and increased awareness of self and the world of work, as the positive effects on student participants. They also denote the value to the institution

of supplementing and augmenting the regular curriculum.

Several studies have been conducted at institutions where experiential programs were not available. Findings at Fitchburg State College, by the Merrimach Education Center, (1979) indicate that the concept of career guidance and how students receive information should be reexamined. Kessler's research (1980) demonstrates a critical need for more extensive data, both short and long range, on the career outcomes of college graduates and on those factors which affect those outcomes. Such data, she states, could be used by educators, employers and students in improving the relationship between education and work. Hoyt (1979) proposes an idealistic model of a comprehensive career education effort in an institution of higher education, while Roemer (1980) examines three social theories (status-competition, functionalism, and legitimation) to explain the growing interest among undergraduate students in pursuing studies which lead to occupational competence. Conclusions of each of these authors strongly support the value of an experiential program at the postsecondary level.

A large number of studies have been conducted of experience based programs at the high school level, with particular emphasis on EBCE (Experience Based Career Education) projects. Monkowski (1980) examined the final year of the Lincoln, Nebraska public school program focusing on the effect on students, and parent and community site evaluations. Pre-tests and post-tests using the Career

Maturity Inventory (CMI), the Intellectual Achievement Responsibility Questionnaire (IAR), and a locally developed survey measured student outcomes. Small increases were achieved (particularly on the IAR) in career awareness and information, self-awareness, career decision making and planning, application of learned skills to jobs, positive view of school and working, and good work habits.

Stead and others (1977) conducted a similar study of the Appalachian Maryland EBCE program involving an experimental and control group of twelfth grade students. Results on the CMI and the Watson-Glaser Critical Thinking Appraisal indicated substantial gains in career skills and career decision making, improved attitude toward education, and exemplary academic progress for the experimental group. In addition, strong community support for EBCE was noted. Bonnet and Richert (1980) conducted a third party evaluation of a career exploration course involving both classroom and site components. Data collection methods included teacher logs, and employer and student questionnaires. Results indicated that students gained career awareness and evaluated the experience as a positive one.

A Watertown, South Dakota (1978) evaluation of the EBCE program indicates that participants improved their self-concept, relationships with others and their basic skills. In addition, other objectives reached, to some degree, were greater understanding of job clusters and families, increased expertise in consumerism, and decrease

in sex role stereotyping. The report concluded that the program had the flexibility to meet the needs of adults in work exploration, guidance and counseling, and in basic educational skills.

Zumbrennan (1979) examined the extent to which 5th, 8th, and 11th grade students reported involvement in career education activities and their attitudes toward these activities. Research instruments used included a locally developed instrument designed to measure student self-report of involvement in and attitude towards particular activities (SII), a standardized measure of self-concept (SOS), and the Stanford Achievement Test (SAT). Treatment included three types of career education activities: cognitive, simulated, and experiential. Results indicated that younger students preferred experiential activities, while older students preferred cognitive activities. High self-acceptance was related to positive attitudes toward career activities. Academic achievement was not significantly related to the students' liking of the three types of career educational activities.

Troyer (1975) outlines a high school program in Ohio for eleventh and twelfth grade students interested in engineering careers. This program included career guidance and investigation in class activities as well as field experiences. Miller and others (1975) describe a similar program in the area of health careers.

With the rise of the women's movement and the

increase of both men and women in non-traditional occupations, a number of studies have focused on sex differences in career decision making. At West Virginia University, Markiewicz (1979) compares the effectiveness of the use of Holland's Self-Directed Search, a decision making program, and a vocational tour on the career development of high school students. The study analyzes and evaluates the trait factor, developmental, and exploratory theoretical approaches to career counseling. The sample consisted of male and female tenth grade applicants planning to enroll in vocational training curriculum. A pre-test, treatment, post-test design was used with the effect on career development evaluated by the American College Testing Program's Assessment of Career Development and Rosenberg's Self-Esteem scale. Results indicated that the decision-making treatment lowered self-esteem, compared to the other treatments, and provided more certainty of choice than the exploration treatment. The self-directed search participants were more apt to change their choice than the exploration participants. Results were different for males than for females for each treatment, and the exploratory treatment seemed to increase the involvement in non-traditional areas.

In a paper presented to the conference for Educating Women in Science, Hanson (1975) observes that women need more "exposure to non-traditional fields". Jackson's (1980) research with academically gifted females concurs.

Identifying career innovators as those women who plan to enter a career in which zero to 40 percent of women are presently employed, Veres and Moore (1975) concluded that role-innovative women had higher grades, made more recent career choices, aspired to higher degrees, were less apt to marry before completing their education, wanted to have fewer children, planned a wider range of careers, were less likely to cite closeness to home as the reason for choosing their college, and reported more problems with their colleges than non-innovators. Non-innovators were defined as those women who plan to enter careers in which 70 to 100 percent are women. Green's (1979) research with women enrolled in a Wisconsin apprentice training program identified a number of factors which encourage women to enter a non-traditional occupation. These include: challenge, variety, learning, feeling of pride and self-worth, a sense of accomplishment, and the work itself. Discouraging factors include: working and safety conditions, lack of supervisory feedback, and personal concerns, such as housework and child care responsibilities.

Thomas and others (1980) studied a short term educational program designed to help women overcome personal-social barriers to enter into non-traditional occupations. Twenty women from each of three community/junior colleges were surveyed using the Survey of Women's Attitudes About Careers. Based upon survey findings, a treatment was designed addressing decision

making, goal setting, self-knowledge and career opportunity awareness. Post-tests and follow-up interviews analyzed the changes made by the participants as a result of setting specific goals, encountering problems, and the amount of support received from family and friends. The author concluded that the program assisted women in setting career goals, in entering the non-traditional occupations, and in changing stereotypical attitudes.

Results of a study of 1500 college students by Harren (1979) indicate that gender and sex role attitudes continue to restrict student career options. Of particular relevance to this study is the result that work related field experience generally makes one less optimistic about one's future. A 1979 study by Alden, administered to 1470 students at 16 Illinois Community colleges, supports the contention that occupational sexism is a result of long-standing stereotypes of role expectation. Respondents classified few occupations along racial lines, but many did so according to sex.

In studies, conducted in postsecondary and secondary vocational-technical schools, which compared women in traditional, mixed, and non-traditional occupations, Kane (1978) concludes that interest is the major reason for selecting a non-traditional occupation. Career education, career orientation and job site visitation were considered the most useful counseling techniques. Little (1974) found that interest in non-traditional occupations could be

increased through an awareness program in which reinforcement was provided by a male counselor. A year long project by the Research Foundation of the State University of New York at Albany (1979) was designed to encourage women to enter non-traditional fields. It included an academic course which demonstrated possibilities for competence, success, and job satisfaction for women in non-traditional careers and identified role models, intensive advisement by female faculty members, and career exploration. Results indicated a significant increase in self-esteem in the participants in the experimental group over the control group. No overall significant difference in career attitude or expectations between the experimental and control groups was found, however. Sauter's research (1980) indicates that increased information, work experience and unbiased counseling influenced the choice of freshmen college women toward both traditional and non-traditional careers.

In an attempt to keep women from dropping an already selected non-traditional career, the Department of Freshmen Engineering at Purdue University developed a model career preparation program for women in the first year of an engineering program. Lebold (1978) evaluates this program. It includes a course designed to provide engineering and career information, and offers a practical experience for the participants. Results have assisted the school in revising the program to better meet student needs.

Generally, researchers identify that the important

factors in career choice and decision making are an awareness of self and the opportunities available in the world of work, and an understanding of how the two "mesh" together. This is particularly true in the case of men or women choosing careers which are not traditional for their genders.

### SUMMARY

In Chapter II, a review of the four major schools of thought on career decision making has been presented. The trait factor approach (Parsons) states that problems of vocational choice can be solved by matching the individual's abilities and interests with vocational opportunities; the sociological model (Reeb, Miller and Form) considers that fate or chance make that choice for the individual. Advocates of the personality theory (Roe, Holland) believe that counselors can assist individuals in making career choices by analyzing the individual's personality and matching it with the personalities of those already in a specific field. Those favoring the self-concept approach (Buehler, Ginzberg, Super, Tiedeman) declare that successful career choice can occur when an individual's self-concept correlates with the vocational concept of the selected career.

These four schools of thought are not incompatible or contradictory. Rather, they are overlapping and similar in many respects, and actually build upon each other. This study will involve and examine applications of each of these

approaches.

In addition, Chapter II has included a review of a number of studies which have analyzed the effect of exploratory field experiences and various career education efforts at the secondary and postsecondary levels. A number of these studies have focused on those involved in non-traditional areas. Findings indicate that participants in these programs have grown in self-esteem, career opportunity awareness, career decision making and planning, and in the application of learned skills to the job. Although these studies would suggest that the experience results in a change of stereotypical attitudes, in some cases it has served as a reality shock which destroys the illusion and as Harren (1979) noted "makes one less optimistic about one's future."

Chapter III will include the description of the design of this study denoting the population to be studied, the instrument to be used, the method of data collection, and the means by which this data will be analyzed.

### CHAPTER III

#### DESIGN OF THE STUDY

This chapter describes the design of the study including: the population studied, the instruments used, the method by which the data were collected, and the statistical means by which they were analyzed.

##### Population

The subjects of this study were all of the Michigan State University students who participated between September, 1977 and July, 1981 in Service-Learning experiences provided by the Service-Learning Center (SLC), a division of Student Affairs. Placements varied from three to twenty hours per week; commitments ranged from one to three terms during the academic year.

The potential volunteer was made aware of the services which the Center could provide through faculty members, academic advisors, college orientation material, classroom presentations, other students, and the media. Students could volunteer through the SLC for non-credit experience(s) as well as arrange for credit through academic departments. In addition, in cooperation with the academic units, the SLC had developed optional and required experiential components for courses, and placements which would assist students in fulfilling the experiential requirements necessary for entrance into a major. Students could participate in one of fifty major programs or 200 special requests developed by the Center in the areas of aging, business, communication,

corrections, education, government, health, mental health, nutrition, recreation, science and special education. These placements provided the participants with the opportunity to work in schools, hospitals, mental health centers, community service agencies, businesses, correctional institutions, and governmental offices.

Each of the participants visited the Service-Learning Center at the beginning of a term. A staff advisor provided information regarding the scope of programs available and assisted the student in the selection of a placement appropriate to the stated need. Potential volunteers were given program description sheets, color coded by area of involvement, which specified time commitment, required qualifications, major suitability, which skills could be developed, and whether or not transportation was provided. The Program Description Sheet also included a program overview, job descriptions of all areas of involvement, and an explanation of the orientation and placement process. After students filled out an SLC application, and attended the orientation, they were referred to the program of their choice and proceeded with the placement process. If they met the placement criteria, they were assigned for a one to three term commitment in the selected program.

The subjects for this study included all of the students who were assigned to and participated in a service-learning experience during an academic year between September, 1977 and July, 1981. (Table 1). The size of the

population studied was 10,620 students.

**TABLE 1**  
**FOUR YEAR REVIEW OF STUDENT PARTICIPATION**

|                               | <u>1977-78</u> | <u>1978-79</u> | <u>1979-80</u> | <u>1980-81</u> |
|-------------------------------|----------------|----------------|----------------|----------------|
| Referrals<br>Academic<br>Year | 3,105          | 3,470          | 3,805          | 3,895          |
| Assigned<br>Academic<br>Year  | 2,445          | 2,600          | 2,762          | 2,813          |

Instrumentation

During 1978, the staff members of the Service-Learning Center familiarized themselves with the broad spectrum of theories of career development. They devised questions which would provide demographic information about the participants in the experiential programs and identify the students' perceptions of the relationship of these experiences to selected measures of career development.

Demographic questions requested the following information: age, class level, sex, college, and major. Additional questions asked the volunteer to identify the program in which he was involved, in which term(s) he volunteered, how he learned about the Center, and whether or not his participation fulfilled an academic requirement. The student was asked to identify his motivation for becoming involved, and how the experience had affected his career plans, major selection and the rest of his university

experience. A number of questions asked the volunteer to identify his perception of the value of the experience in relation to career awareness and career preparation. Finally, the student was asked to evaluate the services and the experience itself.

An optical scan computer card survey instrument was developed in 1978, in conjunction with the Michigan State Social Science Research Laboratory. (Appendix A) Utilization of this instrument provided for a swift analysis of the data. The survey was expanded to two cards for the 1980-81 academic year, to allow space for asking additional questions regarding the use of skills, and personal growth and development. (Appendix B)

At the midterm point of spring term of 1978, a survey card was mailed to each of the individuals who participated in a volunteer experience during the 1977-78 academic year. Included were a personal letter to the student indicating the importance of the survey and the necessity of a prompt response, and a pre-addressed envelope with return postage guaranteed. This effort was repeated for the 1978-79, 1979-80, and 1980-81 academic years. Table 2 provides a review of the total number of volunteers assigned each year, and the number of surveys sent out, delivered, returned undeliverable, and returned completed. It is important to note that the surveys were sent out shortly after midterm during Spring term in each of the four years. There were additional volunteers placed after the surveys were sent out

and this accounts for the differences in the number of volunteers placed and the number of surveys sent out. Over the four year period, 4308 completed surveys were returned. This represents a total return rate of 41.62%.

**TABLE 2**  
**FOUR YEAR REVIEW OF SURVEY RETURNS**

|                                                                 | <u>1977-78</u> | <u>1978-79</u> | <u>1979-80</u> | <u>1980-81</u> | <u>Four Year<br/>Total</u> |
|-----------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------------------|
| Number of<br>Assigned<br>Volunteers                             | 2,445          | 2,600          | 2,762          | 2,813          | 10,620                     |
| Number of<br>Surveys<br>Sent Out                                | 2,445          | 2,544          | 2,687          | 2,720          | 10,396                     |
| Number of<br>Question-<br>naires<br>Returned Un-<br>deliverable | 0              | 0              | 30             | 14             | 44                         |
| Number of<br>Question-<br>naires<br>Delivered<br>to Students    | 2,445          | 2,544          | 2,657          | 2,706          | 10,352                     |
| Number of<br>Completed<br>Question-<br>naires<br>Returned       | 1,013          | 1,041          | 1,162          | 1,092          | 4,308                      |
| Percent<br>Returned                                             | 41.43%         | 40.92%         | 43.73%         | 40.35%         | 41.62%                     |

### Statistical Analysis

When the completed surveys were received, they were grouped together and numbered by program. Handwritten comments from each card were noted by program. Each year, information from these cards was computer tabulated by program as well as grouped collectively. Answers to each question were displayed by count (frequency distribution) and percentages (relative frequency, adjusted frequency, and cumulative frequency). The relative frequency column included a percentage for blank answers; the adjusted frequency column excluded blank answers. For questions requiring answers on a continuum, the cumulative frequencies were displayed as positive and negative groupings. The mean and median for each set of frequency distributions were also calculated.

The data were analysed through a statistical technique known as the analysis of variance (ANOVA). This technique is used to determine whether the differences among two or more means are greater than would be expected by chance alone. It allows us to test the hypothesis that the several populations of interest have the same mean on the variable of interest. The use of the ANOVA technique decreases the probability of a type-I error than would be the case if multiple t-tests were conducted.

The analysis of variance which was developed by the English statistician Sir Ronald Fisher about fifty years

ago, permits the control of alpha ( $\alpha$ )<sup>1</sup> at a predetermined level when testing the simultaneous equality of a number of means (Hopkins, 1978, p. 333) The omnibus hypothesis is:

$$H: u_1 = u_2 = u_3 = \dots u_J$$

where J is the number of groups. In ANOVA, all differences for all pairs of J means are examined at the same time to determine whether one or more means deviate significantly from one or more of the other means. The analysis of variance evaluates whether there is any systematic (non-random) difference among the set of the J means.

The ANOVA utilizes the sums of squares (SS) in testing the null hypothesis. The total sum of squares is decomposed or subdivided into the sources of the variation. Some of the sum of squares are due to the differences between group means; some are the result of differences among the observations within the groups.

$$SS_{\text{total}} = SS_{\text{between}} + SS_{\text{within}}$$

The formula for the sum of squares resulting from the differences between group means is  $SS_B = \sum n_j d_j^2$ , where  $n_j$  is

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<sup>1</sup>When testing whether or not a statistical hypothesis is tenable, the degree or risk of a Type-I error must be specified. This risk, stated as a probability, is denoted as "alpha" ( $\alpha$ ) and is called the level of significance. Setting ( $\alpha$ ) at .05 means that we are willing to take a 5% risk of a Type-I error (rejecting a null that is true).

the number of observations in group  $j$ , and  $d_j$  is the effect of treatment  $j$ , or more simply, the difference in the mean of the group and the grand mean.

The sum of the squares within groups is obtained through the following equation:

$$SS_W = SS_{total} - SS_B$$

When a sum of squares is divided by its degree of freedom, a variance estimate is obtained. In an ANOVA, the ratio of two independent variance estimates is utilized. The total sum of squares is determined and divided into two independent portions,  $SS_B$  and  $SS_W$ . Each of these portions is then divided by its respective degrees of freedom to obtain variance estimates called mean squares. The ratio  $MS_B/MS_W$  is called the F-ratio. When the null hypothesis is true these mean squares are approximately equal, and the expected value of their ratio ( $F$ ) is approximately 1.0. When the population means are not equal, the numerator will tend to be larger than the denominator, and the F-ratio will be greater than 1.0. A table containing the critical values of  $F$  for various levels of significance is contained in most statistics books. Every  $F$  distribution is defined by two sets of degrees of freedom, one for the numerator and one for the denominator. The critical value for  $F$  at the predetermined level of significance is located at the intersection of the two columns. When the observed F-ratio

is greater than the critical F-ratio, the null hypothesis may be rejected.

In this study, the ANOVA technique was used to examine whether students' perceptions of the effects of the volunteer experience were different for different class levels, age levels, genders, and ethnicities. A separate null hypothesis was established and examined for each question regarding academic requirements, volunteer motivation, and the effect on career plans, major selection, career awareness, career preparation, personal awareness and development, and use of skills in relation to age, class, gender, and ethnicity.

For the following null hypothesis:

The motivation for applying for a volunteer position to gain experience in a career field is the same for each age group

the F-ratio was computed and compared to the critical F-ratio at .05 level of significance at the degrees of freedom corresponding to  $SS_B$  and  $SS_W$ . If the F-ratio was less than the critical F-ratio, then the null was tenable.

$H_0 = u_1 = u_2 = u_3 = u_4 = u_5 = u_6$  (where  $u$  is the mean of the answers in the first year)

If the F-ratio was greater than the critical F-ratio, then the null was rejected. It did not necessarily follow that

$$u_1 \neq u_2 \neq u_3 \neq u_4 \neq u_5 \neq u_6$$

Perhaps  $u_1 > u_2 = u_3 < u_4 = u_5 = u_6$  : If we rejected the null,

the alternate hypothesis which we accepted was that:

The motivation for applying for a volunteer position to gain experience in a career field differs by age group.

For purposes of statistical manipulation, the races were grouped into two groups: white and minority. In addition, the participants were grouped in two ways by age. In the first instance, the examination was carried out by utilizing the six age levels as noted on the survey form (i.e., 19 or younger, 20, 21, 22, 23-25, and 26 and over). In the second instance, the participants were grouped into two groups: those who were appropriate to their class level and those who were not. Thus, by reducing the number of groups to two, we increased the impact of the null rejection. The rejection of a null stating that the motivation to apply for a volunteer experience to gain independent study/internship/field experience credit was the same for whites as minorities allowed us to conclude that this motivation was not the same for whites and minorities. The same conclusion could be drawn in the case of males and females, and for those whose age was appropriate to their class level and those who were not.

Another way in which the data from this descriptive study were examined was through the construction of cross tabulation tables. This approach is particularly useful in bivariate correlation studies where an attempt is made to

show that two or more variables are related. The variable which may be influencing the other is known as the independent variable; the variable which may be influenced by the other is known as the dependent variable (Twaite and Monroe, 1979, p. 86). Thus, for example, whether or not the participants' volunteer work was recommended or required by an academic unit was cross tabulated by six age groupings. Traditionally, it is the custom that the independent variable is the column variable, and the dependent variable is the row variable. The subjects falling into the various categories of the independent variable are examined separately in order to determine how subjects in each of these categories distribute over various values of the dependent variable. As many conditional distributions as there are values of the independent variable are considered and expressed as relative frequency distributions. (Table 3 shows an example of a cross tabulation analysis table)

**TABLE 3**

CROSS TABULATION  
OF "REQUIRED BY AGE"

|                 | AGE                      |           |           |           |              |                        | ROW<br>TOTAL |
|-----------------|--------------------------|-----------|-----------|-----------|--------------|------------------------|--------------|
|                 | <u>19 or<br/>younger</u> | <u>20</u> | <u>21</u> | <u>22</u> | <u>23-25</u> | <u>26 or<br/>older</u> |              |
| REQUIRED<br>YES |                          |           |           |           |              |                        |              |
| NO              |                          |           |           |           |              |                        |              |
| COLUMN<br>TOTAL |                          |           |           |           |              |                        |              |

In each cell, the frequency, row percentage, column percentage, and total percentage are listed in order. In addition, the column and row totals are given.

For this particular example, the null hypothesis is:

Age has no effect on whether or not volunteer work was recommended or required by an academic unit.

$$H_0 : u_{10} = u_{11} = u_{12} = u_{13} = u_{14} = u_{15} = u_{16}$$

The alternate hypothesis is that age does have an effect on whether or not volunteer work was recommended or required by an academic unit.

$$H_a : u_{10} \neq u_{11} = u_{12} \neq u_{13} = u_{14} \neq u_{15} \neq u_{16}$$

The level of significance of  $\alpha = .05$  is established to separate the rejection and acceptance regions in each analysis. That is, the null hypothesis will be rejected in favor of the alternative if the level of significance is less than .05. This means that there is a 5% chance of making a Type-I error<sup>2</sup> or rejecting the null when it is true.

The Chi Square statistic and Kendall's Tau statistic were also used to examine the data.

In each case, the degrees of freedom must be determined. For the example given above, the degrees of freedom would be 5, calculated using the following formula:

---

<sup>2</sup>A Type-I error is defined as the error which occurs when a null hypothesis that is true is rejected. It may be likened to convicting an innocent man. The probability of a Type-I error is denoted by the Greek letter  $\alpha$ .

degrees of freedom =  $(R - 1)(C - 1)$  where  $R$  = the number of rows and  $C$  = the number of columns

$$df = (2 - 1)(6 - 1) = 5$$

Chi Square was calculated using the following formula:

$$\chi^2 = \sum \sum \frac{(O - E)^2}{E}$$

where  $E$  is the number of frequencies we would expect to find assuming there was no relationship at all between the two variables, and  $O$  is the number of observed frequencies.

For each analysis, the Chi Square statistic was computed and compared with the critical value of Chi Square as listed on the chart at that degree of freedom and at that level of significance already predetermined (for this study that level was .05). If the value of the calculated Chi Square was greater than the critical value set by the table at that degree of freedom and level of significance, then we rejected the null and accepted the alternate hypothesis.

In another effort to determine the degree of relationship between two variables, the statistical measure Kendall's Tau was used. Kendall's Tau ( $\tau$ ) is a correlational coefficient which requires the use of rankings rather than absolute values of variables in the computation of the coefficients. Kendall coefficients are somewhat more meaningful when the data contain a large number of tied ranks and when a fairly large number of cases are classified into a relatively small number of categories. The general formula for tau is:  $\tau = \frac{S}{\sqrt{2N(N-1)}}$

where  $S$  is computed by comparing the ranking of one variable with the number of pairs of rankings of a second variable, which are all arranged in their correct or natural order, when they are sorted according to the natural order rankings of the first variable.  $N$  is the number of observations or cases.

$S$  is then computed by beginning with the observation ranked on the first variable and counting the number of ranks on the second variable. Once this has been completed, the number of ranks below this observation, which are smaller than its rank on the second variable, are subtracted from the first quantity. This procedure is repeated for all ranks, resulting in a sum of remainders which is equal to the statistic  $S$ . The computed or actual  $S$  is then divided by the maximum possible  $S$  which would have been obtained with that number of rankings had the two sets of rankings been in total agreement. The computations were carried out by computer at the Social Science Research Laboratory on a software package entitled Statistical Package for the Social Sciences developed by the Vogelback Computer Center at Northwestern University.

In addition to the cross tabulation table example provided above, the following additional bivariate analyses were carried out:

|                                   |   |                 |
|-----------------------------------|---|-----------------|
| Major selection                   | ) |                 |
| Importance to Career Awareness    | ) |                 |
| Importance to Career Preparation) |   | by age, class   |
| Use of Various Skills             | ) | level, sex, and |
| Overall Rating                    | ) | ethnic origin   |

Summary

This chapter has contained a description of the design of the study including: the population studied, the instrument used, the method by which the data were collected, and the statistical tools with which they were analyzed. Chapter IV will include the results of the study including demographic information regarding volunteer participants over the four year period, cross tabulation tables of their perceptions of the effects of the experience including Chi Square and Kendall's Tau statistics and level of significance.

**CHAPTER IV**  
**ANALYSIS OF THE RESULTS**

**Introduction**

During the 1977-78, 1978-79, and 1979-80 academic years, a computer card survey instrument was mailed each year to every student who participated in a service-learning experience provided by the Service-Learning Center at Michigan State University. (Appendix A). Each survey contained demographic questions, as well as ones relating to career awareness, career preparation, career decision making and major field selection. During 1980-81, the survey instrument was expanded to two cards to allow space for additional questions regarding personal values and skills. (Appendix B). Over the four year period, 10,352 surveys were delivered to participants. Four thousand three hundred eight surveys were completed and returned, representing an overall return rate of 41.62%.

**Methods of Data Analysis**

The analysis of data from each of the surveys was accomplished by means of optical scan, using the Statistical Package for the Social Sciences (SPSS) as adopted for the CDC 6500 computer at Michigan State University. Answers to each question were computer tabulated by count (absolute frequency) and percentages (relative frequency). The relative frequency was determined by dividing the absolute frequency by the total number of observations. Tables were constructed to assist with the data analysis showing the

frequencies for each variable, by year, along with the calculated means. They appear in Appendix C as numbered tables, and will be cited in the appropriate places in the narrative.

Analyses of the demographic information provided by the participants regarding gender, age, and class level were carried out by comparing absolute frequencies and calculating the means and standard deviations. The differences were well within the established .05 level of significance. Therefore, we could conclude that there were no appreciable demographic differences between the participants during these years. A decision was made to list the results of each question by year, but also to group these results over the four year period.

In addition, the construction of cross tabulation tables provided a means of determining the correlation between two variables. The narrative which follows will refer to these tables, noting the variables which are involved, the data manipulations which were conducted, and the nature of the statistical information which resulted.

#### Analysis of Demographic Information

Over the four year period from 1977-1981, the total number of respondents consisted of 1,224 males (28.9%) and 3,017 (71.1%) females. (Table 1). The gender ratio of all participants during this period was 3,219 (31.1%) males to 7,133 (68.9%) females. Female participants were more likely to return the survey than were their male counterparts.

There were 1,242 (29.1%) respondents who were nineteen or younger; 1,147 (26.9%) age twenty; 913 (21.4%) age twenty-one; 469 (11.0%) age twenty-two; 325 (7.6%) age twenty-three to twenty-five; and 165 (3.9%) age twenty-six or older. (Table 2).

Analysis of the respondent involvement by class indicated that there were 760 (17.7%) freshmen; 1,142 (26.6%) sophomores; 1,273 (29.6%) juniors; 913 (21.2%) seniors; 116 (2.7%) graduate students; 33 (.8%) special students; and 64 (1.5%) non-students. (Table 3).

The question regarding ethnic origin was asked only of 1980-81 volunteers. Results of that year's survey showed that 34 individuals (3.1%) were Black; 8 (.7%) were Oriental; 1,000 (91.6%) were White; 16 (1.5%) were Native American; 10 individuals (.9%) indicated other ethnic origin; and 17 persons (1.6%) left that question blank. (Table 4). The actual Michigan State University enrollment figures for 1980-81 indicate a total minority population of 7.17%, of which 5.3% were Black, .79% were Hispanic, .25% were Native American, .81% were Asian or Asian American. An analysis of the ethnic origin of participants in Service-Learning Center opportunities for 1980-81 shows a 5.65% minority involvement, including: 4.05% Black, .75% Hispanic, .25% Native American, and .60% Asian/Asian American. These figures indicate that while the 1980-81 minority involvement in Service-Learning Center participation was slightly less than the minority enrollment ratio

at Michigan State University, the minority survey response rate was higher than non-minority response rate.

There were 1,815 (42.1%) persons who participated during fall term; 2,536 individuals (58.9%) during winter term; and 2,750 (63.8%) during spring term. Multiple answers were allowed for this question because it was known that many persons participated during more than one term. This fact was emphasized by the answers to the question regarding the number of terms in which the volunteer participated. There were 1,738 (40.3%) who indicated that they had volunteered for one term; 1,194 persons (27.7%) who had participated for two terms; 680 individuals (15.8%) who were involved for three terms; 209 persons (4.9%) who participated for four terms; and 449 persons (10.4%) who participated for five terms or more. An examination of Tables 5 and 6 will show that this pattern of participation was consistent over the four year period.

To the question regarding how they had learned about the opportunity, the participants responded as follows:

|              |                                       |
|--------------|---------------------------------------|
| 922 (21.4%)  | Read it in the college newspaper      |
| 856 (19.9%)  | First heard about it in the classroom |
| 134 (3.1%)   | Saw a Poster                          |
| 496 (11.5%)  | Were told by their advisor            |
| 1250 (29.0%) | Heard through friends                 |
| 105 (2.4%)   | Heard about it in the dorm            |
| 5 (.1%)      | Heard it on the radio                 |

|            |                                         |
|------------|-----------------------------------------|
| 31 (.7%)   | Were spoken to by a student coordinator |
| 59 (1.4%)  | Read a brochure                         |
| 409 (9.5%) | Learned through other means (Table 8).  |

### **Participants' Perception of the Effect of the Experience in Academic and Career Areas**

When the MSU Service Learning Center began in 1972 as the Office of Volunteer Programs, it was in a climate of altruism. Over time, however, the focus of student participation and that of the sponsoring Department of Student Affairs evolved to one of increased emphasis on career development and awareness, and closer coordination with the academic units. Therefore, an analysis of the participants' perception of the effect of the experience on academic and career related areas was considered crucial to the program's continued existence and to future program development.

Participants were asked to identify the relationship of the participation in a Service Learning opportunity to their academic program. There were 572 (13.3%) who reported that it was a course requirement or option; 322 (7.5%) stated that it had been suggested by their professor or instructor; 454 (10.5%) were encouraged to participate by their advisor; for 458 persons (10.6%), the participation was required for admission into their major; and for 249 individuals (5.8%), the involvement was required as part of

their major. (Table 9).

The motivation(s) of the individual to become involved in a Service-Learning opportunity were of great interest to those responsible for developing and providing these opportunities. Because the literature supported the notion that people are motivated to act in specific circumstances by a number of reasons, not just one, multiple answers were allowed on the question regarding motivation. Results of the 1977-80 surveys indicated that the primary motivations were to gain experience in a career field and to help people. (Table 10). Specific results over this three year period were as follows:

- 11.8% (381 persons) participated to gain course credit;
- 15.8% (508 persons) got involved to gain admission into their major;
- 60.8% (1,956 persons) were motivated by a desire to help people;
- 68.1% (2,191 persons) wanted to gain experience in their career field;
- 50.5% (1,624 persons) wanted to develop skills;
- 34.9% (1,125 persons) wanted to meet people;
- 12.2% (391 persons) wanted to have something to do;
- 15.6% (503 persons) sought to develop job contacts;
- 9.6% (310 persons) indicated that they had other reasons.

During the 1980-81 academic year, the wording of the question was altered to provide additional information.

Again the results showed that the two major motivations were to gain experience in a career field and to help people. (Table 11). This time, participants indicated that another important motivation was to explore a possible career choice. Specific results from the 1980-81 survey were as follows:

- 13.6% (148 persons) participated to complete part of a course requirement;
- 21.3% (233 persons) sought to gain independent study, internship, or field experience credit;
- 12.3% (134 persons) participated to help gain admission into their major;
- 14.1% (154 persons) were using this experience to help gain admission into graduate or professional school;
- 48.5% (530 persons) sought to explore a possible career choice;
- 66.9% (731 persons) wanted to gain experience in a career field;
- 27.0% (295 persons) looked to develop professional contacts;
- 68.4% (747 persons) wanted to help people;
- 32.1% (351 persons) wanted to socialize with others;
- 19.4% (212 persons) needed to have something to do in their leisure time;
- 11.7% (128 persons) had a motivation that something other than one of those choices specified.

A total of 2,220 participants (51.5%) noted that the experience had no effect on their major selection, while 1,457 participants (33.8%) reported that it affirmed their

major selection. Of particular importance, however, was that 175 persons (4.1%) reported that they **changed** their major as a result of the experience, while 404 participants (9.4%) indicated that the experience caused them to **consider changing** their major. (Table 13). In addition, 1,504 respondents (36.5%) believed that the experience helped to make some of their courses more meaningful, while 984 persons (23.9%) felt that their participation helped them to identify courses which would be useful to their career. In response to additional questions posed in the 1980-81 survey, 311 students (33.3%) indicated that the experience affected their motivation to learn, participate and achieve in classes; 495 students (53.1%) felt that they were able to apply coursework knowledge and skills to the community, and 405 persons (43.4%) were able to apply community knowledge and skills to their coursework. There were 1,672 participants (40.6%) who indicated that their involvement necessitated better time planning, while 524 persons (12.7%) reported having difficulty keeping up in their classes because of time spent volunteering. (Table 14).

A review of the participants' perception of the effect of the experience on their career plans revealed that 1,654 persons (38.4%) reported that the experience had no effect, while 1,824 persons (42.3%) noted that the experience affirmed their previous career choice. (Table 12). A number of questions asked the participants to rank the importance of the experience on a continuum in a number of

areas of career awareness and preparation. Complete results by year appear in Appendix C as Tables 15-21. The answers of "extremely important" and "somewhat important" were recorded as positive answers; answers of "of little importance" and "of no importance" were considered as negative answers. The percentage of positive answers for the four year period was as follows:

- . Support from other for Career Decisions 55.0% positive
- . Broader knowledge of Career and Job Requirements 69.9% positive
- . Focused (Narrowed) Career Choices 44.5% positive
- . Gained Awareness of Relationship Between Job Requirements and Personal Values 74.3% positive
- . Gained First Hand Exposure to Work Environment 74.9% positive
- . Became Known to People in Their Field Who Could Recommend Them to Potential Employers 34.6% positive
- . Became Aware of How Education Experience is Serving as Preparation for Career 63.8% positive

These statistics would support the conclusion that students perceived that the experience was important to the development of their career awareness and preparation and provided a link between education and the world of work.

### Participants' Rating of Services Provided

Participants over the four year period were asked to rank their level of satisfaction with various services provided by the Service Learning Center Staff and those provided by the agency staff at the volunteer site. Answers of "very satisfied" and "satisfied" were considered to be positive answers; answers of "dissatisfied" and "very dissatisfied" were considered to be negative answers. Complete results appear in Appendix C, Tables 22-32. The level of positive answers over the four year period was as follows:

|                                          |                |
|------------------------------------------|----------------|
| . Helpfulness of staff                   | 90.0% positive |
| . Accurate Job Descriptions              | 88.2% positive |
| . Adequate Orientation                   | 74.0% positive |
| . Adequate Transportation                | 64.1% positive |
| . Contact with Student Coordinator       | 65.8% positive |
| . Helpfulness of Agency Staff            | 80.5% positive |
| . Adequate Supervision at site           | 80.0% positive |
| . Adequate training at site              | 68.6% positive |
| . Meaningful Tasks to Do                 | 73.4% positive |
| . Acceptance and Support by Agency Staff | 84.4% positive |
| . Recognition of Efforts by Agency Staff | 79.9% positive |

Participants gave the experience an overall 86.8% positive rating over the four year period. Ratings of

excellent and good were considered positive; ratings of fair and poor were considered negative. (Table 33).

During the first three years of the survey (1977-80), 50.5% of the respondents had indicated that their motivation for participating in a service-learning experience was to develop skills. Therefore, it was decided to include a question on the use of skills in volunteer work as part of the 1980-81 survey. Respondents were asked to note on a continuum the degree of occurrence of the use of skills with 5 representing "very often", 4 representing "fairly often", 3 "sometimes", 2 "rarely" and 1 "never". The entire results are included in Appendix C, Table 34. The mean and standard deviation for each item were calculated. A review of the results is as follows:

| <u>SKILL</u>                                                                                          | <u>MEAN</u> | <u>STANDARD<br/>DEVIATION</u> |
|-------------------------------------------------------------------------------------------------------|-------------|-------------------------------|
| . Research and Investigation<br>(To Question, seek knowledge<br>and search for data)                  | 2.76        | 1.496                         |
| . Communication and Persuasion<br>(To express knowledge and<br>ideas to others)                       | 3.71        | 1.177                         |
| . Organizational Management<br>(To administer others, guide<br>or direct groups to complete<br>tasks) | 2.82        | 1.440                         |
| . Design and Planning<br>(To image the future and<br>design plans or programs)                        | 2.39        | 1.360                         |
| . Information Management<br>(To organize data and<br>knowledge in writing)                            | 2.33        | 1.421                         |
| . Technical and Manual<br>(To manipulate objects or<br>the physical environment)                      | 2.56        | 1.405                         |

These statistics, in which the means are located between "sometimes" and "fairly often", would indicate that the skill which participants used most was Communication and Persuasion. Participants also indicated some degree of use of the skills of organizational management, research and investigation, and technical and manual in their experiences, with little use of design and planning and information management.

Additional questions were asked on the 1980-81 survey regarding the students' perception of the effects of the experience on personal growth and development. The entire results appear in Appendix C, Table 35. A summary of the items in which a majority of respondents noted that the experience affected them is as follows:

|                                                                                   |       |
|-----------------------------------------------------------------------------------|-------|
| . Improved Communication Skills<br>(Listening, articulating,<br>presenting ideas) | 69.2% |
| . Increased Awareness of Skills                                                   | 66.0% |
| . Developed Awareness of<br>Situational/Personal Dif-<br>ferences in Others       | 61.8% |
| . Increased Awareness of Values                                                   | 61.1% |
| . Developed Self-Confidence                                                       | 60.0% |
| . Gained Personal Feeling of<br>Success and Self-Accomplishment                   | 57.8% |
| . Increased Acceptance of Dif-<br>ferences of Others                              | 51.9% |

Thus, one may conclude that the participants perceived that the experience made a significant impact on their personal growth and development.

**Examination of the Relationship Between Variables  
by Chi Square and by Kendall's Tau**

The approach which was used to examine the relationship between variables involved the construction of cross tabulation tables. Traditionally, the variable which may be influencing the other is known as the independent variable and is shown as the column variable; the variable which may be influenced by the other is known as the dependent variable and is shown as the row variable in the table. The subjects falling into the various categories of the independent variables are examined separately in order to determine how subjects in each of these categories distribute over various values of the dependent variable. As many conditional distributions as there are values of the independent variable were considered and expressed as relative frequency distributions. For each analysis, the Chi Square statistic was computed and compared with the critical value of Chi Square, for that degree of freedom at a .05 level of significance. In addition, Kendall's Tau correlational coefficient was computed. For each cross tabulation table, a decision was made as to whether or not the null hypothesis could be rejected.

**Academic Requirement**

The Cross Tabulational Table for "Recommended or Required by Academic unit" by "Ethnicity" is shown in Table 36. The null hypothesis was:

Ethnicity has no effect on whether or not volunteer work was required or recommended by an academic unit.

The Raw Chi Square of 5.38357 was less than the critical value of Chi Square of 11.1 at .05 level of significance. Therefore, the null may not be rejected and we may conclude that ethnicity does not affect whether or not volunteer work was required or recommended by an academic unit. The Kendall's Tau of .01582 was not within the predetermined level of significance of .05.

The Cross Tabulational Table for "Recommended or Required by Academic Unit" by "Age" is shown in Table 37.

The null hypothesis was:

Age has no effect on whether or not volunteer work was required or recommended by an academic unit.

The Raw Chi Square of 12.38929 was greater than the critical value of Chi Square of 11.1 at the .05 level of significance. Therefore, the null may be rejected. We may conclude that whether or not volunteer work was required or recommended by an academic unit was affected by age. The computed Kendall's Tau statistic of .07083 is also significant to a level of .0162, which is within the .05 level. This positive correlation suggests that the younger students were more likely to have the experience recommended or required by an academic unit than were the older students.

The Cross Tabulational Table for "Recommended or Required by Academic Unit" by "Class" appears in Table 38.

The null hypothesis was:

Class has no effect on whether or not  
volunteer work was recommended or required  
by an academic unit.

The Raw Chi Square of 14.93034 exceeds the critical value of Chi Square of 12.6, with 6 degrees of freedom at the .05 level of significance. Therefore, the null may be rejected. We may conclude that class does have an effect on whether or not the volunteer work was recommended or required by an academic unit. The Kendall's Tau statistic for this table is .08217 which is significant to the .0065 level. These results indicated that freshmen, sophomores, and juniors were more likely to have the experience recommended than were seniors, graduate, or special students.

The Cross Tabulational Table for "Recommended or Required by Academic Unit" by "Gender" appears in Table 39.

The null hypothesis was:

Gender has no effect on the perception of  
whether or not volunteer work was recom-  
mended or required by an academic unit.

The Raw Chi Square of 10.80762 exceeds the critical value of Chi Square of 3.84, with one degree of freedom, at the .05 level of significance. Therefore, the null was rejected and the conclusion reached that gender does have an effect on whether or not volunteer work was recommended or required by an academic unit. The Kendall's Tau correlation statistic for this table is  $-.08827$ , which is significant at the .0005 level. This negative or inverse correlation indicates that women are more likely to have the experience

recommended to them by an academic unit than are men.

In summary, the null hypotheses regarding age, class and gender and the academic requirement of the experience were rejected, and the conclusion was reached that age, class, gender have an effect on whether or not the experience was recommended or required by an academic unit, while ethnicity does not.

### Motivation

Table 40 shows the cross tabulation of "Participant's Motivation to apply for a Volunteer Position" by "Age". The null hypothesis was:

Age does not affect the participant's  
motivation to apply for a volunteer  
position.

The Raw Chi Square of 81.292 exceeded the critical Chi Square of 67.50, at .05 level of significance, with 50 degrees of freedom, so the null was rejected. The alternate hypotheses was accepted that age does affect the participant's motivation to apply for a volunteer position.

The cross tabulation of the "Participant's Motivation to Apply for a Volunteer Position" by "Class" is shown in Table 41. The null hypothesis was:

Class has no effect on the participant's  
motivation to apply for a volunteer position.

The null was rejected because the Raw Chi Square of 132.06 exceeded the critical Chi Square of 79.08, at .05 level of significance, with 60 degrees of freedom. The alternate hypothesis, which was accepted, was that class does affect

the participant's motivation to apply for a volunteer position.

The cross tabulation of "Participant's Motivation to Apply for a Volunteer Position" by "Gender" is shown in Table 42. The null hypothesis was:

Gender has no effect on the participant's motivation to apply for a volunteer position.

The Raw Chi Square of 72.63 was greater than the critical Chi Square of 18.31, at .05 level of significance, with 10 degrees of freedom. Consequently, the null was rejected. The alternate hypothesis, which was accepted, stated that gender does affect the participant's motivation to apply for a volunteer position.

Table 43 shows the cross tabulation of "Participant's Motivation to Apply for a Volunteer Position" by "Race".

The null hypothesis was:

Race has no effect on the participant's motivation to apply for a volunteer position.

The Raw Chi Square of 88.09 exceeded the critical Chi Square of 67.51, at .05 level of significance, with 50 degrees of freedom, so the null was rejected. The alternate hypothesis, which was accepted, was that race does affect the participant's motivation to apply for a volunteer position.

To summarize the cross tabulational analyses regarding motivation, it was determined statistically that age, class, gender, and race each affect the participant's motivation to

apply for a volunteer position. The Kendall's Tau correlational coefficient was not computed for this section, so the direction of correlation could not be established.

### Effect on Career Plans

Another area in which the correlational relationship was examined was that of the "Effect of Experience on Career Plans" by "Age" by Gender, by Class and Race. The Cross Tabulation by Age Table is shown in Table 44. The null hypothesis was:

Age has no effect on the effect of experience on career plans.

The Raw Chi Square of 25.57849 exceeded the critical value of Chi Square of 25.0 at .05 level of significance. Therefore, we could reject the null and conclude that age does affect the effect of experience on career plans. The Kendall's Tau statistic of .04113 is significant at the .0466 level. This indicated that the experience was more likely to affect the career plans of younger students.

The correlational relationship of the "Effect of Experience on Career Plans" by "Class" is shown in Table 45. The null hypothesis was that class has no effect on the effect of the experience in career plans. The Raw Chi Square of 40.95700 exceeded the critical value of Chi Square of 28.9 at 18 degrees of freedom at the .05 level of significance. The null could be rejected and the conclusion reached that class does affect the effect of experience on career plans. The Kendall's Tau statistic of .02980 is

significant to the .1115 level, which is not within the .05 level of significance.

Table 46 shows the Cross Tabulation of the "Effects of the Experience on Career Plans" by "Gender". The null hypothesis was:

Gender has no effect on the effect of the experience on career plans.

The Raw Chi Square of 10.89013 with three degrees of freedom exceeded the critical Chi Square of 7.81. Therefore, the null was rejected and the conclusion drawn that gender does affect the effect of experience on career plans. The negative Kendall's Tau of  $-.05768$  has a significance of .0263. Therefore, the career plans of women are more likely to be affected by the experience than are those of men.

The null hypothesis regarding the effect of race could not be rejected statistically. Therefore, the conclusion was reached that age, class and gender do affect the effect of experience on career plans, but race does not.

#### Effect on Major Selection

The Cross Tabulation of the "Effect of Experience on Major Selection" by "Age" is shown in Table 47. The null hypothesis was:

Age does not affect the effect of experience on major selection.

The Raw Chi Square of 25.57849, with fifteen degrees of freedom, exceeds the critical value of 24.99, so the null was rejected and the conclusion reached that age does affect the effect of the experience on career plans. The positive

Kendall's Tau of .04113 has a significance of .0466 and indicates that the older students are more likely to perceive that the experience did not make them change their career plans than are younger students.

Table 48 provides the Cross Tabulation Chart of the "Effect of the Experience" by "Class". The null hypothesis was:

Class level has no effect on the participant's perception of effects of experience on major selection.

The critical value of Chi Square, at .05 level of significance, with 18 degrees of freedom, was exceeded by the Raw Chi Square of 73.22198, so the null was rejected. The alternate hypothesis was accepted that class level has an effect on the effects of experience on major. The Kendall's Tau correlation of .10674 with a significance of .0000 suggests seniors, special, graduate or non-students are more likely to perceive that the experience did not make them change their major, than are freshmen, sophomores and juniors. Conversely, freshmen, sophomores, and juniors are more likely to change their major as a result of the experience.

The Cross Tabulation Table of "Effect of Experience on Major Selection" by "Gender" is shown in Table 49. The null hypothesis of:

Gender has no effect on the participant's perception of the effects of the experience on major selection

was rejected because the Raw Chi Square of 23.05762 exceeded

the critical value of Chi Square of 7.81 with 3 degrees of freedom at .05 level of significance. The alternate hypothesis that gender has an effect on the participants' perception of the effects of the experience on major selection was accepted. The Kendall's Tau negative correlation of  $-.12815$  had a significance of .0000 means that women are more likely to have the volunteer experience affect their major selection than are men.

The null hypothesis regarding the effect of race could not be rejected statistically. Therefore, the conclusion was reached that age, class, and gender affect the effects of the experience on major selection, but race does not.

#### Importance of Volunteer Experience in Relation to Career Awareness

##### a) Support from Others for Career Decision

Table 50 shows the Cross Tabulation of "Importance of Experience in Relation to Support from Others for Career Decisions" by "Age". The null hypothesis was:

Age has no effect on participants' perception of the importance of the volunteer experience in relation to support from others on career decisions.

The Raw Chi Square of 26.61273 exceeded the critical Chi Square of 25.0 at .05 level of significance with 15 degrees of freedom, so the null was rejected. The alternate hypothesis that age does affect the participants' perception of the importance of the experience in relation to support from others for career decisions. Based on Kendall's Tau correlation of  $-.08793$ , with a significance of .0002,

indicates that the experience was more important to younger students than to older or non-students in this area. The null hypotheses regarding the effect of gender, class, and race could not be rejected statistically.

b) Broadening Knowledge of Career and Job Requirements

The cross tabulation of "Importance of Effect of Experience in Broadening Knowledge of Career and Job Requirements" by "Class" is shown in Table 51. The null hypothesis was:

Class has no effect on the participants' perception of the importance of the experience in broadening knowledge of career and job requirements.

The null was rejected when the Raw Chi Square of 31.78539 exceeded the critical Chi Square of 28.9, at .05 level of significance, with 18 degrees of freedom. The alternate hypothesis, which was accepted, was that class does affect the participant's perception of the importance of the experience in broadening the knowledge of career and job requirements. The negative Kendall's Tau correlation of  $-.04583$  at  $.0330$  level of significance indicates that the experience was more important to lower class students in this area than to seniors, graduate and non-students.

The Cross Tabulation of "Importance of Effect of Experience on Broadening Knowledge of Career and Job Requirements" by "Gender" is shown in Table 52. The null hypothesis:

Gender has no effect on the participant's perception of the importance of the experience in broadening knowledge of career and job requirements

was rejected when the Raw Chi Square of 10.16054 exceeded the critical Chi Square of 7.81, at .05 level of significance, with 3 degrees of freedom. The alternate hypothesis was accepted that gender affects the participants' perception of the importance of the experience in broadening knowledge of career and job requirements. The positive Kendall's Tau correlation of .09204 with a .0012 level of significance indicates that the experience was more important to women than men in this area.

The null hypotheses regarding the effect of age and race could not be rejected statistically. Therefore, the conclusion was reached that only class and gender affect the participant's perception of the effect of the experience in broadening knowledge of career and job requirements.

#### c) Focusing Choices

The Cross Tabulation of "Importance of the Experience in Focusing Choices" by Gender is shown in Table 53. The null hypothesis was:

Gender has no effect on participants' perception of the effect of the experience in focusing career choices.

Because the Raw Chi Square of 20.60914 exceeded the critical Chi Square of 7.81, at .05 level of significance, with 3 degrees of freedom, the null was rejected. The alternate hypothesis was accepted stating that gender does affect the

participant's perception of the effect of the experience in focusing career choices. The positive Kendall's Tau correlation of .12859 and a significance of .0000 indicates that the experience is more important to women than men in this area.

The null hypotheses regarding the effects of age, class, and race could not be rejected statistically. Therefore, the conclusion was reached that only gender affects the participant's perception of the effect of the experience in focusing choices.

#### Importance of Volunteer Experience in Relation to Career Preparation

##### a) First Hand Exposure to Work Environment

Table 54 shows a cross tabulation of "Importance of Experience in Providing First Hand Exposure to the Work Environment" by "Gender". The null hypothesis was:

Gender has no effect on the participants' perception of the importance of the experience in providing first hand exposure to the work environment.

The Raw Chi Square of 8.03968 exceeded the critical Chi Square of 7.81, at .05 level of significance, with 3 degrees of freedom, so the null was rejected.

A Kendall's Tau correlation of .12859 with a significance of .0000 indicated that the experience was more important to females than males in this area.

The null hypotheses regarding the effects of race, age and class could not be rejected statistically. Therefore,

the conclusion was reached that only gender affected the participant's perception of the importance of the experience in providing first hand exposure to the work environment.

b) Becoming Known to People in Field Who Could Recommend to Potential Employer

The Cross Tabulation of the "Importance of Experience to Participant Becoming Known to People in Field Who Could Recommend Him/Her to Potential Employer" by "Race" is shown in Table 55. The null hypothesis was:

Race has no effect on participants' perception of the importance of the experience in the participant becoming known to people in field who could recommend him/her to potential employer.

This was rejected because the Raw Chi Square of 25.42590 exceeded the critical Chi Square of 25.0 at .05 level of significance with 15 degrees of freedom. The alternate hypothesis was accepted that race does affect the participants' perception of the importance of the experience to the participant becoming known to people in the field who could recommend him/her to a potential employer. The negative Kendall's Tau correlation of  $-.11184$  with a significance of  $.4705$  was not relevant because it was not within .05 level of significance.

The null hypotheses regarding the effects of age, class, and gender could not be rejected statistically. Therefore, the conclusion was reached that only race affects the participant's perception of the importance of the experience to becoming known to people in the field who

could recommend to a potential employer.

c) Becoming Aware of How Education Experience is Serving as Preparation for Career

Table 56 shows the cross tabulation of "Importance of Experience to Participants Becoming Aware of How Education Experience is Serving as Preparation for Career" by "Gender". The null hypothesis was:

Gender has no effect on the participant's perception of the importance of the experience to the participant becoming aware of how the education experience is serving as preparation for career.

The null was rejected with a Raw Chi Square of 17.34395 exceeding the critical Chi Square of 7.81, at .05 level of significance, with 3 degrees of freedom. The alternate hypothesis, which was accepted, was that gender does affect the participant's perception of the importance of the experience to the participant becoming aware of how the education experience is serving as preparation for career. The positive Kendall's Tau correlation of .11381 at a .0001 level of significance indicates that the experience is more important to women than men in this area.

The null hypotheses regarding race, age, and class could not be rejected statistically. Therefore, the conclusion was reached that only gender affects the participant's perception of the importance of the experience to becoming aware of how the education experience is serving as preparation for career.

d) Awareness of Relationship Between Job Requirements and Personal Values

Table 57 shows the cross tabulation of "Importance of Experience to Participant Gaining Awareness of the Relationship Between Job Requirements and Personal Values" by "Age".

The null hypothesis was:

Age has no effect on the participant's perception of the importance of the experience to the participant gaining awareness of the relationship between job requirements and personal values.

A Raw Chi Square of 26.74974 exceeded the critical Chi Square of 25.0 at .05 level of significance with 15 degrees of freedom, so the null was rejected. The alternate hypothesis, which was accepted, stated that age affected the participant's perception of the importance of the experience to the participant gaining awareness of the relationship between job requirements and personal values. The negative Kendall's Tau correlation of  $-.06713$  with a .0035 level of significance indicates that the experience was more important to younger students in this area than to older students.

The Cross Tabulation of the "Importance of the Experience to the Participant Gaining Awareness of the Relationship Between Job Requirements and Personal Values" by "Class" is shown in Table 58. The null hypothesis was:

Class has no effect on the participant's perception of the importance of the experience to the participant gaining awareness of the relationship between job requirements and personal values.

This null was rejected because the Raw Chi Square of 41.05540 exceeded the critical Chi Square of 28.9, at .05

level of significance, with 18 degrees of freedom. The alternate hypothesis was accepted. This stated that class affects the participant's perception of the importance of the experience to the participant gaining awareness of the relationship between job requirements and personal values. A negative Kendall's Tau correlation coefficient of  $-.07212$  with a significance of  $.0019$  indicates that the importance of the experience in this area was greater for those in lower classes than higher classes.

The null hypotheses regarding gender and race could not be rejected statistically. Therefore, the conclusion was made that only age and class affect the participant's perception of the importance of the experience to gaining awareness of the relationship between job requirements and personal values.

### Use of Skills In the Volunteer Experience

#### a) Research and Investigation

The Cross Tabulation of "Use of Research and Investigation Skills in Volunteer Work" by "Gender" is shown in Table 59. The null hypothesis was:

Gender has no effect on the use of research and investigation skills in the volunteer work.

This null was rejected because the Raw Chi Square of  $10.24028$  was greater than the critical Chi Square of  $9.49$ , at a  $.05$  level of significance, with 4 degrees of freedom. The alternate hypothesis, that gender does affect the use of research and investigation skills in the volunteer work, was accepted. The negative Kendall's Tau correlational

coefficient of  $-.09190$ , with a  $.0017$  level of significance, indicated that women are more likely to use research and investigation skills in the volunteer experience than men.

The null hypotheses regarding the effects of age, class and race could not be rejected statistically. Consequently, the conclusion was reached that only gender affects the use of research and investigation skills in volunteer work.

b) Communication and Persuasion

The null hypotheses regarding age, class, gender, and race could not be rejected statistically. Therefore, the conclusion was made that neither age, class, gender, or race affects the use of communication and persuasion skills in the volunteer experience.

c) Organization Management

The null hypotheses regarding age, class, gender, and race could not be rejected statistically, at the  $.05$  level of significance. Therefore, the decision was made that neither age, class, gender, or race affects the use of organizational management skills in the volunteer work.

d) Design and Planning Skills

The null hypotheses regarding age, class, gender and race could not be rejected statistically at the  $.05$  level of significance. Therefore, the conclusion was reached that neither age, class, gender or race affects the use of design and planning skills in volunteer work.

e) Information Management Skills

Table 60 shows the cross tabulation of "The Use of Information Management Skill in the Volunteer Experience" by "Race". The null hypothesis was:

Race has no effect on the use of information management skills in volunteer work.

A Raw Chi Square of 36.50666 which exceeded the critical Chi Square at the .05 level of significance with 20 degrees of freedom allowed rejection of the null. The alternate hypothesis was accepted that race does affect the use of information management skills in the volunteer work. The negative Kendall's Tau correlational coefficient of  $-.00166$  and a level of significance of .4388 does not fall within the predetermined level of significance of .05, so no conclusion could be drawn regarding for which race the impact was greater.

The cross tabulation of "Use of Information Management Skills in Volunteer Work" by "Class" is displayed in Table 61. The null hypothesis was:

Class has no effect on the use of information management skills in volunteer work.

The Raw Chi Square of 48.56710 exceeded the critical Chi Square of 36.4, at .05 level of significance, with 24 degrees of freedom, so the null was rejected. The alternative hypothesis was accepted that class does affect the use of information management skills in volunteer work. The Kendall's Tau correlational coefficient of  $.06010$ , with a level of significance of .0055, indicated that upper

classmen and graduate students were more likely to use these skills.

The cross tabulation of "Use of Information Management Skills in Volunteer Work" by "Age" is shown in Table 62.

The null hypothesis was:

Age has no effect on the use of informational management skills in volunteer work.

The null was rejected because the Raw Chi Square of 45.16873 exceeded the critical Chi Square of 31.4, at .05 level of significance, with 20 degrees of freedom. The alternate hypothesis that age does affect the use of informational management skills in volunteer work was accepted. A positive Kendall's Tau correlational coefficient of .04789, at a level of significance of .0216, indicated that older students were more apt to use this skill.

The null hypothesis regarding gender could not be rejected statistically at the .05 level of significance. Therefore, the decision was reached that race, class, and age affect the use of informational management skills, but gender does not.

f) Technical and Manual Skills

Table 63 shows the cross tabulation of the "Use of Technical and Manual Skills in Volunteer Work" by Race. The null hypothesis was:

Race has no effect on the use of technical and manual skills in volunteer work.

The null was rejected because the Raw Chi Square exceeded the critical Chi Square of 31.4, at .05 level of

significance, with 20 degrees of freedom. The alternate hypothesis that race does affect the use of technical and manual skills in volunteer work was accepted. The Kendall's Tau correlational coefficient of .01748 has a level of significance of .0547, which is slightly greater than the predetermined acceptable level of significance of .05. No conclusion could be drawn as to which race(s) had a greater level of use.

The null hypotheses regarding the effects of age, class, and gender could not be rejected statistically at the .05 level of significance. Therefore, the decision was reached that the use of technical and manual skills in volunteer work was affected by race but not by age, class, and gender.

#### **Examination of the Relationship Between Variables by Analysis of Variance**

A separate null hypothesis was established and examined by the analysis of variance for the participants answers to the 1980-81 survey questions regarding academic recommendation or requirement, volunteer motivation, and effect on career plans, major selection, career awareness, career preparation, personal awareness and development, and use of skills in relation to: age, gender, class, and ethnicity. For purposes of statistical manipulation, participants were grouped into two racial groups: white and minority. In addition, participants were grouped in two ways by age. In the first instance, the examination was carried out by utilizing the six age levels as noted on the

survey form (i.e. 19 or younger, 20, 21, 22, 23-25, and 26 and older). In the narrative describing the results, this category is referred to as "age level". In the second instance, the participants were grouped into two age groups: those who were proper for their class level and those who were not. In the narrative describing the results, this will be designated as "age groups (two groups)".

Of the two hundred and eight null hypotheses thus established, the following null hypotheses were rejected at the .05 level of significance. The specific F-ratios and degrees of freedom corresponding to SSB and SSW are noted. The F-probability indicates the level of significance. All the null hypotheses shown were rejected because they fell well within the .05 level of significance.

\* \* \*

#### Academic Requirement

**NULL:** Whether or not volunteer work was recommended or required by an academic unit is the same:

|           |                     |                        |                                                                             |
|-----------|---------------------|------------------------|-----------------------------------------------------------------------------|
|           |                     |                        | ... <u>for males as females</u>                                             |
| Reject: { | SS <sub>B</sub> = 1 | SS <sub>W</sub> = 1059 | F-ratio = 10.898<br>F-probability = .0010                                   |
|           | SS <sub>B</sub> = 4 | SS <sub>W</sub> = 1051 | ... <u>for each class level</u><br>F-ratio = 2.472<br>F-probability = .0430 |
|           | SS <sub>B</sub> = 5 | SS <sub>W</sub> = 1080 | ... <u>for each age level</u><br>F-ratio = 2.493<br>F-probability = .0296   |

The null hypotheses regarding race and academic requirement could not be rejected statistically, at the .05

level of significance. Therefore, the conclusion was reached that whether or not volunteer work was recommended or required by an academic unit was not the same for males and females, for each class level, or for each age level, but was the same for whites and minorities.

\* \* \*

**NULL:** The nature of the academic unit requirement being "required by major" is the same:

|         |                                                            |                                                              |                                      |                       |
|---------|------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------|-----------------------|
|         |                                                            |                                                              | <u>... for males as females</u>      |                       |
| Reject: | $\left\{ \begin{array}{l} SS_B = 1 \\ \end{array} \right.$ | $\left\{ \begin{array}{l} SS_W = 402 \\ \end{array} \right.$ | F-ratio = 23.352                     | F-probability = .0000 |
|         |                                                            |                                                              | <u>... for each class level</u>      |                       |
|         | $\left\{ \begin{array}{l} SS_B = 4 \\ \end{array} \right.$ | $\left\{ \begin{array}{l} SS_W = 402 \\ \end{array} \right.$ | F-ratio = 2.887                      | F-probability = .0223 |
|         |                                                            |                                                              | <u>... for whites and minorities</u> |                       |
|         | $\left\{ \begin{array}{l} SS_B = 1 \\ \end{array} \right.$ | $\left\{ \begin{array}{l} SS_W = 402 \\ \end{array} \right.$ | F-ratio = 3.867                      | F-probability = .0499 |

The null hypothesis regarding the nature of the academic unit being required by major being the same for each age group could not be rejected at the .05 level of significance. The alternate hypotheses for gender, class level, and race were accepted.

\* \* \*

**NULL:** The nature of the academic requirement being "required as part of major" is the same:

|         |                                                            |                                                              |                                 |                       |
|---------|------------------------------------------------------------|--------------------------------------------------------------|---------------------------------|-----------------------|
|         |                                                            |                                                              | <u>... for males as females</u> |                       |
| Reject: | $\left\{ \begin{array}{l} SS_B = 1 \\ \end{array} \right.$ | $\left\{ \begin{array}{l} SS_W = 402 \\ \end{array} \right.$ | F-ratio = 26.995                | F-probability = .0000 |

The null hypotheses regarding the nature of the

academic requirement being "required as part of major" being the same for whites and minorities, each class level, and each age group and age level could not be rejected at the .05 level of significance. The alternate hypothesis regarding males and females was accepted.

\* \* \*

**NULL:** The nature of the academic requirement or recommendation being "suggested by advisor" is the same:

... for each class level

Reject:  $\left\{ \begin{array}{ll} SS_B = 4 & SS_W = 402 \end{array} \right. \begin{array}{l} F\text{-ratio} = 4.192 \\ F\text{-probability} = .0025 \end{array}$

The null hypotheses regarding age, gender and race and "suggested by advisory" could not be rejected statistically at the .05 level of significance. The alternate hypothesis that the nature of the academic requirement or recommendation "suggested by advisor" was different for different class levels was accepted.

\* \* \*

**NULL:** The nature of the academic requirement being "course requirement" is the same:

... for each class level

Reject:  $\left\{ \begin{array}{ll} SS_B = 4 & SS_W = 402 \end{array} \right. \begin{array}{l} F\text{-ratio} = 2.679 \\ F\text{-probability} = .0314 \end{array}$

The null hypotheses regarding age, gender and race and course requirement could not be rejected statistically at the .05 level of significance. The alternate hypothesis regarding class level was accepted. This stated that the nature of the academic requirement being "course

requirement" differed by class level.

\* \* \*

### Motivation

**NULL:** The motivation to apply for a volunteer position to complete part of a course requirement is the same:

... for males as females

$$\text{Reject: } \left\{ \begin{array}{lll} SS_B = 1 & SS_W = 1063 & F\text{-ratio} = 16.466 \\ & & F\text{-probability} = .0001 \end{array} \right.$$

The null hypotheses regarding age level, age groups, class level and race cannot be rejected statistically at the .05 level of significance. The alternate hypothesis regarding gender and motivation being "to complete part of course requirement" was accepted.

\* \* \*

**NULL:** The motivation to apply for a volunteer experience to gain independent study/internship/field experience credit is the same:

... for whites as minorities

$$\text{Reject: } \left\{ \begin{array}{lll} SS_B = 1 & SS_W = 1071 & F\text{-ratio} = 9.067 \\ & & F\text{-probability} = .0027 \end{array} \right.$$

... for each age group  
(two groups)

$$\left\{ \begin{array}{lll} SS_B = 1 & SS_W = 1071 & F\text{-ratio} = 9.067 \\ & & F\text{-probability} = .0027 \end{array} \right.$$

The null hypotheses regarding age level, class level, and gender and motivation being "to gain independent study/internship/field experience credit" could not be rejected at the .05 level of significance. The alternate

hypotheses regarding race and age group were accepted.

\* \* \*

**NULL:** The motivation to apply for a volunteer position to gain admission into the major is the same:

$$\begin{array}{l}
 \dots \text{for each class level} \\
 \left\{ \begin{array}{ll} SS_B = 4 & SS_W = 1053 \end{array} \right. \begin{array}{l} F\text{-ratio} = 12.143 \\ F\text{-probability} = .0000 \end{array} \\
 \dots \text{for males as females} \\
 \left\{ \begin{array}{ll} SS_B = 1 & SS_W = 1063 \end{array} \right. \begin{array}{l} F\text{-ratio} = 26.860 \\ F\text{-probability} = .0000 \end{array} \\
 \dots \text{for each age level} \\
 \text{Reject: } \left\{ \begin{array}{ll} SS_B = 5 & SS_W = 1084 \end{array} \right. \begin{array}{l} F\text{-ratio} = 4.635 \\ F\text{-probability} = .0003 \end{array}
 \end{array}$$

The alternate hypotheses regarding class level, gender, and age level were accepted. The null hypotheses regarding age group and race could not be rejected statistically at the .05 level of significance.

\* \* \*

**NULL:** The motivation to apply for a volunteer position to gain admission into graduate or professional school is the same:

$$\begin{array}{l}
 \dots \text{for males as females} \\
 \text{Reject: } \left\{ \begin{array}{ll} SS_B = 1 & SS_W = 1063 \end{array} \right. \begin{array}{l} F\text{-ratio} = 39.749 \\ F\text{-probability} = .0000 \end{array}
 \end{array}$$

The null hypotheses regarding age level, age group, and race, and class level and the motivation being "to gain admission into graduate school" could not be rejected statistically at the .05 level of significance. The alternate hypotheses regarding gender and this variable was

accepted.

\* \* \*

**NULL:** The motivation to apply for a volunteer position to explore a possible career choice is the same:

... for each age level

$$\text{Reject: } \left\{ \begin{array}{ll} SS_B = 5 & SS_W = 1084 \\ F\text{-ratio} = 2.385 & F\text{-probability} = .0366 \end{array} \right.$$

The null hypotheses regarding gender, class level, age group, and race and motivation being "to explore a possible career choice" could not be rejected statistically at the .05 level of significance. The alternate hypothesis regarding age level and this variable was accepted, however.

\* \* \*

**NULL:** The motivation to apply for the volunteer position to gain experience in a career field is the same:

... for each class level

$$\text{Reject: } \left\{ \begin{array}{ll} SS_B = 4 & SS_W = 1053 \\ F\text{-ratio} = 3.168 & F\text{-probability} = .0134 \end{array} \right.$$

... for each age group  
(two groups)

$$\left\{ \begin{array}{ll} SS_B = 1 & SS_W = 1056 \\ F\text{-ratio} = 6.731 & F\text{-probability} = .0096 \end{array} \right.$$

... for each age level

$$\left\{ \begin{array}{ll} SS_B = 5 & SS_W = 1084 \\ F\text{-ratio} = 5.620 & F\text{-probability} = .0000 \end{array} \right.$$

The null hypotheses regarding gender, and race and the motivation being "to gain experience in career field" could not be rejected statistically at the .05 level of significance. The alternate hypotheses for class level and

age group were accepted.

\* \* \*

**NULL:** The motivation to apply for a volunteer position to develop professional contacts is the same:

... for each class level

Reject:  $\left\{ \begin{array}{lll} SS_B = 4 & SS_W = 1053 & F\text{-ratio} = 2.502 \\ & & F\text{-probability} = .0410 \end{array} \right.$

... for each age level

$\left\{ \begin{array}{lll} SS_B = 5 & SS_W = 1084 & F\text{-ratio} = 3.539 \\ & & F\text{-probability} = .0035 \end{array} \right.$

The null hypotheses regarding age group, race, and gender and the motivation being "to develop professional contacts could not be rejected statistically at the .05 level of significance. The alternate hypotheses regarding class level and age level were accepted.

\* \* \*

**NULL:** The motivation to apply for a volunteer position to help people is the same:

... for whites as for minorities

Reject:  $\left\{ \begin{array}{lll} SS_B = 1 & SS_W = 1071 & F\text{-ratio} = 4.587 \\ & & F\text{-probability} = .0325 \end{array} \right.$

... for each class level

$\left\{ \begin{array}{lll} SS_B = 4 & SS_W = 1053 & F\text{-ratio} = 3.430 \\ & & F\text{-probability} = .0085 \end{array} \right.$

... for each age group (two groups)

$\left\{ \begin{array}{lll} SS_B = 1 & SS_W = 1071 & F\text{-ratio} = 4.587 \\ & & F\text{-probability} = .0325 \end{array} \right.$

The alternate hypotheses regarding race, class level,

and age group and the motivation being "to help people" were accepted. The null hypotheses regarding gender and age level could not be statistically rejected at the .05 level of significance.

\* \* \*

**NULL:** The motivation to apply for a volunteer position to have something to do with leisure time is the same:

... for each class level

$$\text{Reject: } \left\{ \begin{array}{l} SS_B = 4 \\ SS_W = 1053 \end{array} \right. \quad \begin{array}{l} F\text{-ratio} = 2.921 \\ F\text{-probability} = .0203 \end{array}$$

The alternate hypothesis was accepted regarding class level and the motivation being "to have something to do with leisure time". The null hypotheses regarding age group, age level, gender, and race could not be rejected statistically at the .05 level of significance.

**SUMMARY CHART  
OF REJECTION OF THE NULL  
AND ACCEPTANCE OF THE ALTERNATE HYPOTHESIS  
REGARDING MOTIVATION AND DEMOGRAPHIC VARIABLES**

#1

| Motivation to Volunteer                                         | Age Level | Age Group | Class Level | Race | Gender |
|-----------------------------------------------------------------|-----------|-----------|-------------|------|--------|
| 1. To complete part of course requirement                       |           |           |             |      | X      |
| 2. To gain independent study/internship/field experience credit |           | X         |             | X    |        |
| 3. To gain admission into major                                 | X         |           | X           |      | X      |

| Motivation to Volunteer                                   | Age Level | Age Group | Class Level | Race | Gender |
|-----------------------------------------------------------|-----------|-----------|-------------|------|--------|
| 4. To gain admission into graduate or professional school |           |           |             |      | X      |
| 5. To explore possible career choice                      | X         |           |             |      |        |
| 6. To gain experience in career field                     | X         | X         | X           |      |        |
| 7. To develop professional contacts                       | X         |           | X           |      |        |
| 8. To help people                                         |           | X         | X           | X    |        |
| 9. To socialize with others                               |           |           |             |      |        |
| 10. To have something to do with leisure time             |           |           | X           |      |        |

\* \* \*

Effects of Experiencea) On Career Plans

NULL: The effect of the volunteer experience on career plans is the same:

|           |                     |                        |                                          |
|-----------|---------------------|------------------------|------------------------------------------|
|           |                     |                        | ... <u>for each age level</u>            |
|           | SS <sub>B</sub> = 5 | SS <sub>W</sub> = 1073 | F-ratio = 3.516<br>F-probability = .0037 |
|           |                     |                        | ... <u>for males as females</u>          |
| Reject: { | SS <sub>B</sub> = 1 | SS <sub>W</sub> = 1053 | F-ratio = 8.031<br>F-probability = .0047 |
|           |                     |                        | ... <u>for each class level</u>          |
|           | SS <sub>B</sub> = 4 | SS <sub>W</sub> = 1045 | F-ratio = 4.761<br>F-probability = .0008 |

The alternate hypotheses regarding age level, gender, and class level and the effects on career plans were accepted. The null hypotheses regarding age group and race and the effects on career plans could not be rejected statistically at the .05 level of significance.

\* \* \*

b) On Major Plans

**NULL:** The effect of the volunteer experience on major plans is the same:

|         |                     |                        |                                           |
|---------|---------------------|------------------------|-------------------------------------------|
|         |                     |                        | <u>... for each age level</u>             |
| Reject: | SS <sub>B</sub> = 5 | SS <sub>W</sub> = 1074 | F-ratio = 9.603<br>F-probability = .0000  |
|         |                     |                        | <u>... for each class level</u>           |
|         | SS <sub>B</sub> = 4 | SS <sub>W</sub> = 1048 | F-ratio = 13.716<br>F-probability = .0000 |
|         |                     |                        | <u>... for males as females</u>           |
|         | SS <sub>B</sub> = 1 | SS <sub>W</sub> = 1053 | F-ratio = 17.586<br>F-probability = .0000 |

The alternate hypotheses regarding age level, class level and gender and the effects of the experience on major plans were accepted. The null hypotheses regarding age group and race could not be statistically rejected at the .05 level of significance.

\* \* \*

c) On Areas of Career Awareness

**NULL:** The importance of the volunteer experience in providing support from others for career decisions is the same:

|         |            |               |                                                      |
|---------|------------|---------------|------------------------------------------------------|
|         |            |               | <u>... for each age level</u>                        |
|         | $SS_B = 5$ | $SS_W = 1073$ | F-ratio = 2.701<br>F-probability = .0196             |
|         |            |               | <u>... for each age group</u><br><u>(two groups)</u> |
| Reject: | $SS_B = 1$ | $SS_W = 1049$ | F-ratio = 4.868<br>F-probability = .0276             |
|         |            |               | <u>... for males as females</u>                      |
|         | $SS_B = 1$ | $SS_W = 1052$ | F-ratio = 4.619<br>F-probability = .0319             |
|         |            |               | <u>... for whites as minorities</u>                  |
|         | $SS_B = 1$ | $SS_W = 1060$ | F-ratio = 7.658<br>F-probability = .0058             |

The alternate hypotheses regarding age level, age group, gender, and race were accepted. The null hypothesis regarding class level and support from others for career decisions could not statistically be rejected at the .05 level of significance.

\* \* \*

**NULL:** The importance of the volunteer experience in broadening knowledge of career and job requirements is the same:

|         |            |               |                                                      |
|---------|------------|---------------|------------------------------------------------------|
|         |            |               | <u>... for each age level</u>                        |
|         | $SS_B = 5$ | $SS_W = 1073$ | F-ratio = 2.525<br>F-probability = .0278             |
|         |            |               | <u>... for each age group</u><br><u>(two groups)</u> |
| Reject: | $SS_B = 1$ | $SS_W = 1048$ | F-ratio = 5.080<br>F-probability = .0244             |
|         |            |               | <u>... for males as females</u>                      |
|         | $SS_B = 1$ | $SS_W = 1052$ | F-ratio = 7.852<br>F-probability = .0052             |

The null hypotheses regarding race and class level and the effect of the experience in broadening knowledge of career and job requirements could not be rejected statistically at the .05 level of significance. The alternate hypotheses regarding age level, age group, and gender were accepted.

\* \* \*

**NULL:** The importance of the experience in focusing career choices is the same:

|         |                     |                        |                                                      |
|---------|---------------------|------------------------|------------------------------------------------------|
| Reject: |                     |                        | ... <u>for each age level</u>                        |
|         | SS <sub>B</sub> = 5 | SS <sub>W</sub> = 1069 | F-ratio = 2.546<br>F-probability = .0267             |
|         |                     |                        | ... <u>for each age group</u><br><u>(two groups)</u> |
|         | SS <sub>B</sub> = 1 | SS <sub>W</sub> = 1054 | F-ratio = 4.667<br>F-probability = .0310             |
|         |                     |                        | ... <u>for each class</u>                            |
|         | SS <sub>B</sub> = 4 | SS <sub>W</sub> = 1042 | F-ratio = 3.830<br>F-probability = .0043             |
|         |                     |                        | ... <u>for males as females</u>                      |
|         | SS <sub>B</sub> = 1 | SS <sub>W</sub> = 1050 | F-ratio = 16.702<br>F-probability = .0000            |

The alternate hypotheses regarding age level, age group, class level, and gender and the importance of the experience in focusing career choices were accepted. The null hypothesis regarding race in this area could not be rejected statistically at the .05 level of significance.

**SUMMARY CHART**  
**OF REJECTION OF THE NULL**  
**AND ACCEPTANCE OF THE ALTERNATE HYPOTHESIS**  
**REGARDING IMPORTANCE OF EXPERIENCE IN RELATION TO**  
**AREAS OF CAREER AWARENESS AND DEMOGRAPHIC VARIABLES**

#2

| Area of Career Awareness                         | Age Level | Age Group | Class Level | Gender | Race |
|--------------------------------------------------|-----------|-----------|-------------|--------|------|
| Support from others for career decisions         | X         | X         |             | X      | X    |
| Broader knowledge of career and job requirements | X         | X         |             | X      |      |
| Career choices focused                           | X         | X         | X           | X      |      |

\* \* \*

d) On Areas of Career Preparation

**NULL:** The importance of the experience in gaining first hand exposure to the world of work is the same:

... for each age group  
 (two groups)

$$\text{Reject: } \left\{ \begin{array}{ll} \text{SS}_B = 1 & \text{SS}_W = 1054 \\ \text{F-ratio} = 4.667 & \text{F-probability} = .0310 \end{array} \right.$$

... for males as females

$$\left\{ \begin{array}{ll} \text{SS}_B = 1 & \text{SS}_W = 1058 \\ \text{F-ratio} = 4.566 & \text{F-probability} = .0329 \end{array} \right.$$

The alternate hypotheses were accepted regarding age group and gender and the importance of the experience in gaining first hand exposure to the world of work. The null hypotheses regarding age level, class level, and race in this area could not be rejected statistically at the .05 level of significance.

\* \* \*

NULL: The importance of the experience to becoming known to people in his/her field who could recommend him/her to potential employers is the same:

... for whites as minorities

$$\text{Reject: } \left\{ \begin{array}{ll} SS_B = 1 & SS_W = 1058 \end{array} \right. \begin{array}{l} F\text{-ratio} = 5.762 \\ F\text{-probability} = .0166 \end{array}$$

The alternate hypothesis was accepted regarding race and the importance of the experience to becoming known to people who could recommend to potential employer. The null hypotheses regarding age level, age group, class level, and gender could not be rejected statistically at the .05 level of significance.

\* \* \*

NULL: The importance of the experience in becoming aware of how education experience is serving as preparation for career is the same:

... for each age level

$$\text{Reject: } \left\{ \begin{array}{ll} SS_B = 5 & SS_W = 1062 \end{array} \right. \begin{array}{l} F\text{-ratio} = 2.289 \\ F\text{-probability} = .0440 \end{array}$$

... for each age group  
(two groups)

$$\left\{ \begin{array}{ll} SS_B = 1 & SS_W = 1051 \end{array} \right. \begin{array}{l} F\text{-ratio} = 9.890 \\ F\text{-probability} = .0017 \end{array}$$

... for whites as minorities

$$\left\{ \begin{array}{ll} SS_B = 1 & SS_W = 1062 \end{array} \right. \begin{array}{l} F\text{-ratio} = 5.042 \\ F\text{-probability} = .0250 \end{array}$$

... for males as females

$$\left\{ \begin{array}{ll} SS_B = 1 & SS_W = 1054 \end{array} \right. \begin{array}{l} F\text{-ratio} = 12.010 \\ F\text{-probability} = .0006 \end{array}$$

The null hypotheses regarding class level and the

importance of the experience in becoming aware of how education experience is serving as preparation for career could not be rejected statistically at the .05 level of significance. The alternate hypotheses regarding age level, age group, race, and gender were accepted.

\* \* \*

**NULL:** The importance of the volunteer's experience in gaining awareness of the relationship between job requirements and personal values is the same:

|         |                     |                         |                                          |
|---------|---------------------|-------------------------|------------------------------------------|
|         |                     |                         | <u>... for each age level</u>            |
| Reject: | SS <sub>B</sub> = 5 | SS <sub>W</sub> = 1075  | F-ratio = 2.870<br>F-probability = .0148 |
|         |                     |                         | <u>... for each class level</u>          |
|         | SS <sub>B</sub> = 4 | SS <sub>W</sub> = 1047  | F-ratio = 3.550<br>F-probability = .0069 |
|         |                     |                         | <u>... for whites as minorities</u>      |
|         | SS <sub>B</sub> = 1 | SS <sub>W</sub> = .0024 | F-ratio = 9.284<br>F-probability = .0024 |
|         |                     |                         | <u>... for males as females</u>          |
|         | SS <sub>B</sub> = 1 | SS <sub>W</sub> = 1055  | F-ratio = 6.266<br>F-probability = .0125 |

The null hypothesis regarding age group and the importance of the experience in gaining awareness of the relationship between job requirements and personal values could not be rejected statistically at the .05 level of significance. The alternate hypotheses regarding age level, class level, race, and gender were accepted.

**SUMMARY CHART**  
**OF REJECTION OF THE NULL**  
**AND ACCEPTANCE OF THE ALTERNATE HYPOTHESIS**  
**REGARDING IMPORTANCE OF EXPERIENCE IN RELATION TO**  
**AREAS OF CAREER PREPARATION AND DEMOGRAPHIC VARIABLES**

#3

| Area of Career Preparation                                                    | Age Level | Age Group | Class Level | Gender | Race |
|-------------------------------------------------------------------------------|-----------|-----------|-------------|--------|------|
| Gained first hand exposure to work environment                                |           | X         |             | X      |      |
| Became known to people in field who could recommend to potential employer     |           |           |             |        | X    |
| Became aware of how education experience serves as preparation for career     | X         | X         |             | X      | X    |
| Gained awareness of relationship between job requirements and personal values | X         |           | X           | X      | X    |

\* \* \*

e) On Collegiate Areas

**NULL:** The effect of the experience making some of the volunteer's courses more meaningful is the same:

... for each class level

Reject:  $\left\{ \begin{array}{ll} SS_B = 4 & SS_W = 907 \end{array} \right. \quad \begin{array}{l} F\text{-ratio} = 34.14 \\ F\text{-probability} = .0088 \end{array}$

... for males as females

$\left\{ \begin{array}{ll} SS_B = 1 & SS_W = 910 \end{array} \right. \quad \begin{array}{l} F\text{-ratio} = 4.383 \\ F\text{-probability} = .0366 \end{array}$

The alternate hypotheses were accepted regarding class level and gender and the effect of the experience in making

some of the volunteer's courses more meaningful. The null hypotheses regarding age level, age group, and race could not be rejected statistically at the .05 level of significance.

\* \* \*

**NULL:** The experience affecting the volunteer's motivation to learn, participate and achieve in his classes is the same:

... for each class level

Reject:  $\left\{ \begin{array}{ll} SS_B = 4 & SS_W = 907 \end{array} \right. \begin{array}{l} F\text{-ratio} = 2.680 \\ F\text{-probability} = .0306 \end{array}$

The alternate hypothesis was accepted regarding class level and the effect of the experience on the volunteer's motivation to learn, participate and achieve in their classes. The null hypotheses regarding age level, age group, gender, and race in this area could not be rejected statistically at the .05 level of significance.

\* \* \*

**NULL:** The experience affecting the volunteer's ability to apply coursework knowledge/skills to the community is the same:

... for each class level

Reject:  $\left\{ \begin{array}{ll} SS_B = 4 & SS_W = 907 \end{array} \right. \begin{array}{l} F\text{-ratio} = 3.652 \\ F\text{-probability} = .0058 \end{array}$

... for males as females

$\left\{ \begin{array}{ll} SS_B = 1 & SS_W = 910 \end{array} \right. \begin{array}{l} F\text{-ratio} = 6.733 \\ F\text{-probability} = .0096 \end{array}$

... for whites as minorities

$$\text{Reject: } \left\{ \begin{array}{ll} SS_B = 1 & SS_W = 917 \end{array} \right. \quad \begin{array}{l} F\text{-ratio} = 7.222 \\ F\text{-probability} = .0073 \end{array}$$

The null hypotheses regarding age level and age group and the effect of the experience on the volunteer's ability to apply coursework knowledge/skills to community could not be rejected statistically at the .05 level of significance. The alternate hypotheses regarding class level, gender, and race were accepted.

\* \* \*

**NULL:** The experience helping the volunteer identify courses which s/he could take which would be useful to his/her career is the same:

... for whites as minorities

$$\text{Reject: } \left\{ \begin{array}{ll} SS_B = 1 & SS_W = 917 \end{array} \right. \quad \begin{array}{l} F\text{-ratio} = 3.912 \\ F\text{-probability} = .0482 \end{array}$$

The alternate hypothesis was accepted regarding race and the effect of the experience in helping the volunteer identify courses to take which would be useful to career. The null hypotheses regarding age level, age group, class level and gender in this could not be rejected statistically at the .05 level of significance.

\* \* \*

**NULL:** The experience affecting the volunteer's ability to apply community knowledge/skills to coursework is the same:

... for males as females

$$\text{Reject: } \left\{ \begin{array}{ll} SS_B = 1 & SS_W = 910 \end{array} \right. \quad \begin{array}{l} F\text{-ratio} = 5.446 \\ F\text{-probability} = .0198 \end{array}$$

Reject:  $\left\{ \begin{array}{l} SS_B = 4 \\ SS_W = 1032 \end{array} \right.$  ... for each class level  
 $F\text{-ratio} = 2.601$   
 $F\text{-probability} = .0346$

The null hypotheses regarding age level, age group and gender and the effect of the experience on the volunteer's ability to apply community knowledge/skills to coursework could not be rejected statistically at the .05 level of significance. The alternate hypotheses regarding gender and class level in this area were accepted.

**SUMMARY CHART  
 OF REJECTION OF NULL  
 AND ACCEPTANCE OF ALTERNATE HYPOTHESIS  
 REGARDING EFFECTS OF VOLUNTEER EXPERIENCE  
 ON COLLEGIATE AREAS AND DEMOGRAPHIC VARIABLES**

#4

| Effects on Collegiate Areas                                      | Age Level | Age Group | Class Level | Gender | Race |
|------------------------------------------------------------------|-----------|-----------|-------------|--------|------|
| Made some courses more meaningful                                |           |           | X           | X      |      |
| Helped identify courses to take which would be useful to career  |           |           |             |        | X    |
| Made keeping up with classes difficult                           |           |           |             |        |      |
| Affected motivation to learn, participate and achieve in classes |           |           | X           |        |      |
| Able to apply course-work knowledge/skills to community          |           |           | X           | X      | X    |
| Able to apply community knowledge/skills to course-work          |           |           | X           | X      |      |

\* \* \*

f) On Personal Areas

**NULL:** The volunteer being forced to better plan his/her time as a result of participating in the experience is the same:

... for each age level

$$\text{Reject: } \left\{ \begin{array}{ll} SS_B = 5 & SS_W = 1062 \\ \end{array} \right. \begin{array}{l} F\text{-ratio} = 2.397 \\ F\text{-probability} = .0357 \end{array}$$

The alternate hypothesis was accepted regarding age level and the volunteer being forced to better plan his time as a result of the experience. The null hypotheses regarding age group, gender, class level and race could not be rejected statistically at the .05 level of significance.

\* \* \*

**NULL:** The volunteer increasing his/her ability to be responsible for himself/herself and others as a result of the experience is the same:

... for each age level

$$\text{Reject: } \left\{ \begin{array}{ll} SS_B = 5 & SS_W = 1062 \\ \end{array} \right. \begin{array}{l} F\text{-ratio} = 3.920 \\ F\text{-probability} = .0015 \end{array}$$

... for each age group  
(two groups)

$$\left\{ \begin{array}{ll} SS_B = 1 & SS_W = 1035 \\ \end{array} \right. \begin{array}{l} F\text{-ratio} = 5.777 \\ F\text{-probability} = .0164 \end{array}$$

... for each class level

$$\left\{ \begin{array}{ll} SS_B = 4 & SS_W = 1032 \\ \end{array} \right. \begin{array}{l} F\text{-ratio} = 2.601 \\ F\text{-probability} = .0348 \end{array}$$

... for whites as minorities

$$\left\{ \begin{array}{ll} SS_B = 1 & SS_W = 1051 \\ \end{array} \right. \begin{array}{l} F\text{-ratio} = 4.394 \\ F\text{-probability} = .0363 \end{array}$$

The null hypothesis regarding gender and the volunteer increasing his ability to be responsible for himself as a result of the experience could not be rejected statistically at the .05 level of significance. The alternate hypotheses regarding age level, age group, class level and race were accepted.

\* \* \*

**NULL:** The volunteer learning to problem solve as a result of the experience is the same:

|         |                                                                        |                                                                                                       |                                                      |
|---------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------|
|         |                                                                        |                                                                                                       | <u>... for each age level</u>                        |
| Reject: | $\left\{ \begin{array}{l} SS_B = 5 \\ SS_W = 1062 \end{array} \right.$ | $\left\{ \begin{array}{l} F\text{-ratio} = 3.518 \\ F\text{-probability} = .0037 \end{array} \right.$ |                                                      |
|         |                                                                        |                                                                                                       | <u>... for each age group</u><br><u>(two groups)</u> |
|         | $\left\{ \begin{array}{l} SS_B = 1 \\ SS_W = 1035 \end{array} \right.$ | $\left\{ \begin{array}{l} F\text{-ratio} = 4.678 \\ F\text{-probability} = .0308 \end{array} \right.$ |                                                      |
|         |                                                                        |                                                                                                       | <u>... for each class level</u>                      |
|         | $\left\{ \begin{array}{l} SS_B = 4 \\ SS_W = 1032 \end{array} \right.$ | $\left\{ \begin{array}{l} F\text{-ratio} = 2.471 \\ F\text{-probability} = .0431 \end{array} \right.$ |                                                      |

The alternate hypotheses were accepted regarding age level, age group and class level and the volunteer learning to problem solve as a result of the experience. The null hypotheses regarding gender and race could not be rejected statistically at the .05 level of significance.

\* \* \*

**NULL:** The volunteer developing an awareness of the situational/personal differences in others as a result of the experience is the same:

... for males as females

$$\text{Reject: } \left\{ \begin{array}{l} SS_B = 1 \\ SS_W = 1042 \end{array} \right. \quad \begin{array}{l} F\text{-ratio} = 11.991 \\ F\text{-probability} = .0006 \end{array}$$

The alternate hypothesis was accepted regarding gender and the volunteer developing an awareness of the situational/personal differences in others as a result of the experience. The null hypotheses regarding race, age level, age group, and class level could not be rejected statistically at the .05 level of significance in this area.

\* \* \*

**NULL:** The volunteer increasing his/her acceptance of the differences in others as a result of the experience is the same:

... for each class level

$$\text{Reject: } \left\{ \begin{array}{l} SS_B = 4 \\ SS_W = 1032 \end{array} \right. \quad \begin{array}{l} F\text{-ratio} = 2.743 \\ F\text{-probability} = .0275 \end{array}$$

The alternate hypothesis was accepted regarding class level and the volunteer increasing his/her acceptance of others as a result of the experience. The null hypotheses regarding age level, age group, race, and gender and this area could not be rejected statistically at the .05 level of significance.

\* \* \*

**NULL:** The volunteer developing his ability to cooperate with others as a result of the experience is the same:

... for each age level

$$\text{Reject: } \left\{ \begin{array}{l} SS_B = 5 \\ SS_W = 1062 \end{array} \right. \quad \begin{array}{l} F\text{-ratio} = 2.971 \\ F\text{-probability} = .0114 \end{array}$$

The alternate hypothesis was accepted regarding age level and the volunteer developing his ability to cooperate with others as a result of the experience. The null hypotheses regarding age group, class level, gender, and race and this area could not be rejected statistically at the .05 level of significance.

**SUMMARY CHART  
OF REJECTION OF NULL  
AND ACCEPTANCE OF ALTERNATE HYPOTHESIS  
REGARDING EFFECTS OF VOLUNTEER EXPERIENCE  
ON PERSONAL AREAS AND DEMOGRAPHIC VARIABLES**

#5

| Effects on Personal Areas                                  | Age Level | Age Group | Class Level | Gender | Race |
|------------------------------------------------------------|-----------|-----------|-------------|--------|------|
| Increased Awareness of Values                              |           |           |             |        |      |
| Increased Awareness of Skills                              |           |           |             |        |      |
| Developed Self-Confidence                                  |           |           |             |        |      |
| Forced to Plan Time Better                                 | X         |           |             |        |      |
| Gained Personal Feeling of Success and Self-Accomplishment |           |           |             |        |      |
| Increased Ability to be Responsible for Self and Others    | X         | X         | X           |        | X    |
| Learned to Accept Consequences for Actions                 |           |           |             |        |      |
| Learned to take Risks                                      |           |           |             |        |      |
| Learned to Problem-Solve                                   | X         | X         | X           |        |      |

| Effects on Personal Areas                                         | Age Level | Age Group | Class Level | Gender | Race |
|-------------------------------------------------------------------|-----------|-----------|-------------|--------|------|
| Developed Awareness of Situational/Personal Differences in Others |           |           |             | X      |      |
| Developed Awareness of Values of Others                           |           |           |             |        |      |
| Increased Acceptance of Differences in Others                     |           |           | X           |        |      |
| Developed Ability to Cooperate with Others                        | X         |           |             |        |      |
| Improved Communication Skills                                     |           |           |             |        |      |

The use of Research and Investigation Skills in the volunteer experience is the same:

$$\begin{array}{l}
 \text{Reject:} \left\{ \begin{array}{ll}
 \text{SS}_B = 1 & \text{SS}_W = 1044 \\
 \text{SS}_B = 4 & \text{SS}_W = 1035
 \end{array} \right.
 \end{array}$$

... for males as females

F-ratio = 8.956  
F-probability = .0028

... for each class level

F-ratio = 3.902  
F-probability = .0038

The alternate hypotheses were accepted regarding gender and class level and the use of research and investigation skills in the volunteer experience. The null hypotheses regarding age level, age group and race in these areas could not be rejected statistically at the .05 level of significance.

\* \* \*

All null hypotheses regarding age level, age group, class level, gender and race and the use of communication and persuasion skills in volunteer work could not be rejected statistically at the .05 level of significance.

\* \* \*

**NULL:** The Use of Organizational Management Skills in the volunteer experience is the same:

... for males as females

$$\text{Reject: } \left\{ \begin{array}{ll} SS_B = 1 & SS_W = 1041 \end{array} \right. \quad \begin{array}{l} F\text{-ratio} = 6.182 \\ F\text{-probability} = .0131 \end{array}$$

The alternate hypothesis was accepted regarding gender and the use of organizational management skills in the volunteer experience. The null hypotheses regarding age level, age group, class level, and race could not be rejected statistically at the .05 level of significance.

\* \* \*

**NULL:** The use of Design and Planning Skills in the volunteer experience is the same:

... for each class level

$$\text{Reject: } \left\{ \begin{array}{ll} SS_B = 4 & SS_W = 1029 \end{array} \right. \quad \begin{array}{l} F\text{-ratio} = 2.767 \\ F\text{-probability} = .0264 \end{array}$$

The alternate hypotheses were accepted regarding class level and the use of design and planning skills in volunteer work. The null hypotheses regarding age level, age group, race and gender in this area could not be rejected statistically at the .05 level of significance.

\* \* \*

**NULL:** The use of Information Management Skills in the volunteer experience is the same:

$$\begin{array}{l}
 \text{Reject:} \left\{ \begin{array}{ll}
 \text{SS}_B = 5 & \text{SS}_W = 1059 \\
 \text{SS}_B = 4 & \text{SS}_W = 1030 \\
 \text{SS}_B = 1 & \text{SS}_W = 1039
 \end{array} \right.
 \end{array}$$

... for each age level  
 F-ratio = 4.554  
 F-probability = .0004  
 ... for each class level  
 F-ratio = 5.809  
 F-probability = .0001  
 ... for males as females  
 F-ratio = 6.179  
 F-probability = .0131

The alternate hypotheses were accepted regarding age level, class level, and gender and the use of information management skills in community work. The null hypotheses regarding race and age group could not be rejected statistically at the .05 level of significance.

**SUMMARY CHART**  
**OF REJECTION OF THE NULL**  
**AND ACCEPTANCE OF THE ALTERNATE HYPOTHESIS**  
**REGARDING USE OF SKILLS IN VOLUNTEER WORK**  
**AND DEMOGRAPHIC VARIABLES**

#6

| Skill                           | Age<br>Level | Age<br>Group | Class<br>Level | Gender | Race |
|---------------------------------|--------------|--------------|----------------|--------|------|
| Research and<br>Investigation   |              |              | X              | X      |      |
| Communication and<br>Persuasion |              |              |                |        |      |
| Organizational<br>Management    |              |              |                | X      |      |
| Design and Planning             |              |              | X              |        |      |
| Information<br>Management       | X            |              | X              | X      |      |
| Technical and Manual            |              |              |                |        |      |

**COMPARISON OF TRADITIONAL AND  
NON-TRADITIONAL PROGRAMS**

One other aspect of the volunteer experience, which was examined, involved a comparison of 1980-81 survey respondents' answers to questions in areas related to career awareness, career preparation and skill use for six programs. Three programs were related to careers considered traditional for women and non-traditional for men: working with mentally handicapped (Beekman Center), working with foods and nutrition (Expanded Nutrition), and pre-school teaching (Headstart). Three programs were related to careers considered non-traditional for women, but traditional for men: medicine (Ingham Medical Center), marketing (Marketing Aide), and government service (Legislative Aide).

| <u>Programs</u>             | <u>Male</u> | <u>Gender</u> | <u>Female</u> |
|-----------------------------|-------------|---------------|---------------|
| Legislative Aide (75)       | 51.4%       |               | 48.6%         |
| Marketing Aide (6)          | 50.0%       |               | 50.0%         |
| Ingham Medical Center (111) | 45.5%       |               | 54.5%         |
| Beekman (28)                | 10.7%       |               | 89.3%         |
| Expanded Nutrition (16)     | 6.7%        |               | 93.3%         |
| Headstart (22)              | 10.0%       |               | 90.0%         |

The gender participation ratios for these programs differed greatly from the overall program participation ratio (71% women/29% men). Programs considered non-

traditional for women and traditional for men had a 50/50 ratio; programs considered traditional for women and non-traditional for men had a 90/10 ratio.

**VOLUNTEER WORK REQUIRED OR RECOMMENDED BY ACADEMIC UNIT**

| <u>Program</u>        | <u>Yes</u> | <u>No</u> |
|-----------------------|------------|-----------|
| Legislative Aide      | 17.3%      | 82.7%     |
| Marketing Aide        | 16.7%      | 83.3%     |
| Ingham Medical Center | 40.5%      | 59.5%     |
| Beekman               | 76.9%      | 23.6%     |
| Expanded Nutrition    | 31.3%      | 68.8%     |
| Headstart             | 40.9%      | 59.1%     |

Whether or not the participation was required was not related to the traditional or non-traditional nature of the program. The conclusion was reached that the individual nature of the program and the academic curriculum requirements to which it was related had more impact in this area. This same conclusion was also reached regarding the comparison of the importance of the experience in areas of career awareness and career planning, and skill use in traditional and non-traditional programs. The data are shown in the following charts.

**VOLUNTEER EXPERIENCE AFFECTED CAREER PLANS**

| <u>Program</u>   | <u>Confirmed</u> | <u>Questioned</u> | <u>Changed</u> | <u>Of No Effect</u> |
|------------------|------------------|-------------------|----------------|---------------------|
| Legislative Aide | 36.1%            | 20.8%             | 1.4%           | 41.7%               |
| Marketing Aide   | 83.3%            | 0%                | 16.7%          | 0%                  |

**VOLUNTEER EXPERIENCE AFFECTED CAREER PLANS (cont.)**

| <u>Program</u>        | <u>Confirmed</u> | <u>Questioned</u> | <u>Changed</u> | <u>No Effect</u> |
|-----------------------|------------------|-------------------|----------------|------------------|
| Ingham Medical Center | 62.7%            | 19.1%             | 4.5%           | 13.6%            |
| Beekman               | 70.4%            | 7.4%              | 3.7%           | 18.5%            |
| Expanded Nutrition    | 56.3%            | 6.3%              | 12.5%          | 25.0%            |
| Headstart             | 36.4%            | 9.1%              | 13.6%          | 40.9%            |

**IMPORTANCE OF EXPERIENCE IN GAINING  
BROADER KNOWLEDGE OF CAREER AND JOB REQUIREMENTS**

| <u>Program</u>        | <u>Extremely</u> | <u>Somewhat</u> | <u>Of Little</u> | <u>Of No</u> |
|-----------------------|------------------|-----------------|------------------|--------------|
| Legislative           | 41.3%            | 42.7%           | 12.0%            | 4.0%         |
| Marketing Aide        | 66.7%            | 16.7%           | 16.7%            | 0%           |
| Ingham Medical Center | 45.9%            | 34.9%           | 11.0%            | 8.3%         |
| Beekman               | 71.4%            | 25.0%           | 3.6%             | 0%           |
| Expanded Nutrition    | 68.8%            | 31.3%           | 0%               | 0%           |
| Headstart             | 50.0%            | 27.3%           | 13.6%            | 9.1%         |

**IMPORTANCE OF EXPERIENCE IN FOCUSING CAREER CHOICES**

| <u>Program</u>        | <u>Extremely</u> | <u>Somewhat</u> | <u>Of Little</u> | <u>Of No</u> |
|-----------------------|------------------|-----------------|------------------|--------------|
| Legislative Aide      | 22.7%            | 40.0%           | 29.3%            | 8.0%         |
| Marketing Aide        | 33.3%            | 50.0%           | 0%               | 16.7%        |
| Ingham Medical Center | 28.4%            | 45.0%           | 16.5%            | 10.1%        |
| Beekman               | 46.2%            | 46.2%           | 3.8%             | 3.8%         |
| Expanded Nutrition    | 25.0%            | 62.5%           | 12.5%            | 0%           |
| Headstart             | 40.9%            | 27.3%           | 13.6%            | 18.2%        |

**IMPORTANCE IN GAINING FIRST-HAND EXPOSURE TO  
WORK ENVIRONMENT**

| <u>Program</u>        | <u>Extremely</u> | <u>Somewhat</u> | <u>Of Little</u> | <u>Of No</u> |
|-----------------------|------------------|-----------------|------------------|--------------|
| Legislative Aide      | 52.0%            | 38.7%           | 5.3%             | 4.9%         |
| Marketing Aide        | 66.7%            | 33.3%           | 0%               | 0%           |
| Ingham Medical Center | 70.3%            | 19.8%           | 6.3%             | 3.6%         |
| Beekman               | 81.5%            | 14.8%           | 3.7%             | 0%           |
| Expanded Nutrition    | 50.0%            | 37.5%           | 12.5%            | 0%           |
| Headstart             | 45.5%            | 36.4%           | 9.1%             | 9.1%         |

**IMPORTANCE IN BECOMING AWARE OF HOW EDUCATION  
EXPERIENCE IS SERVING AS PREPARATION FOR CAREER**

| <u>Program</u>        | <u>Extremely</u> | <u>Somewhat</u> | <u>Of Little</u> | <u>Of No</u> |
|-----------------------|------------------|-----------------|------------------|--------------|
| Legislative Aide      | 28.0%            | 40.0%           | 21.3%            | 10.7%        |
| Marketing Aide        | 66.7%            | 33.3%           | 0%               | 0%           |
| Ingham Medical Center | 27.0%            | 42.3%           | 20.7%            | 9.9%         |
| Beekman               | 50.0%            | 39.3%           | 10.7%            | 0%           |
| Expanded Nuturition   | 31.3%            | 50.0%           | 18.8%            | 0%           |
| Headstart             | 23.8%            | 52.4%           | 14.3%            | 9.5%         |

**IMPORTANCE IN GAINING AWARENESS OF RELATIONSHIP BETWEEN  
JOB REQUIREMENTS AND PERSONAL VALUES**

| <u>Program</u>        | <u>Extremely</u> | <u>Somewhat</u> | <u>Of Little</u> | <u>Of No</u> |
|-----------------------|------------------|-----------------|------------------|--------------|
| Legislative           | 41.9%            | 31.1%           | 21.6%            | 5.4%         |
| Marketing Aide        | 83.3%            | 16.7%           | 0%               | 0%           |
| Ingham Medical Center | 39.6%            | 34.2%           | 19.8%            | 6.3%         |
| Beekman               | 53.6%            | 39.3%           | 3.6%             | 3.6%         |
| Expanded Nutrition    | 25.0%            | 56.3%           | 12.5%            | 6.3%         |
| Headstart             | 42.9%            | 33.3%           | 19.0%            | 4.8%         |

**USE OF SKILLS**  
**RESEARCH**

| <u>Program</u>        | <u>Very Often</u> | <u>Fairly Often</u> | <u>Some-times</u> | <u>Rarely</u> | <u>Never</u> |
|-----------------------|-------------------|---------------------|-------------------|---------------|--------------|
| Legislative Aide      | 60.3%             | 26.0%               | 6.8%              | 2.7%          | 4.1%         |
| Marketing Aide        | 83.3%             | 16.7%               | 0%                | 0%            | 0%           |
| Ingham Medical Center | 19.3%             | 24.8%               | 18.3%             | 8.3%          | 29.4%        |
| Beekman               | 10.7%             | 17.9%               | 10.7%             | 10.7%         | 50.0%        |
| Expanded Nutrition    | 37.5%             | 31.3%               | 18.8%             | 6.3%          | 6.3%         |
| Headstart             | 9.5%              | 4.8%                | 0%                | 23.8%         | 61.9%        |

**COMMUNICATION & PERSUASION**

| <u>Program</u>        | <u>Very Often</u> | <u>Fairly Often</u> | <u>Some-times</u> | <u>Rarely</u> | <u>Never</u> |
|-----------------------|-------------------|---------------------|-------------------|---------------|--------------|
| Legislative Aide      | 37.5%             | 30.6%               | 19.4%             | 6.9%          | 5.6%         |
| Marketing Aide        | 66.7%             | 16.7%               | 0%                | 16.7%         | 0%           |
| Ingham Medical Center | 11.9%             | 23.9%               | 34.9%             | 20.2%         | 9.2%         |
| Beekman               | 25.0%             | 46.4%               | 10.7%             | 10.7%         | 7.1%         |
| Expanded Nutrition    | 25.0%             | 18.8%               | 31.3%             | 12.5%         | 12.5%        |
| Headstart             | 28.6%             | 38.1%               | 19.0%             | 14.3%         | 0%           |

**ORGANIZATIONAL MANAGEMENT**

| <u>Program</u>        | <u>Very Often</u> | <u>Fairly Often</u> | <u>Some-times</u> | <u>Rarely</u> | <u>Never</u> |
|-----------------------|-------------------|---------------------|-------------------|---------------|--------------|
| Legislative Aide      | 11.0%             | 12.3%               | 24.7%             | 31.5%         | 20.5%        |
| Marketing aide        | 33.3%             | 66.7%               | 0%                | 0%            | 0%           |
| Ingham Medical Center | 10.2%             | 9.3%                | 12.0%             | 24.1%         | 44.4%        |
| Beekman               | 32.1%             | 28.6%               | 17.9%             | 14.3%         | 7.1%         |
| Expanded Nutrition    | 25.0%             | 25.0%               | 12.5%             | 18.8%         | 18.8%        |
| Headstart             | 33.3%             | 14.3%               | 33.3%             | 4.8%          | 14.3%        |

**DESIGN AND PLANNING**

| <u>Program</u>        | <u>Very Often</u> | <u>Fairly Often</u> | <u>Some-times</u> | <u>Rarely</u> | <u>Never</u> |
|-----------------------|-------------------|---------------------|-------------------|---------------|--------------|
| Legislative Aide      | 13.9%             | 15.3%               | 29.2%             | 20.8%         | 20.8%        |
| Marketing Aide        | 66.7%             | 33.3%               | 0%                | 0%            | 0%           |
| Ingham Medical Center | 3.7%              | 7.4%                | 8.3%              | 25.9%         | 54.6%        |
| Beekman               | 11.1%             | 11.1%               | 18.5%             | 37.0%         | 22.2%        |
| Expanded Nutrition    | 25.0%             | 43.8%               | 12.5%             | 12.5%         | 6.3%         |
| Headstart             | 4.8%              | 0%                  | 23.8%             | 23.8%         | 4.6%         |

**INFORMATION MANAGEMENT**

| <u>Program</u>        | <u>Very Often</u> | <u>Fairly Often</u> | <u>Some-times</u> | <u>Rarely</u> | <u>Never</u> |
|-----------------------|-------------------|---------------------|-------------------|---------------|--------------|
| Legislative Aide      | 45.2%             | 39.7%               | 5.5%              | 4.1%          | 5.5%         |
| Marketing Aide        | 100.0%            | 0%                  | 0%                | 0%            | 0%           |
| Ingham Medical Center | 3.7%              | 16.7%               | 13.0%             | 10.2%         | 56.5%        |
| Beekman               | 7.4%              | 7.4%                | 18.5%             | 11.1%         | 55.6%        |
| Expanded Nutrition    | 31.3%             | 25.0%               | 31.3%             | 6.3%          | 6.3%         |
| Headstart             | 4.8%              | 9.5%                | 9.5%              | 23.8%         | 52.4%        |

**TECHNICAL AND MANUAL**

| <u>Program</u>        | <u>Very Often</u> | <u>Fairly Often</u> | <u>Some-times</u> | <u>Rarely</u> | <u>Never</u> |
|-----------------------|-------------------|---------------------|-------------------|---------------|--------------|
| Legislative Aide      | 4.1%              | 12.3%               | 30.1%             | 26.0%         | 27.4%        |
| Marketing Aide        | 0%                | 50.0%               | 33.3%             | 0%            | 16.7%        |
| Ingham Medical Center | 26.6%             | 21.1%               | 18.3%             | 15.6%         | 18.3%        |
| Beekman               | 33.3%             | 18.5%               | 25.9%             | 3.7%          | 18.5%        |
| Expanded Nutrition    | 6.3%              | 18.8%               | 18.8%             | 18.8%         | 37.5%        |
| Headstart             | 14.3%             | 14.3%               | 9.5%              | 9.5%          | 52.4%        |

**OVERALL RATING**

| <u>Program</u>        | <u>Excellent</u> | <u>Good</u> | <u>Fair</u> | <u>Poor</u> |
|-----------------------|------------------|-------------|-------------|-------------|
| Legislative Aide      | 47.9%            | 37.0%       | 9.6%        | 5.5%        |
| Marketing Aide        | 83.3%            | 16.7%       | 0%          | 0%          |
| Ingham Medical Center | 45.5%            | 39.1%       | 12.7%       | 2.7%        |
| Beekman               | 75.0%            | 21.4%       | 0%          | 3.6%        |
| Expanded Nutrition    | 50.0%            | 25.0%       | 18.8%       | 6.3%        |
| Headstart             | 54.5%            | 45.5%       | 0%          | 0%          |

**SUMMARY**

This chapter has contained a review of the results of participants' answers to 1977-78, 1978-79, 1979-80, and 1980-81 survey questions regarding demographics, motivation, effect on career plans and major selection, nature of academic requirement, importance of the experience to areas of career awareness and planning, and skill use. Results of the 1980-81 survey were cross tabulated and the relationship between variables analyzed using Chi-Square and Kendall's Tau Correlational statistics. A null hypothesis was established for each set of variables and accepted or rejected at the .05 level of significance.

In addition, a separate null hypothesis was established and examined by the analysis of variance for the participants' answers to the 1980-81 survey questions regarding academic requirement, motivation, effect on career

plans and major selection, career awareness, career preparation, personal awareness and development, and use of skills in relation to age, gender, class and ethnicity. The .05 level of significance was used to accept or reject the null. If the null was rejected the alternate hypothesis was accepted.

Finally, a comparison of 1980-81 participants' answers to questions in areas related to career awareness, career preparation, and skill use for three programs related to careers considered non-traditional for women were compared with participants answers for programs considered traditional for women.

Chapter V includes a review of the conclusions which were reached based on data presented in Chapter IV. In addition, suggestions for future studies are included.

## CHAPTER V

### **SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS**

#### Overview of the Study

This study examined the relationship between community work experiences and selected measures of career development of Michigan State University students, who participated in programs coordinated by the MSU Service-Learning Center, during 1977-78, 1978-79, 1979-80, and 1980-81 academic years. This study also sought to determine whether or not a service-learning program was of value at the postsecondary level.

A computer card survey instrument was mailed in each academic year to every student who participated in a service-learning experience provided by the Service-Learning Center. Each survey contained demographic questions, as well as ones relating to career awareness, career preparation, career decision making and major field selection. During 1980-81, the survey instrument was expanded to two cards to allow space for additional questions regarding personal values and skills. Over the four year period, 10,352 surveys were delivered to participants. Four thousand three hundred and eight surveys were completed and returned, representing an overall return rate of 41.62%.

The analysis of data from each of the surveys was accomplished by means of optical scan, using the Statistical Package for the Social Sciences (SPSS) as adopted for the

CDC 6500 computer at Michigan State University. Answers to each question were computer tabulated by count (absolute frequency) and percentages (relative frequency). Tables were constructed to assist with the data analysis.

Analysis of the demographic information provided by the participants regarding gender, age, race and class level were carried out by comparing absolute frequencies and calculating the means and standard deviations. The differences were well within the established .05 level of significance. A conclusion was made that there were no appreciable demographic differences between the participants during these years. Therefore the data over the four year period could be grouped together.

The construction of cross tabulation tables provided a means of determining the correlation between two variables. Chi Square and Kendall's Tau statistical techniques were used to determine correlation at the .05 level of significance. In addition the analysis of variance was used to identify whether the experience affected the 1980-81 participants differently by age, gender, race or class level. A separate comparison of the effects of participation in traditional and non-traditional programs was carried out.

### Summary and Conclusions

As a result of this study the following conclusions were reached:

- . More women than men (2/1) participated in the community work experiences, but the porporation of male participants grew over the four year period.
- . Women were more apt to participate in programs considered non-traditional for women (50/50); men were less apt to participate in programs considered non-traditional for men. This percentage consisted of only 10% of individuals who were men.
- . The two major motivations for becoming involved in a service-learning opportunity were to gain experience in a career field and to help people. Pragmatic motivations increased over the four year period.
- . More than half of the participants affirmed, changed or questioned their career choice; almost half affirmed, changed or considered changing their major.
- . The majority of the participants felt that the experience was important to:
  - a) gaining support from others for career decisions,
  - b) providing broader knowledge for career and job requirements,
  - c) gaining first-hand exposure to the work environment,
  - d) gaining awareness of the relationship between job requirements and personal values, and
  - e) becoming aware of how education serves as a preparation for career.
- . The experience made courses more meaningful, helped participants identify courses which would be useful to their career, and helped them apply coursework knowledge and skills to their coursework.
- . Through the experience the participants:
  - a) increased their awareness of their values,
  - b) increased their awareness of their skills,
  - c) developed self-confidence,

- d) gained personal feelings of success and self-accomplishment,
  - e) developed an awareness of situational and personal differences in others, and
  - f) improved communications skills (listening, articulation, presenting ideas).
- . Women were more apt to cross the stereotypic barrier into non-traditional careers than were men. Their motivation to become involved was different than men, particularly in relation to academics. They were more likely to view the community experience as a help to gaining admission into their major and eventually into graduate or professional school.
- . Women were more likely to have the experience affect their career plans, but were less likely to change their major than were men.
- . Women found that the experience had a more profound effect in certain areas of career and personal development than did men:
  - broadening their knowledge of career and job requirements,
  - providing first hand exposure to the work environment,
  - making a link between education and career,
  - focusing their career choices,
  - increasing awareness of the relationship between job requirements and personal values, and
  - providing first hand exposure to the work environment.
- . Minorities were less apt to become involved in community work experiences, but once involved, were more apt to respond to the survey than their white counterparts. Racial differences were also noted in motivation and the impact of the experience. Minorities found the experience to be more important to:
  - gaining awareness of the relationship between job requirements and personal values,
  - becoming known to people who could recommend him/her to potential employers,

- identifying courses useful to career,
  - applying coursework to community problems, and
  - using and developing their skills.
- . Younger and lower class students were more likely to become involved to explore possible career choices and select majors which would lead to these careers. They wanted to know what the world of work was really like and they sought support from others for the choices they made. The experience helped younger students learn to problem solve and become aware of their values in relation to the work environment. It also provided a setting to use and build skills.
  - . Older students were more interested in building skills, gaining experience, and developing professional contacts. They were also better able to transfer knowledge and skills between school and community.

### Discussion and Recommendations

Richard Graham, of Brookings Institute, describes a good volunteer experience as manageable confrontation with novel responsibility, with the added proviso that experience earns esteem (Graham, 1975). He states that development of self requires these manageable confrontations to provide opportunities for changing roles and the changing structure of responsibilities. Thus, moving from carrying out orders, to participating in their formulation, to looking out for others, will provide this change in role and responsibility which will help foster true development. Most part-time jobs available to college students include such tasks as working in fast-food establishments, filing, or dorm maintenance. These positions require an entirely different level of responsibility than would volunteer positions

tutoring children, helping mental health patients, or researching environmental concerns.

College service-learning placements provide these manageable confrontations which held the student translate interests in possible career areas into knowledge of the fit between occupation and self. Employers are looking for students with experience, as well as sound academic preparation. Students involved in service-learning opportunities have both. Often times, the classroom has shielded itself from outside interference. The students are taught many theories, concepts, and ideas, yet are rarely given the opportunity or encouragement to test them, outside the classroom. Solving problems becomes an academic exercise with few responsibilities for wrong decisions. Bloom, et al., point out the value of service-learning relative to course curricula in their handbook, Taxonomy of Educational Objectives (1975, p.123):

If the situations described by the objective... are to involve applications...then they must either be situations new to the student or situations containing new elements as compared to the situation in which the abstraction was learned...Ideally, we are seeking a problem which will test the extent to which the individual has learned to apply the abstraction in a practical way. This means that the problems should have some relation to the situations in which he may ultimately be expected to apply the abstraction.

Experience then becomes a primary component of learning.

The results of this study would bear out Ginzberg's developmental theory, which stated that the process of

occupational decision making can be divided into three periods: fantasy, tentative, and realistic. Younger students are more apt to be in the tentative stage in exploring possible career choices. Older students are gaining experience in a career field, developing professional contacts and making realistic choices.

It would seem that growth in the area of career awareness is essential for younger students and for women. It is possible that "cold water shock", as Tideman puts it, can make a student change his mind. This is certainly not all bad, particularly if it occurs early-on in a student's academic career. Additionally, although the participant may not focus his career choices, he, in effect, may be broadening these choices by coming in contact with a number of careers within a work setting, which he didn't even know existed. For example, a participant may have in mind a career in medicine and be thinking of, specifically, a career as a doctor or nurse. When he gets into a hospital situation, he may discover that there are some two hundred and fifty separate medically-related careers, that are on-going within a hospital setting at any given time.

The experience had the most significant impact on women, minorities, and younger students. To a greater degree, it increased their awareness of and exposure to "the work of work" and provided that critical link between college and career than for whites, males and older students. In examining the reasons behind these results, a

conclusion can be reached that these special groups were more naive about career possibilities and had less expectations at the start. Many women and minorities have been victims of cultural stereotyping. These experiences open "doors of possibility" for these groups in particular and give them hope that dreams are really attainable.

In this study the advisors emerged as a significant source of academic referral. It is critical that they be sensitive to these stereotypic barriers, and make their suggestions and recommendations based on a student's interests and capabilities, not on predetermined biases. Their role should be to encourage students to make tentative major and career choices and to test the compatibility of their choices with reality. The college education, which leads eventually to a life long career, is becoming increasingly expensive. It is better that a student discover early-on in his academic preparation, that a career, which he has chosen, is a proper career for him. Since the first two years of college are primarily comprised of general courses, it is better that a student find out if he has chosen the appropriate major within those first two years. The closer to graduation one gets, the more costly in time and money changes become.

The advisor can help the student evaluate the service-learning experience to decide whether he enjoyed the work, the environment, and those with whom he worked. This evaluation can help him decide whether this is the field for

him, or whether he should seek additional experiences in other areas. It is particularly important that advisors be skilled and knowledgeable in assisting students with this evaluative process. Additional training and close cooperation with the staff of the center which places the students in the community work experiences is highly recommended.

In addition, increased effort should be given to the cooperative relationship between a service-learning center, the career counseling center, and the academic advisors. Each of these entities should encourage students to seek experience, to make the most of that experience, and to evaluate that experience in terms of his aptitudes, interests, and skills within the possibilities of the "world of work". This cooperative vocational guidance can be the catalytic agent which helps students focus the academic world and the world of work. These efforts would confirm Tideman's hypothesis that those people, whose own meaning is most consistent with that found in the world of work will find greatest satisfaction and success in their work. Additional emphasis should be placed on experiences, such as these, which allow students opportunities to try out adult roles, test the reality of their self-concept, and have an opportunity for personal, as well as academic growth.

Increased emphasis needs to be given to the area of skill use and skill development. The academic curriculum provides much in the way of cognitive information to

students, but very little in the area of personal interactions and goal accomplishment. Thus, an accounting major may learn a great deal about balance sheets, double entry bookkeeping, debits, credits, etc., but very little in how to present this information to other individuals. An engineering student learns a great deal about structural materials and design, but very little on how to organize a project. An advisor can encourage students with a lot of technical knowledge, but very little in human relation skills, to get involved in a service-learning opportunity to increase these skills. Skills are also translatable across professions. The abilities to seek knowledge, express ideas, and plan and organize are essential to success in the world of work.

In the fall of 1985, Dr. Howard Swearer, president of Brown University, and the Education Commission of the United States spearheaded the founding of a nationwide organization called Campus Contact: The Project for Public and Community Service. Leaders and their staffs from over 50 colleges met in March, 1986 to plan how to make this operational. The Minimum Expectations for Membership, which were reviewed by the executive committee in December, 1986 in New York, determined the policies which would help an institution to move ahead in its efforts to foster public service on campuses. Member organizations are encouraged to:

Explore links between community service and the curriculum. Academic classes that encourage service-learning include those with a field

study/work component - such as work in a mental health agency for a psychology major - those including a research project where the community is a source of information, and other courses where the student learns through addressing social problems within a community.

This study has shown that students' motivations to become involved in community opportunities are both altruistic and pragmatic. Volunteerism has changed significantly since the early days of "Lady Bountifuls" who gave of goods and money to those less fortunate, but rarely had direct association with those whom they helped. Service today must be symbiotic in nature, where a mutually beneficial arrangement exists. Society benefits through students knowledge, energy and creative imagination. The student gains by the experience he receives and the personal sense of accomplishment and giving he achieves. Service-learning is, after all, service in exchange for learning.

The mission of colleges and universities, particularly land-grant institutions, involves teaching, research and public service. Their graduates go out into the world and, hopefully, make contributions to the betterment of society, which will reflect favorably upon the institution which educated them.

The benefits to the individual student are many, as have been demonstrated by this study. The benefits to a college and university are also numerous. In addition to providing an added learning dimension to the traditional classroom, the service-learning experience allows the university or college to fulfill its service mission to the

community, to check the relevance of education with real-life situations, and to update theory with practical knowledge.

Inter-relationships and inter-dependency between academic institutions and the world will be essential in the future. Developments beyond the classroom will enhance education for generations to come, according to Boyer (1977). Present Wofford, of the State University of New York, eloquently articulated the value of education in a symbiotic relationship with the experience:

The tragedy of the world is that those who are imaginative have but slight experience, and those who are experienced have feeble imaginations. Fools act on imagination with knowledge; pedants act on knowledge without imagination. The task of a university is to weld together imagination and experience.

#### Recommendations for Future Study

Although this study provided ample data to validate the value of the service-learning experience to nearly 10,000 Michigan State University students, who participated in these experiences from 1977 through 1981, there are several additional studies which should be undertaken.

A study using the pre-test/post-test design would measure the actual changes in students' levels of career awareness, career development, and use of skills as a result of the experience, rather than the students' self-perception of these changes.

It would also be interesting to do a comparison study of career development of students who have participated in

the service-learning experiences with those in the same colleges or majors who have not. This study could be longitudinal in nature and conducted during college years as well as one, two or five years after graduation.

Additionally, a study comparing students who participated in community work experiences with those who did not regarding the area of changing of their major and/or their career choices is recommended. Finally, a study would be interesting which compares the extent of community service involvement, several years after graduation, of individuals, who participated in those types of experiences while in college, with those who did not.

These studies would provide additional evidence of the value of service-learning experiences to the college and to the community.

## **APPENDICES**

## **APPENDIX A**

# QUESTIONNAIRE APPENDIX A

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Sex: ☐ Male ☐ Female

Present Age: ☐ 19 or younger ☐ 22  
☐ 20 ☐ 23 - 25  
☐ 21 ☐ 26 or older

College:

|                                                  |                                              |
|--------------------------------------------------|----------------------------------------------|
| <input type="checkbox"/> Agriculture & Nat. Res. | <input type="checkbox"/> James Madison       |
| <input type="checkbox"/> Arts & Letters          | <input type="checkbox"/> Justin Morrill      |
| <input type="checkbox"/> Business                | <input type="checkbox"/> Lyman Briggs        |
| <input type="checkbox"/> Comm. Arts & Letters    | <input type="checkbox"/> Natural Science     |
| <input type="checkbox"/> Education               | <input type="checkbox"/> Social Science      |
| <input type="checkbox"/> Engineering             | <input type="checkbox"/> University College  |
| <input type="checkbox"/> Human Ecology           | <input type="checkbox"/> Urban Development   |
| <input type="checkbox"/> Human Medicine          | <input type="checkbox"/> Veterinary Medicine |
|                                                  | <input type="checkbox"/> Other               |

Major at the time of volunteering: \_\_\_\_\_

Classification at time of volunteering:

☐ Freshman ☐ Junior ☐ Graduate  
☐ Sophomore ☐ Senior ☐ Special ☐ Other

Which terms did you volunteer during the 1977-78 academic year?  
☐ Fall 1977 ☐ Winter 1978 ☐ Spring 1978

How many terms (including this term) have you volunteered as an MSU student?  
☐ One ☐ Two ☐ Three ☐ Four ☐ Five or more

Name of the volunteer program(s) in which you participated this year: \_\_\_\_\_

How did you learn about the Office of Volunteer Programs? (mark only one)

☐ State News ☐ Classroom ☐ Friends ☐ Radio  
☐ Poster ☐ Advisor ☐ Dorm ☐ Other

If your volunteer work was recommended by any academic unit on campus, please mark one of the following: (mark as many as apply)

|                                                            |          |
|------------------------------------------------------------|----------|
| <input type="checkbox"/> course requirement or option      | (course) |
| <input type="checkbox"/> suggested by my professor         | (name)   |
| <input type="checkbox"/> recommended by my advisor         | (name)   |
| <input type="checkbox"/> required for admission into major | (major)  |
| <input type="checkbox"/> required as part of major         | (major)  |

What motivated you to apply for a volunteer position: (mark as many as apply)

☐ course credit  
☐ to gain admission into my major  
☐ desire to help people  
☐ to gain experience in my career field  
☐ to develop skills ☐ to have something to do  
☐ to meet people ☐ to develop new contacts  
☐ other \_\_\_\_\_

Which was most helpful to you in choosing your volunteer program? (mark only one)

☐ Staff ☐ Orientation ☐ Job Description  
☐ Friends ☐ Agency Visit

In what way did your volunteer experience affect your career plans? (mark only one)

☐ no effect  
☐ questioned my previous choice  
☐ changed my career plans  
☐ affirmed my previous choice

Did your volunteer work have any affect on your major selection? (mark only one)

147

- ☐ affirmed my major selection
- ☐ changed my major selection
- ☐ made me think about selecting a new major
- ☐ had no affect

Did your volunteer experience have any affect on the rest of your university experience? (mark as many as apply)

- ☐ made some of my courses more meaningful
- ☐ no, it did not change anything
- ☐ forced me to plan my time better
- ☐ had a hard time keeping up in my classes because of time spent in volunteering
- ☐ helped me to identify courses which I might take which would be useful in my career

Rate the importance of your volunteer experience in relation to career awareness and/or preparation (mark only one per row) EV=extremely valuable SV=somewhat valuable LV=of little value NV=of no value

- a. Support from others for career decisions . . . . . EV SV LV NV
- b. Broader knowledge of careers and job requirements . . . . . EV SV LV NV
- c. Narrowed my career interests . . . . . EV SV LV NV
- d. Gained first hand exposure to work environment and personnel in a particular interest field . . . . . EV SV LV NV
- e. Became known to influential people in my field who could refer me to appropriate employers . . . . . EV SV LV NV
- f. Became realistically aware of how my education experience is serving as preparation for work opportunities EV SV LV NV
- g. Awareness of fit between job requirements and personal values and skills . . . . . EV SV LV NV

Rate the services provided by the Office of Volunteer Programs (mark only one per row) VS=very satisfied S=satisfied D=dissatisfied VS=very dissatisfied NA=not applicable

- Helpfulness of staff . . . VS S D VD NA
- Accurate job description . . VS S D VD NA
- Adequate orientation . . . VS S D VD NA
- Adequate transportation . . VS S D VD NA
- Contact with student coord. . VS S D VD NA

Please rate your experience at the volunteer site at which you worked (mark only one per row)

- Helpfulness of agency staff VS S D VD NA
- Adequate supervision . . . VS S D VD NA
- Adequate training . . . . VS S D VD NA
- Meaningful tasks to do . . VS S D VD NA
- Acceptance and support . . VS S D VD NA
- Recognition for my efforts . VS S D VD NA

Overall, how would you rate your experience as an MSU volunteer?

- ☐ Excellent ☐ Good ☐ Fair ☐ Poor

Would you recommend the volunteer program in which you worked to any of your friends or classmates?

- ☐ Yes ☐ No

Next year, do you plan to continue your volunteer experience?

- ☐ Yes, in the same program ☐ Yes, but in a different program
- ☐ No, I do not intend to volunteer ☐ No, I am graduating

COMMENTS

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## **APPENDIX B**

APPENDIX B

## SERVICE-LEARNING CENTER

## QUESTIONNAIRE

1. What is your present age?  
☒ 19 or younger ☒ 20 ☒ 21  
☒ 22 ☒ 23 to 25 ☒ 26 or older
2. What is your present class level?  
☒ freshman ☒ sophomore ☒ junior  
☒ senior ☒ graduate ☒ special
3. Sex: ☐ male ☐ female
4. Ethnic origin: ☒ Black ☒ Oriental  
☒ Hispanic ☒ White  
☒ Native American ☒ Other
5. College: ☐ Engineering ☐ Nursing  
☐ Agriculture & Nat. Resources ☐ Human Ecology ☐ Social Science  
☐ Arts & Letters ☐ Human Medicine ☐ Urban Development  
☐ Business ☐ James Madison ☐ Univ. Coll. Undgrd. Div.  
☐ Communication Arts & Sciences ☐ Lyman Briggs ☐ Veterinary Medicine  
☐ Education ☐ Natural Science ☐ Other
6. What was your major at the time you did your volunteer work?
- 
7. In which terms during the 1980-1981 year were you a volunteer through the Service-Learning Center?  
☐ Summer 1980 ☐ Fall 1980 ☐ Winter 1981 ☐ Spring 1981
8. How many total terms (including this one) have you volunteered through the Service-Learning Center?  
☐ One ☐ Two ☐ Three ☐ Four ☐ Five or more
9. Please list the volunteer program in which you participated this year. If you participated in more than one, please list all of them.
- 
- 
- 
10. You should have received a separate questionnaire for each volunteer program you participated in. Questions 1 - 9 should have the same answers in each case. For the remaining questions, however, your answers may be different for different programs. Please write in below the name of the program which you are responding to in this particular questionnaire. Then answer questions 11 - 27 based on your experiences in that program.
- 
- 
11. From which of the following sources did you FIRST learn about the Service-Learning Center? (MARK ONLY ONE)
- |                                                         |                                                              |                                              |
|---------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------|
| <input checked="" type="checkbox"/> residence halls     | <input checked="" type="checkbox"/> classroom presentation   | <input checked="" type="checkbox"/> poster   |
| <input checked="" type="checkbox"/> State News          | <input checked="" type="checkbox"/> academic advisor/faculty | <input checked="" type="checkbox"/> brochure |
| <input checked="" type="checkbox"/> student coordinator | <input checked="" type="checkbox"/> friends                  |                                              |

PLEASE TURN THIS CARD OVER AND CONTINUE ANSWERING  
 (face 1)

## CARD ONE, PAGE 2

12. Was your volunteer work recommended or required by any academic unit? ☒ yes ☐ no

13. If your answer to question 12 was "yes", indicate below the nature of the recommendation(s) and requirement(s). MARK AS MANY AS APPLY

- ☒ required by major ☒ suggested by my advisor ☒ course requirement  
☒ required as part of major ☒ suggested by an instructor ☒ course option

14. What motivated you to apply for a volunteer position? MARK AS MANY AS APPLY

- ☒ 1 to complete part of a course requirement  
☒ 2 to gain independent study/internship/field experience credit  
☒ 3 to gain admission to my major  
☒ 4 to gain admission into graduate or professional school  
☒ 5 to explore a possible career choice  
☒ 6 to gain experience in career field  
☒ 7 to develop professional contacts  
☒ 8 to help people  
☒ 9 to socialize with others  
☒ 10 to have something to do in my leisure time  
☒ 4 other (please write in below)

15. Which of the following sources was MOST helpful to you in selecting your volunteer program? (MARK ONLY ONE)

- ☒ SLIC staff ☒ program description ☐ friends  
☒ orientation ☒ student coordinator ☒ agency visit

16. In what way did your volunteer experience affect your career plans? (MARK ONLY ONE)

- ☒ confirmed my previous choice ☒ changed my previous choice  
☒ questioned my previous choice ☒ had no effect

17. In what way did your volunteer experience affect your major selection? (MARK ONLY ONE)

- ☒ confirmed my previous choice ☒ changed my major selection  
☒ made me think about selecting a new major ☒ had no effect

18. Rate the importance of your volunteer experience in relation to career awareness. (MARK ONLY ONE PER ROW)

EI = extremely important SI = somewhat important  
 LI = of little importance NI = of no importance

- a. support from others for career decisions EI SI LI NI  
 b. broader knowledge of career and job requirements EI SI LI NI  
 c. focussed my career choices EI SI LI NI

4 3 2 1

19. Rate the importance of your volunteer experience in relation to career preparation. (MARK ONLY ONE PER ROW)

- a. gained first-hand exposure to work environment EI SI LI NI  
 b. became known to people in my field who could recommend me to potential employers EI SI LI NI  
 c. became aware of how my education experience is serving as preparation for career EI SI LI NI  
 d. gained awareness of the relationship between job requirements and personal values EI SI LI NI

4 3 2 1

PLEASE CONTINUE ANSWERING ON CARD TWO

## CARD TWO, PAGE 3

20. What effect did your volunteer experience have on each of the following? (MARK AS MANY AS APPLY)

- ☐ made some of my courses more meaningful
- ☐ helped me identify courses I could take which would be useful to my career
- ☐ made keeping up with my classes difficult because of the time spent volunteering
- ☐ affected my motivation to learn, participate, and achieve in my classes
- ☐ I was able to apply coursework knowledge/skills to the community
- ☐ I was able to apply community knowledge/skills to coursework

21. Through my volunteer experiences I have:  
MARK AS MANY AS APPLY

- 1 ☐ increased my awareness of my values
- 2 ☐ increased my awareness of my skills
- 3 ☐ developed my self-confidence
- 4 ☐ been forced to better plan my time
- 5 ☐ gained a personal feeling of success and self-accomplishment
- 6 ☐ increased my ability to be responsible for myself and others
- 7 ☐ learned to accept the consequences of my actions
- 8 ☐ learned to take risks
- 9 ☐ learned to problem-solve
- 10 ☐ developed my awareness of the situational/personal differences in others
- 11 ☐ developed my awareness of the values of others
- 12 ☐ increased my acceptance of differences in others
- 13 ☐ developed my ability to cooperate with others
- 14 ☐ improved my communication skills (listening, articulating, presenting ideas)

22. Check how often you have used each of the following skills in your volunteer work (MARK ONE IN EACH ROW)

5 = very often    4 = fairly often    3 = sometimes  
2 = rarely    1 = practically never

- a. Research and investigation (to question, seek knowledge, and search for data) ☒ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1
- b. Communication and persuasion (to express knowledge and ideas to others) ☒ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1
- c. Organizational management (to administer others, guide or direct groups to complete tasks) ☒ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1
- d. Design and planning (to image the future and design plans or programs) ☒ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1
- e. Information management (to organize data and knowledge in writing) ☒ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1
- f. Technical and manual (to manipulate objects or the physical environment) ☒ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1

23. Rate the services provided by the Service-Learning Center  
MARK ONE IN EACH ROW

VS = very satisfied    S = satisfied    D = dissatisfied  
VD = very dissatisfied    NA = not applicable

- a. helpfulness of SLC office staff ☒ VS ☐ S ☐ D ☐ VD ☐ NA
- b. accuracy of job descriptions ☒ VS ☐ S ☐ D ☐ VD ☐ NA
- c. adequacy of job orientation ☒ VS ☐ S ☐ D ☐ VD ☐ NA
- d. adequacy of transportation ☒ VS ☐ S ☐ D ☐ VD ☐ NA
- e. contacts with student coordinator ☒ VS ☐ S ☐ D ☐ VD ☐ NA
- f. content of newsletter ☒ VS ☐ S ☐ D ☐ VD ☐ NA
- g. other (please write in) ☒ VS ☐ S ☐ D ☐ VD ☐ NA

4 3 2 1 0

PLEASE TURN THIS CARD OVER AND CONTINUE ANSWERING  
(face 3)

## CARD TWO, FACE 4

24. Please rate your experience at the volunteer site at which you worked. (MARK ONE IN EACH ROW)

VS = very satisfied S = satisfied D = dissatisfied  
VD = very dissatisfied NA = not applicable

|                                |                                        |                            |                            |                             |                             |
|--------------------------------|----------------------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|
| a. helpfulness of agency staff | <input checked="" type="checkbox"/> VS | <input type="checkbox"/> S | <input type="checkbox"/> D | <input type="checkbox"/> VD | <input type="checkbox"/> NA |
| b. adequacy of supervision     | <input checked="" type="checkbox"/> VS | <input type="checkbox"/> S | <input type="checkbox"/> D | <input type="checkbox"/> VD | <input type="checkbox"/> NA |
| c. adequacy of training        | <input checked="" type="checkbox"/> VS | <input type="checkbox"/> S | <input type="checkbox"/> D | <input type="checkbox"/> VD | <input type="checkbox"/> NA |
| d. meaningfulness of tasks     | <input checked="" type="checkbox"/> VS | <input type="checkbox"/> S | <input type="checkbox"/> D | <input type="checkbox"/> VD | <input type="checkbox"/> NA |
| e. acceptance and support      | <input checked="" type="checkbox"/> VS | <input type="checkbox"/> S | <input type="checkbox"/> D | <input type="checkbox"/> VD | <input type="checkbox"/> NA |
| f. recognition for my efforts  | <input checked="" type="checkbox"/> VS | <input type="checkbox"/> S | <input type="checkbox"/> D | <input type="checkbox"/> VD | <input type="checkbox"/> NA |
| g. evaluation                  | <input checked="" type="checkbox"/> VS | <input type="checkbox"/> S | <input type="checkbox"/> D | <input type="checkbox"/> VD | <input type="checkbox"/> NA |
|                                |                                        | 4                          | 3                          | 2                           | 1                           |

25. Overall, how would you rate your experience as an MSU volunteer?

☐ excellent ☐ good ☐ fair ☐ poor

26. Would you recommend the volunteer program in which you worked to any of your friends and classmates?

☐ yes ☐ no

27. Next year, do you hope to continue your volunteer experience?

|                                                                     |                                                                       |
|---------------------------------------------------------------------|-----------------------------------------------------------------------|
| <input checked="" type="checkbox"/> yes, in the same program        | <input type="checkbox"/> no, I do not intend to volunteer             |
| <input checked="" type="checkbox"/> yes, but in a different program | <input type="checkbox"/> no, I am graduating                          |
|                                                                     | <input checked="" type="checkbox"/> no, I am transferring/leaving MSU |

28. Write in below additional comments and suggestions which you may have.

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staff only: code

THANK YOU VERY MUCH FOR FILLING OUT THIS QUESTIONNAIRE  
PLEASE MAIL IT TO US IN THE ENVELOPE PROVIDED

## **APPENDIX C**

**Table 1**  
**Respondent Involvement By Gender, 1977-81**

| <i>Year</i>      | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b>Male</b>      | 275             | 27.3%           | 293             | 28.4%           | 332             | 29.9%           | 324             | 29.7%           | 1224                    | 28.9%           |
| <b>Female</b>    | 734             | 72.7%           | 738             | 71.6%           | 777             | 70.1%           | 768             | 70.3%           | 3017                    | 71.1%           |
| <b>Blank</b>     | 4               | .4%             | 10              | 1.0%            | 53              | 4.6%            | 0               | .0%             | 67                      | 1.6%            |
| <b>TOTAL</b>     | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    |                 |

**Table 2**  
**Respondent Involvement By Age, 1977-81**

| <i>Year</i>          | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>     | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b>19 or Younger</b> | 283             | 28.3%           | 303             | 29.3%           | 340             | 30.0%           | 316             | 28.9%           | 1242                    | 29.1%           |
| <b>20</b>            | 303             | 30.3%           | 250             | 24.2%           | 308             | 27.2%           | 286             | 26.2%           | 1147                    | 26.9%           |
| <b>21</b>            | 216             | 21.6%           | 241             | 23.3%           | 222             | 19.6%           | 234             | 21.4%           | 913                     | 21.4%           |
| <b>22</b>            | 104             | 10.4%           | 112             | 10.8%           | 131             | 11.6%           | 122             | 11.2%           | 469                     | 11.0%           |
| <b>23-25</b>         | 63              | 6.3%            | 84              | 8.1%            | 93              | 8.2%            | 85              | 7.8%            | 325                     | 7.6%            |
| <b>26 or Older</b>   | 32              | 3.2%            | 44              | 4.3%            | 40              | 3.5%            | 49              | 4.5%            | 165                     | 3.9%            |
| <b>Blank</b>         | 12              | 1.2%            | 7               | .7%             | 28              | 2.4%            | 0               | .0%             | 47                      | 1.1%            |
| <b>TOTAL</b>         | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    |                 |

**Table 3**  
**Respondent Involvement By Class, 1977-81**

| <b>Year</b>        | <b>1977-78</b>  |                 | <b>1978-79</b>  |                 | <b>1979-80</b>  |                 | <b>1980-81</b>  |                 | <b>Four-Year Totals</b> |                 |
|--------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <b>Frequency</b>   | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b>         | <b>Relative</b> |
| <b>Freshman</b>    | 203             | 20.0%           | 170             | 16.4%           | 221             | 19.0%           | 166             | 15.2%           | 760                     | 17.7%           |
| <b>Sophomore</b>   | 296             | 29.2%           | 270             | 26.0%           | 283             | 24.4%           | 293             | 26.9%           | 1142                    | 26.6%           |
| <b>Junior</b>      | 310             | 30.6%           | 307             | 29.5%           | 328             | 28.3%           | 328             | 30.1%           | 1273                    | 29.6%           |
| <b>Senior</b>      | 172             | 17.0%           | 238             | 22.8%           | 272             | 23.4%           | 231             | 21.2%           | 913                     | 21.2%           |
| <b>Graduate</b>    | 16              | 1.6%            | 26              | 2.5%            | 32              | 2.8%            | 42              | 3.9%            | 116                     | 2.7%            |
| <b>Special</b>     | 4               | .4%             | 10              | 1.0%            | 8               | .7%             | 11              | 1.0%            | 33                      | .8%             |
| <b>Non-Student</b> | 11              | 1.1%            | 18              | 1.7%            | 17              | 1.5%            | 18              | 1.7%            | 64                      | 1.5%            |
| <b>Blank</b>       | 1               | .1%             | 2               | .2%             | 1               | .1%             | 3               | .3%             | 7                       | .2%             |
| <b>TOTAL</b>       | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    |                 |

**Table 4**  
**Ethnic Origin of Volunteers, 1980-81**

|                          | <i>Frequency</i> | <i>Absolute</i> | <i>Relative</i> | <i>Adjusted</i> |
|--------------------------|------------------|-----------------|-----------------|-----------------|
| <b>1 Black</b>           |                  | 34              | 3.1%            | 3.2%            |
| <b>2 Oriental</b>        |                  | 8               | .7%             | .7%             |
| <b>3 Hispanic</b>        |                  | 7               | .6%             | .7%             |
| <b>4 White</b>           |                  | 1000            | 91.6%           | 93.0%           |
| <b>5 Native American</b> |                  | 16              | 1.5%            | 1.5%            |
| <b>6 Other</b>           |                  | 10              | .9%             | .9%             |
| <b>7 Blank</b>           |                  | 17              | 1.6%            | Missing         |
| <b>TOTAL</b>             |                  | 1092            | 100%            | 100%            |

Valid Cases = 1075  
Missing Cases = 17

**Table 5**  
**Respondent Involvement By Terms, 1977-81\***

| <i><b>Year</b></i>      | <i><b>1977-78</b></i>  |                        | <i><b>1978-79</b></i>  |                        | <i><b>1979-80</b></i>  |                        | <i><b>1980-81</b></i>  |                        | <i><b>Four-Year Totals</b></i> |                        |
|-------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------------|------------------------|
| <i><b>Frequency</b></i> | <i><b>Absolute</b></i> | <i><b>Relative</b></i> | <i><b>Absolute</b></i> | <i><b>Relative</b></i> | <i><b>Absolute</b></i> | <i><b>Relative</b></i> | <i><b>Absolute</b></i> | <i><b>Relative</b></i> | <i><b>Absolute</b></i>         | <i><b>Relative</b></i> |
| <i><b>Fall</b></i>      | 447                    | 44.1%                  | 440                    | 42.3%                  | 477                    | 41.0%                  | 451                    | 41.3%                  | 1815                           | 42.1%                  |
| <i><b>Winter</b></i>    | 607                    | 59.9%                  | 574                    | 55.1%                  | 693                    | 59.6%                  | 662                    | 60.6%                  | 2536                           | 58.9%                  |
| <i><b>Spring</b></i>    | 691                    | 68.2%                  | 671                    | 64.5%                  | 694                    | 59.7%                  | 694                    | 63.6%                  | 2750                           | 63.8%                  |
| <i><b>Summer</b></i>    | N/A                    |                        | N/A                    |                        | N/A                    |                        | 43                     | 3.9%                   | N/A                            |                        |
| <i><b>TOTAL</b></i>     | 1013                   |                        | 1041                   |                        | 1162                   |                        | 1092                   |                        | 4308                           |                        |

\*Multiple Answers Permitted

**Table 6**  
**Number of Terms Volunteers Participated, by Year, 1977-81**

| <i>Year</i>         | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|---------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>    | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <i>One</i>          | 392             | 38.7%           | 436             | 41.9%           | 468             | 40.3%           | 442             | 40.5%           | 1738                    | 40.3%           |
| <i>Two</i>          | 246             | 24.3%           | 279             | 26.8%           | 347             | 29.9%           | 322             | 29.5%           | 1194                    | 27.7%           |
| <i>Three</i>        | 201             | 19.8%           | 146             | 14.0%           | 171             | 14.7%           | 162             | 14.8%           | 680                     | 15.8%           |
| <i>Four</i>         | 49              | 4.8%            | 53              | 5.1%            | 58              | 5.0%            | 49              | 4.5%            | 209                     | 4.9%            |
| <i>Five or More</i> | 119             | 11.7%           | 118             | 11.3%           | 109             | 9.4%            | 103             | 9.4%            | 449                     | 10.4%           |
| <i>Blank</i>        | 6               | 0.6%            | 9               | 0.9%            | 9               | 0.8%            | 14              | 1.3%            | 38                      | 0.9%            |
| <i>TOTAL</i>        | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    | 100.0%          |

**Table 7**  
**Respondent Involvement By Number of Terms, 1977-81**

| <i>Year</i>         | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|---------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>    | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <i>One</i>          | 392             | 38.7%           | 436             | 41.9%           | 468             | 40.3%           | 448             | 41.0%           | 1744                    | 40.5%           |
| <i>Two</i>          | 246             | 24.3%           | 279             | 26.8%           | 347             | 29.9%           | 326             | 29.9%           | 1198                    | 27.8%           |
| <i>Three</i>        | 201             | 19.8%           | 146             | 14.0%           | 171             | 14.7%           | 164             | 15.0%           | 682                     | 15.8%           |
| <i>Four</i>         | 49              | 4.8%            | 53              | 5.1%            | 58              | 5.0%            | 49              | 4.5%            | 209                     | 4.9%            |
| <i>Five or More</i> | 119             | 11.7%           | 118             | 11.3%           | 109             | 9.4%            | 105             | 9.6%            | 451                     | 10.5%           |
| <i>Blank</i>        | 6               | .6%             | 9               | .9%             | 9               | .8%             | 0               | 0.0%            | 24                      | .6%             |
| <i>Totals</i>       | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    | 100.1%          |

**Table 8**  
**How Respondent Learned About Opportunity, 1977-81**

| <i>Year</i>                       | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|-----------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>                  | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b><i>State News</i></b>          | 232             | 22.9%           | 234             | 22.5%           | 258             | 22.2%           | 198             | 18.1%           | 922                     | 21.4%           |
| <b><i>Classroom</i></b>           | 181             | 17.9%           | 207             | 19.9%           | 236             | 20.3%           | 232             | 21.2%           | 856                     | 19.9%           |
| <b><i>Posters</i></b>             | 49              | 4.8%            | 44              | 4.2%            | 17              | 1.5%            | 24              | 2.2%            | 134                     | 3.1%            |
| <b><i>Advisor</i></b>             | 119             | 11.7%           | 86              | 8.3%            | 118             | 10.2%           | 173             | 15.8%           | 496                     | 11.5%           |
| <b><i>Friends</i></b>             | 296             | 29.2%           | 293             | 28.1%           | 334             | 28.7%           | 327             | 29.9%           | 1250                    | 29.0%           |
| <b><i>Dorm</i></b>                | 26              | 2.6%            | 16              | 1.5%            | 15              | 1.3%            | 48              | 4.4%            | 105                     | 2.4%            |
| <b><i>Radio</i></b>               | 1               | .1%             | 2               | .2%             | 2               | .2%             | NA              |                 | 5                       | .1%             |
| <b><i>Other</i></b>               | 109             | 10.8%           | 143             | 13.7%           | 157             | 13.5%           | NA              |                 | 409                     | 9.5%            |
| <b><i>Student Coordinator</i></b> | NA              |                 | NA              |                 | NA              |                 | 31              | 2.8%            | 31                      | .7%             |
| <b><i>Brochure</i></b>            |                 |                 |                 |                 |                 |                 | 59              | 5.4%            | 59                      | 1.4%            |
| <b><i>Blank</i></b>               | 0               |                 | 16              | 1.5%            | 25              | 2.2%            | 0               |                 | 41                      | 1.0%            |
|                                   | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    | 100.0%          |

**Table 9**  
**Source of Academic Recommendation, 1977-81**

| <b>Year</b>                                | <b>1977-78</b>  |                 | <b>1978-79</b>  |                 | <b>1979-80</b>  |                 | <b>1980-81</b>  |                 | <b>Four-Year Totals</b> |                 |
|--------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <b>Frequency</b>                           | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b>Course Requirement or Option</b>        | 150             | 14.8%           | 140             | 13.4%           | 161             | 13.9%           | 121             | 11.1%           | 572                     | 13.3%           |
| <b>Suggested By Professor (Instructor)</b> | 93              | 9.2%            | 91              | 8.7%            | 59              | 5.1%            | 75              | 6.9%            | 322                     | 7.5%            |
| <b>Recommended By Advisor</b>              | 95              | 9.4%            | 74              | 7.1%            | 123             | 10.6%           | 162             | 14.8%           | 454                     | 10.5%           |
| <b>Required for Admission Into Major</b>   | 115             | 11.3%           | 110             | 10.6%           | 121             | 10.4%           | 112             | 10.3%           | 458                     | 10.6%           |
| <b>Required as Part of Major</b>           | 61              | 6.0%            | 59              | 5.7%            | 56              | 4.8%            | 73              | 6.7%            | 249                     | 5.8%            |
| <b>Blank</b>                               | 499             | 49.3%           | 567             | 54.5%           | 642             | 55.2%           | 549             | 50.3%           | 2257                    | 52.4%           |
| <b>TOTAL</b>                               | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    | 100.1%          |

**Table 10**  
**Motivation of Volunteer, 1977-80\***

| <i>Year</i>                               | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>Three-Year Totals</i> |                 |
|-------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------------------|-----------------|
| <i>Frequency</i>                          | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>          | <i>Relative</i> |
| <i>Course Credit</i>                      | 109             | 10.8%           | 129             | 12.4%           | 143             | 12.3%           | 381                      | 11.8%           |
| <i>To Gain Admission Into Major</i>       | 172             | 17.0%           | 152             | 14.6%           | 184             | 15.9%           | 508                      | 15.8%           |
| <i>Desire to Help People</i>              | 678             | 66.9%           | 626             | 60.3%           | 652             | 56.9%           | 1956                     | 60.8%           |
| <i>To Gain Experience in Career Field</i> | 711             | 70.2%           | 704             | 67.8%           | 776             | 66.9%           | 2191                     | 68.1%           |
| <i>To Develop Skills</i>                  | 518             | 51.1%           | 509             | 49.0%           | 597             | 51.5%           | 1624                     | 50.5%           |
| <i>To Meet People</i>                     | 392             | 38.7%           | 330             | 31.8%           | 401             | 34.6%           | 1123                     | 34.9%           |
| <i>To Have Something to Do</i>            | 125             | 12.3%           | 121             | 11.7%           | 145             | 12.5%           | 391                      | 12.2%           |
| <i>To Develop Job Contacts</i>            | 160             | 15.8%           | 155             | 14.0%           | 188             | 16.2%           | 503                      | 15.6%           |
| <i>Other</i>                              | 88              | 8.7%            | 105             | 10.1%           | 117             | 10.1%           | 310                      | 9.6%            |

\*Multiple Answers Permitted

**Table 11**  
**Motivation of Volunteer, 1980-81\***

| <i>Frequency</i>                                                    | <i>1980-81</i>  |                 |
|---------------------------------------------------------------------|-----------------|-----------------|
|                                                                     | <i>Absolute</i> | <i>Relative</i> |
| <i>To Complete Part of Course Requirement</i>                       | 148             | 13.6%           |
| <i>To Gain Independent Study/Internship/Field Experience Credit</i> | 233             | 21.3%           |
| <i>To Gain Admission into Major</i>                                 | 134             | 12.3%           |
| <i>To Gain Admission into Graduate or Professional School</i>       | 154             | 14.1%           |
| <i>To Explore A Possible Career Field</i>                           | 530             | 48.5%           |
| <i>To Gain Experience in Career Field</i>                           | 731             | 66.9%           |
| <i>To Develop Professional Contacts</i>                             | 295             | 27.0%           |
| <i>To Help People</i>                                               | 747             | 68.4%           |
| <i>To Socialize with Others</i>                                     | 351             | 32.1%           |
| <i>To Have Something to Do in Leisure Time</i>                      | 212             | 19.4%           |
| <i>Other</i>                                                        | 128             | 11.7%           |

\*Multiple Answers Permitted

**Table 12**  
**Effect of Volunteer Experience on Career Plans, 1977-81**

| <b>Year</b>                                         | <b>1977-78</b>  |                 | <b>1978-79</b>  |                 | <b>1979-80</b>  |                 | <b>1980-81</b>  |                 | <b>Four-Year Totals</b> |                 |
|-----------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <b>Frequency</b>                                    | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b>No Effect</b>                                    | 371             | 36.6%           | 381             | 36.6%           | 446             | 38.5%           | 456             | 41.8%           | 1654                    | 38.4%           |
| <b>Made Student Question Previous Choice</b>        | 126             | 12.4%           | 136             | 13.1%           | 161             | 13.9%           | 148             | 13.6%           | 571                     | 13.2%           |
| <b>Made Student Question or Change Career Plans</b> | 53              | 5.2%            | 67              | 6.4%            | 56              | 4.8%            | 63              | 5.8%            | 239                     | 5.5%            |
| <b>Made Student Affirm Previous Choice</b>          | 461             | 45.5%           | 455             | 43.7%           | 496             | 42.8%           | 412             | 37.7%           | 1824                    | 42.3%           |
| <b>Blank</b>                                        | 2               | 0.2%            | 2               | 0.2%            | 3               | 0.3%            | 13              | 1.2%            | 20                      | 0.5%            |
| <b>TOTAL</b>                                        | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    | 99.9%           |

**Table 13**  
**Effect of Volunteer Experience on Major Selection, 1977-81**

| <b>Year</b>                                        | <b>1977-78</b>  |                 | <b>1978-79</b>  |                 | <b>1979-80</b>  |                 | <b>1980-81</b>  |                 | <b>Four-Year Totals</b> |                 |
|----------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <b>Frequency</b>                                   | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b><i>Affirmed Major Selection</i></b>             | 385             | 38.0%           | 348             | 33.4%           | 371             | 31.9%           | 353             | 32.3%           | 1457                    | 33.8%           |
| <b><i>Changed Major</i></b>                        | 42              | 4.1%            | 45              | 4.3%            | 42              | 3.6%            | 46              | 4.2%            | 175                     | 4.1%            |
| <b><i>Made Student Consider Changing Major</i></b> | 84              | 8.3%            | 91              | 8.7%            | 126             | 10.9%           | 103             | 9.4%            | 404                     | 9.4%            |
| <b><i>No Effect</i></b>                            | 485             | 47.9%           | 544             | 52.3%           | 613             | 52.8%           | 578             | 52.9%           | 2220                    | 51.5%           |
| <b><i>Blank</i></b>                                | 17              | 1.7%            | 13              | 1.2%            | 10              | 0.9%            | 12              | 1.1%            | 52                      | 1.2%            |
| <b>TOTAL</b>                                       | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    | 100.0%          |

**Table 14**  
**Effect on Rest of University Experience, 1977-81\***

| <b>Year</b>                                                                     | <b>1977-78</b>  |                 | <b>1978-79</b>  |                 | <b>1979-80</b>  |                 | <b>1980-81</b>  |                 | <b>Four-Year Totals</b> |                 |
|---------------------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <b>Frequency</b>                                                                | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b>         | <b>Relative</b> |
| <b><i>Made Some Courses More Meaningful</i></b>                                 | 368             | 36.3%           | 324             | 31.1%           | 354             | 30.5%           | 458             | 41.9%           | 1504                    | 34.9%           |
| <b><i>No Effect</i></b>                                                         | 257             | 25.4%           | 139             | 13.4%           | 187             | 16.1%           |                 |                 | 583                     | 13.5%           |
| <b><i>Necessitated Better Time Planning</i></b>                                 | 405             | 40.10%          | 387             | 37.2%           | 454             | 39.1%           | 426             | 39.1%           | 1672                    | 38.8%           |
| <b><i>Keeping Up Difficult Because of Time Spent Volunteering</i></b>           | 85              | 8.4%            | 140             | 13.4%           | 153             | 13.7%           | 146             | 13.4%           | 524                     | 12.2%           |
| <b><i>Helped Student Identify Additional Courses Useful to Career</i></b>       | 206             | 20.3%           | 222             | 21.3%           | 235             | 20.2%           | 321             | 29.4%           | 984                     | 22.8%           |
| <b><i>Helped Student Develop Self-Confidence</i></b>                            |                 |                 | 561             | 53.9%           | 591             | 50.9%           | 641             | 58.7%           |                         |                 |
| <b><i>Affected Motivation to Learn, Participate, &amp; Achieve in Class</i></b> |                 |                 |                 |                 |                 |                 | 311             | 28.5%           |                         |                 |
| <b><i>Able to Apply Course Work/ Knowledge/Skills to Community</i></b>          |                 |                 |                 |                 |                 |                 | 495             | 45.3%           |                         |                 |
| <b><i>Able to Apply Community Knowledge/Skills to Course Work</i></b>           |                 |                 |                 |                 |                 |                 | 405             | 37.1%           |                         |                 |
| <b>TOTAL</b>                                                                    | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    |                 |

\*Multiple Answers Permitted

**Table 15**  
**Rating of Importance of Volunteer Experience to Career Awareness and/or Preparation, 1977-81**

**A) Support from Others for Career Decisions**

| <b>Year</b>                 | <b>1977-78</b>  |                 | <b>1978-79</b>  |                 | <b>1979-80</b>  |                 | <b>1980-81</b>  |                 | <b>Four-Year Totals</b> |                 |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <b>Frequency</b>            | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b>Extremely Important</b>  | 126             | 12.4%           | 139             | 13.4%           | 163             | 14.0%           | 132             | 12.1%           | 560                     | 13.0%           |
| <b>Somewhat Important</b>   | 435             | 42.9%           | 428             | 41.1%           | 477             | 41.0%           | 414             | 37.9%           | 1754                    | 40.7%           |
| <b>Of Little Importance</b> | 215             | 21.2%           | 192             | 18.4%           | 212             | 18.2%           | 237             | 21.7%           | 856                     | 19.9%           |
| <b>Of No Importance</b>     | 206             | 20.3%           | 252             | 24.2%           | 279             | 24.0%           | 296             | 27.1%           | 1033                    | 24.0%           |
| <b>Total Positive</b>       | 561             | 55.4%           | 567             | 54.5%           | 640             | 55.1%           | 546             | 50.0%           | 2314                    | 53.7%           |
| <b>Blank</b>                | 31              | 3.1%            | 30              | 2.9%            | 31              | 2.7%            | 13              | 1.2%            | 105                     | 2.4%            |
| <b>TOTAL</b>                | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    | 100.0%          |

**Table 16**  
**Rating of Importance of Volunteer Experience to Career Awareness and/or Preparation, 1977-81**

**B) Broader Knowledge of Career and Job Requirements**

| <i>Year</i>                        | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>                   | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b><i>Extremely Important</i></b>  | 261             | 25.8%           | 347             | 33.3%           | 373             | 32.1%           | 430             | 39.4%           | 1411                    | 32.8%           |
| <b><i>Somewhat Important</i></b>   | 427             | 42.2%           | 370             | 35.5%           | 407             | 35.0%           | 336             | 30.8%           | 1540                    | 35.7%           |
| <b><i>Of Little Importance</i></b> | 171             | 16.9%           | 128             | 12.3%           | 185             | 15.9%           | 132             | 12.1%           | 616                     | 14.3%           |
| <b><i>Of No Importance</i></b>     | 127             | 12.5%           | 174             | 16.7%           | 175             | 15.1%           | 181             | 16.6%           | 657                     | 15.3%           |
| <b><i>Total Positive</i></b>       | 688             | 67.9%           | 717             | 68.9%           | 780             | 67.1%           | 766             | 70.1%           | 2951                    | 68.5%           |
| <b><i>Blank</i></b>                | 27              | 2.7%            | 22              | 2.1%            | 22              | 1.9%            | 13              | 1.2%            | 84                      | 1.9%            |
| <b><i>TOTAL</i></b>                | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    | 100.1%          |

**Table 17**  
**Rating of Importance of Volunteer Experience to Career Awareness and/or Preparation, 1977-81**  
**C) Focused (Narrowed) Career Choices**

| <i>Year</i>                        | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>                   | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b><i>Extremely Important</i></b>  | 72              | 7.1%            | 102             | 9.8%            | 103             | 8.9%            | 245             | 22.4%           | 522                     | 12.1%           |
| <b><i>Somewhat Important</i></b>   | 308             | 30.4%           | 287             | 27.6%           | 331             | 28.5%           | 414             | 37.9%           | 1340                    | 31.1%           |
| <b><i>Of Little Importance</i></b> | 249             | 24.6%           | 207             | 19.9%           | 281             | 24.2%           | 205             | 18.8%           | 942                     | 21.9%           |
| <b><i>Of No Importance</i></b>     | 351             | 34.6%           | 415             | 39.9%           | 413             | 35.55%          | 211             | 19.3%           | 1390                    | 32.3%           |
| <b><i>Total Positive</i></b>       | 380             | 37.5%           | 389             | 37.4%           | 434             | 37.3%           | 659             | 60.3%           | 1862                    | 43.2%           |
| <b><i>Blank</i></b>                | 33              | 3.3%            | 30              | 2.9%            | 34              | 2.9%            | 17              | 1.6%            | 114                     | 2.6%            |
| <b><i>TOTAL</i></b>                | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    | 100.0%          |

**Table 18**  
**Rating of Importance of Volunteer Experience to Career Awareness and/or Preparation, 1977-81**

**D) Gained Awareness of Relationship Between Job Requirements and Personal Values**

| <i>Year</i>                 | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>            | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <i>Extremely Important</i>  | 325             | 32.1%           | 323             | 31.0%           | 334             | 28.7%           | 393             | 36.0%           | 1375                    | 31.9%           |
| <i>Somewhat Important</i>   | 438             | 43.2%           | 429             | 41.2%           | 490             | 42.2%           | 394             | 36.1%           | 1751                    | 40.6%           |
| <i>Of Little Importance</i> | 119             | 11.7%           | 130             | 12.5%           | 159             | 13.7%           | 156             | 14.3%           | 564                     | 13.1%           |
| <i>Of No Importance</i>     | 94              | 9.3%            | 129             | 12.4%           | 156             | 13.4%           | 138             | 12.6%           | 517                     | 12.0%           |
| <i>Total Positive</i>       | 763             | 75.3%           | 752             | 72.2%           | 824             | 70.9%           | 787             | 72.1%           | 3126                    | 72.6%           |
| <i>Blank</i>                | 37              | 3.7%            | 30              | 2.9%            | 23              | 2.0%            | 11              | 1.0%            | 101                     | 2.3%            |
| <i>TOTAL</i>                | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    | 99.9%           |

**Table 19**  
**Rating of Importance of Volunteer Experience to Career Preparation, 1977-81**

**A) Gained First-Hand Exposure to Work Environment**

| <i>Year</i>                 | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>            | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <i>Extremely Important</i>  | 496             | 49.0%           | 452             | 43.1%           | 482             | 41.5%           | 487             | 44.5%           | 1917                    | 44.5%           |
| <i>Somewhat Important</i>   | 291             | 28.7%           | 300             | 28.8%           | 344             | 29.6%           | 318             | 29.0%           | 1253                    | 29.1%           |
| <i>Of Little Importance</i> | 96              | 9.5%            | 112             | 10.8%           | 138             | 11.9%           | 114             | 10.4%           | 460                     | 10.7%           |
| <i>Of No Importance</i>     | 103             | 10.2%           | 154             | 14.8%           | 181             | 15.6%           | 166             | 15.2%           | 604                     | 14.0%           |
| <i>Total Positive</i>       | 787             | 77.7%           | 752             | 72.2%           | 826             | 71.1%           | 805             | 73.5%           | 3170                    | 73.6%           |
| <i>Blank</i>                | 27              | 2.7%            | 23              | 2.2%            | 17              | 1.5%            | 7               | 0.9%            | 74                      | 1.8%            |
| <i>TOTAL</i>                | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    | 99.9%           |

**Table 20**  
**Rating of Importance of Volunteer Experience to Career Preparation, 1977-81**

**B) Became Known to People in My Field Who Could  
Recommend Me to Potential Employers**

| <i>Year</i>                        | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>                   | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b><i>Extremely Important</i></b>  | 85              | 8.4%            | 146             | 14.0%           | 144             | 12.4%           | 173             | 15.8%           | 548                     | 12.7%           |
| <b><i>Somewhat Important</i></b>   | 206             | 20.3%           | 230             | 22.1%           | 231             | 19.9%           | 242             | 22.1%           | 909                     | 21.1%           |
| <b><i>Of Little Importance</i></b> | 259             | 25.6%           | 229             | 22.0%           | 318             | 27.4%           | 269             | 24.6%           | 1075                    | 25.0%           |
| <b><i>Of No Importance</i></b>     | 436             | 43.0%           | 408             | 39.2%           | 450             | 38.7%           | 392             | 35.8%           | 1686                    | 39.1%           |
| <b><i>Total Positive</i></b>       | 291             | 28.7%           | 376             | 36.1%           | 375             | 32.3%           | 415             | 37.9%           | 1457                    | 33.8%           |
| <b><i>Blank</i></b>                | 27              | 2.7%            | 28              | 2.7%            | 19              | 1.6%            | 16              | 1.5%            | 90                      | 2.1%            |
| <b><i>TOTAL</i></b>                | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    | 100.1%          |

**Table 21**  
**Rating of Importance of Volunteer Experience to Career Preparation, 1977-81**

**C) Became Aware of How My Education Experience  
Is Serving as Preparation for Career**

| <i>Year</i>                        | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>                   | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b><i>Extremely Important</i></b>  | 293             | 28.9%           | 227             | 21.8%           | 255             | 21.9%           | 277             | 25.3%           | 1052                    | 24.4%           |
| <b><i>Somewhat Important</i></b>   | 383             | 37.8%           | 403             | 38.7%           | 427             | 36.7%           | 424             | 38.7%           | 1637                    | 38.0%           |
| <b><i>Of Little Importance</i></b> | 176             | 17.4%           | 208             | 20.0%           | 239             | 20.6%           | 185             | 16.9%           | 808                     | 18.8%           |
| <b><i>Of No Importance</i></b>     | 130             | 12.8%           | 174             | 16.7%           | 218             | 18.8%           | 195             | 17.8%           | 717                     | 16.6%           |
| <b><i>Total Positive</i></b>       | 676             | 66.7%           | 630             | 60.5%           | 682             | 58.7%           | 701             | 64.0%           | 2689                    | 62.4%           |
| <b><i>Blank</i></b>                | 31              | 3.1%            | 29              | 2.8%            | 23              | 2.0%            | 11              | 1.0%            | 94                      | 2.2%            |
| <b><i>TOTAL</i></b>                | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    | 100.1%          |

**Table 22**  
**Rating of Services Provided by OVP / SLC, 1977-81**

**A) Helpfulness of Staff**

| <i>Year</i>              | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>         | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b>Very Satisfied</b>    | 435             | 42.9%           | 445             | 42.7%           | 490             | 42.2%           | 456             | 41.6%           | 1826                    | 42.4%           |
| <b>Satisfied</b>         | 483             | 47.7%           | 462             | 44.4%           | 540             | 46.5%           | 488             | 44.6%           | 1973                    | 45.8%           |
| <b>Dissatisfied</b>      | 36              | 3.6%            | 38              | 3.7%            | 38              | 3.3%            | 30              | 2.7%            | 142                     | 3.3%            |
| <b>Very Dissatisfied</b> | 7               | 0.7%            | 17              | 1.6%            | 14              | 1.2%            | 9               | 0.8%            | 47                      | 1.1%            |
| <b>Not Applicable</b>    | 41              | 4.0%            | 38              | 3.7%            | 70              | 6.0%            | 84              | 7.7%            | 233                     | 5.4%            |
| <b>Level Positive</b>    | 90.6%           |                 | 87.1%           |                 | 88.6%           |                 | 86.2%           |                 | 88.2%                   |                 |
| <b>Blank</b>             | 11              | 1.1%            | 41              | 3.9%            | 10              | 0.9%            | 25              | 2.3%            | 87                      | 2.0%            |
| <b>TOTAL</b>             | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    | 100.1%          |

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**Table 23**  
**Rating of Services Provided by OVP / SLC, 1977-81**

**B) Accurate Job Descriptions**

| <i>Year</i>              | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>         | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b>Very Satisfied</b>    | 322             | 31.8%           | 345             | 33.1%           | 355             | 30.6%           | 350             | 32.0%           | 1372                    | 31.8%           |
| <b>Satisfied</b>         | 574             | 56.7%           | 560             | 53.8%           | 638             | 54.9%           | 587             | 53.6%           | 2359                    | 54.8%           |
| <b>Dissatisfied</b>      | 48              | 4.7%            | 57              | 5.5%            | 66              | 5.7%            | 55              | 5.0%            | 226                     | 5.2%            |
| <b>Very Dissatisfied</b> | 13              | 1.3%            | 13              | 1.2%            | 33              | 2.8%            | 21              | 1.9%            | 80                      | 1.9%            |
| <b>Not Applicable</b>    | 41              | 4.0%            | 47              | 4.5%            | 54              | 4.6%            | 50              | 4.6%            | 192                     | 4.5%            |
| <b>Level Positive</b>    | 88.5%           |                 | 86.9%           |                 | 85.5%           |                 | 85.6%           |                 | 86.6%                   |                 |
| <b>Blank</b>             | 15              | 1.5%            | 19              | 1.8%            | 16              | 1.4%            | 29              | 2.7%            | 76                      | 1.8%            |
| <b>TOTAL</b>             | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    |                 |

**Table 24**  
**Rating of Services Provided by OVP / SLC, 1977-81**

**C) Adequate Orientation**

| <i>Year</i>              | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>         | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b>Very Satisfied</b>    | 231             | 22.8%           | 269             | 25.8%           | 276             | 23.8%           | 283             | 25.8%           | 1059                    | 24.6%           |
| <b>Satisfied</b>         | 485             | 47.9%           | 476             | 45.7%           | 587             | 50.5%           | 511             | 46.7%           | 2059                    | 47.8%           |
| <b>Dissatisfied</b>      | 109             | 10.8%           | 109             | 10.5%           | 107             | 9.2%            | 91              | 8.3%            | 416                     | 9.7%            |
| <b>Very Dissatisfied</b> | 37              | 3.7%            | 29              | 2.8%            | 26              | 2.2%            | 31              | 2.8%            | 123                     | 2.9%            |
| <b>Not Applicable</b>    | 133             | 13.1%           | 131             | 12.6%           | 140             | 12.0%           | 140             | 12.8%           | 544                     | 12.6%           |
| <b>Level Positive</b>    | 70.7%           |                 | 71.5%           |                 | 74.3%           |                 | 72.5%           |                 | 72.4%                   |                 |
| <b>Blank</b>             | 18              | 1.8%            | 27              | 2.6%            | 26              | 2.2%            | 36              | 3.3%            | 107                     | 2.5%            |
| <b>TOTAL</b>             | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    |                 |

**Table 25**  
**Rating of Services Provided by OVP / SLC, 1977-81**

**D) Adequate Transportation**

| <b>Year</b>              | <b>1977-78</b>  |                 | <b>1978-79</b>  |                 | <b>1979-80</b>  |                 | <b>1980-81</b>  |                 | <b>Four-Year Totals</b> |                 |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <b>Frequency</b>         | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b>         | <b>Relative</b> |
| <b>Very Satisfied</b>    | 420             | 41.5%           | 359             | 34.5%           | 438             | 37.7%           | 317             | 28.9%           | 1534                    | 36.1%           |
| <b>Satisfied</b>         | 293             | 28.9%           | 272             | 26.1%           | 289             | 24.9%           | 301             | 27.5%           | 1155                    | 26.8%           |
| <b>Dissatisfied</b>      | 47              | 4.6%            | 73              | 7.0%            | 64              | 5.5%            | 84              | 7.7%            | 268                     | 6.2%            |
| <b>Very Dissatisfied</b> | 24              | 2.4%            | 49              | 4.7%            | 33              | 2.8%            | 58              | 5.3%            | 164                     | 3.8%            |
| <b>Not Applicable</b>    | 215             | 21.2%           | 266             | 25.6%           | 314             | 27.0%           | 289             | 26.4%           | 1084                    | 25.2%           |
| <b>Level Positive</b>    | 70.4%           |                 | 60.6%           |                 | 62.6%           |                 | 56.3%           |                 | 62.9%                   |                 |
| <b>Blank</b>             | 14              | 1.4%            | 22              | 2.1%            | 24              | 2.1%            | 43              | 3.9%            | 103                     | 1.9%            |
| <b>TOTAL</b>             | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    |                 |

**Table 26**  
**Rating of Services Provided by OVP / SLC, 1977-81**

**E) Contact With Student Coordinator**

| <i>Year</i>              | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>         | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b>Very Satisfied</b>    | 231             | 22.8%           | 200             | 19.2%           | 214             | 18.4%           | 242             | 22.1%           | 887                     | 20.6%           |
| <b>Satisfied</b>         | 450             | 44.4%           | 450             | 43.2%           | 497             | 42.8%           | 468             | 42.7%           | 1865                    | 43.3%           |
| <b>Dissatisfied</b>      | 104             | 10.3%           | 109             | 10.5%           | 133             | 11.4%           | 107             | 9.8%            | 453                     | 10.5%           |
| <b>Very Dissatisfied</b> | 45              | 4.4%            | 57              | 5.5%            | 55              | 5.0%            | 49              | 4.5%            | 206                     | 4.8%            |
| <b>Not Applicable</b>    | 159             | 15.7%           | 192             | 18.4%           | 236             | 20.3%           | 181             | 16.6%           | 768                     | 17.8%           |
| <b>Level Positive</b>    |                 | 67.2%           |                 | 62.4%           |                 | 61.2%           |                 | 64.8%           |                         | 63.9%           |
| <b>Blank</b>             | 24              | 2.4%            | 33              | 3.2%            | 27              | 2.3%            | 45              | 4.4%            | 129                     | 3.0%            |
| <b>TOTAL</b>             | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    |                 |

**Table 27**  
**Rating of Experience at Volunteer Site, 1977-81**

**A) Helpfulness of Agency Staff**

| <i>Year</i>                     | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>                | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b><i>Very Satisfied</i></b>    | 346             | 34.2%           | 391             | 37.6%           | 408             | 35.1%           | 451             | 41.3%           | 1596                    | 37.0%           |
| <b><i>Satisfied</i></b>         | 435             | 42.9%           | 432             | 41.5%           | 487             | 41.9%           | 433             | 39.7%           | 1787                    | 41.5%           |
| <b><i>Dissatisfied</i></b>      | 80              | 7.9%            | 64              | 6.1%            | 94              | 8.1%            | 63              | 5.8%            | 301                     | 7.0%            |
| <b><i>Very Dissatisfied</i></b> | 31              | 3.1%            | 20              | 1.9%            | 40              | 3.4%            | 30              | 2.7%            | 121                     | 2.8%            |
| <b><i>Not Applicable</i></b>    | 91              | 9.0%            | 104             | 10.0%           | 113             | 9.7%            | 91              | 8.3%            | 399                     | 9.3%            |
| <b><i>Level Positive</i></b>    | 77.1%           |                 | 79.1%           |                 | 77.0%           |                 | 81.0%           |                 | 78.5%                   |                 |
| <b><i>Blank</i></b>             | 30              | 3.0%            | 30              | 2.9%            | 20              | 1.7%            | 24              | 2.5%            | 104                     | 2.4%            |
| <b><i>TOTAL</i></b>             | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    |                 |

**Table 28**  
**Rating of Experience at Volunteer Site, 1977-81**  
**B) Adequate Supervision**

| <i>Year</i>              | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>         | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <i>Very Satisfied</i>    | 273             | 26.9%           | 300             | 28.8%           | 338             | 29.1%           | 375             | 34.3%           | 1286                    | 29.9%           |
| <i>Satisfied</i>         | 484             | 47.8%           | 497             | 47.7%           | 535             | 46.0%           | 486             | 44.5%           | 2002                    | 46.5%           |
| <i>Dissatisfied</i>      | 101             | 10.0%           | 83              | 8.0%            | 95              | 8.2%            | 68              | 6.2%            | 347                     | 8.1%            |
| <i>Very Dissatisfied</i> | 32              | 3.2%            | 27              | 2.6%            | 43              | 3.7%            | 36              | 3.3%            | 138                     | 3.2%            |
| <i>Not Applicable</i>    | 101             | 10.0%           | 105             | 10.1%           | 119             | 10.2%           | 96              | 8.8%            | 421                     | 9.8%            |
| <i>Level Positive</i>    | 74.7%           |                 | 76.5%           |                 | 75.1%           |                 | 78.8%           |                 | 80.0%                   |                 |
| <i>Blank</i>             | 22              | 2.2%            | 29              | 2.8%            | 32              | 2.8%            | 31              | 2.8%            | 114                     | 2.6%            |
| <i>TOTAL</i>             | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    |                 |

**Table 29**  
**Rating of Experience at Volunteer Site, 1977-81**

**C) Adequate Training**

| <b>Year</b>              | <b>1977-78</b>  |                 | <b>1978-79</b>  |                 | <b>1979-80</b>  |                 | <b>1980-81</b>  |                 | <b>Four-Year Totals</b> |                 |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <b>Frequency</b>         | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b>Very Satisfied</b>    | 200             | 19.7%           | 211             | 20.3%           | 231             | 19.9%           | 247             | 22.6%           | 889                     | 20.6%           |
| <b>Satisfied</b>         | 447             | 44.1%           | 479             | 46.0%           | 551             | 47.4%           | 497             | 45.5%           | 1974                    | 45.8%           |
| <b>Dissatisfied</b>      | 152             | 15.0%           | 134             | 12.9%           | 135             | 11.6%           | 142             | 13.0%           | 563                     | 13.1%           |
| <b>Very Dissatisfied</b> | 54              | 5.3%            | 44              | 4.2%            | 59              | 5.1%            | 49              | 4.5%            | 206                     | 4.8%            |
| <b>Not Applicable</b>    | 129             | 12.7%           | 142             | 13.6%           | 147             | 12.7%           | 122             | 11.2%           | 540                     | 12.5%           |
| <b>Level Positive</b>    | 63.8%           |                 | 66.3%           |                 | 67.3%           |                 | 68.1%           |                 | 66.4%                   |                 |
| <b>Blank</b>             | 31              | 3.1%            | 31              | 3.0%            | 39              | 3.4%            | 35              | 3.2%            | 136                     | 3.2%            |
| <b>TOTAL</b>             | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    |                 |

**Table 30**  
**Rating of Experience at Volunteer Site, 1977-81**

**D) Meaningful Tasks To Do**

| <i>Year</i>              | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>         | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b>Very Satisfied</b>    | 248             | 24.5%           | 269             | 25.8%           | 280             | 24.1%           | 322             | 29.5%           | 1119                    | 26.0%           |
| <b>Satisfied</b>         | 456             | 45.0%           | 478             | 45.9%           | 528             | 45.4%           | 491             | 45.0%           | 1953                    | 45.3%           |
| <b>Dissatisfied</b>      | 148             | 14.6%           | 132             | 12.7%           | 139             | 12.0%           | 136             | 12.5%           | 555                     | 12.9%           |
| <b>Very Dissatisfied</b> | 60              | 5.9%            | 60              | 5.8%            | 95              | 8.2%            | 56              | 5.1%            | 271                     | 6.3%            |
| <b>Not Applicable</b>    | 72              | 7.1%            | 76              | 7.3%            | 86              | 7.4%            | 54              | 4.9%            | 288                     | 6.7%            |
| <b>Level Positive</b>    | 69.5%           |                 | 71.7%           |                 | 69.5%           |                 | 74.5%           |                 | 71.3%                   |                 |
| <b>Blank</b>             | 29              | 2.9%            | 26              | 2.5%            | 34              | 2.9%            | 33              | 3.0%            | 122                     | 2.8%            |
| <b>TOTAL</b>             | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    |                 |

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**Table 31**  
**Rating of Experience at Volunteer Site, 1977-81**  
**E) Acceptance and Support**

| <b>Year</b>              | <b>1977-78</b>  |                 | <b>1978-79</b>  |                 | <b>1979-80</b>  |                 | <b>1980-81</b>  |                 | <b>Four-Year Totals</b> |                 |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <b>Frequency</b>         | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b>         | <b>Relative</b> |
| <b>Very Satisfied</b>    | 358             | 35.3%           | 396             | 38.0%           | 423             | 36.4%           | 418             | 38.3%           | 1595                    | 37.0%           |
| <b>Satisfied</b>         | 461             | 45.5%           | 476             | 45.7%           | 496             | 42.7%           | 503             | 46.1%           | 1938                    | 45.0%           |
| <b>Dissatisfied</b>      | 79              | 7.8%            | 66              | 6.3%            | 88              | 7.6%            | 74              | 6.8%            | 307                     | 7.1%            |
| <b>Very Dissatisfied</b> | 27              | 2.7%            | 23              | 2.2%            | 48              | 4.1%            | 32              | 2.9%            | 130                     | 3.0%            |
| <b>Not Applicable</b>    | 59              | 5.8%            | 56              | 5.5%            | 70              | 6.0%            | 30              | 2.7%            | 215                     | 5.0%            |
| <b>Level Positive</b>    | 80.8%           |                 | 83.7%           |                 | 79.1%           |                 | 84.4%           |                 | 82.0%                   |                 |
| <b>Blank</b>             | 29              | 2.9%            | 24              | 2.3%            | 37              | 3.2%            | 35              | 3.2%            | 125                     | 2.9%            |
| <b>TOTAL</b>             | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    |                 |

**Table 32**  
**Rating of Experience at Volunteer Site, 1977-81**

**F) Recognition of Efforts**

| <b>Year</b>              | <b>1977-78</b>  |                 | <b>1978-79</b>  |                 | <b>1979-80</b>  |                 | <b>1980-81</b>  |                 | <b>Four-Year Totals</b> |                 |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <b>Frequency</b>         | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b> | <b>Relative</b> | <b>Absolute</b>         | <b>Relative</b> |
| <b>Very Satisfied</b>    | 308             | 30.4%           | 361             | 34.7%           | 368             | 31.7%           | 365             | 33.4%           | 1402                    | 32.5%           |
| <b>Satisfied</b>         | 464             | 45.8%           | 472             | 45.3%           | 503             | 43.3%           | 492             | 45.1%           | 1931                    | 44.8%           |
| <b>Dissatisfied</b>      | 95              | 9.4%            | 80              | 7.7%            | 111             | 9.6%            | 107             | 9.8%            | 393                     | 9.1%            |
| <b>Very Dissatisfied</b> | 39              | 3.8%            | 30              | 2.9%            | 49              | 4.2%            | 36              | 3.3%            | 154                     | 3.6%            |
| <b>Not Applicable</b>    | 75              | 7.4%            | 73              | 7.0%            | 86              | 7.4%            | 55              | 5.0%            | 289                     | 6.7%            |
| <b>Level Positive</b>    |                 | 76.2%           |                 | 80.0%           |                 | 75.0%           |                 | 78.5%           |                         | 77.3%           |
| <b>Blank</b>             | 32              | 3.2%            | 25              | 2.4%            | 45              | 3.9%            | 37              | 3.4%            | 139                     | 3.2%            |
| <b>TOTAL</b>             | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    |                 |

**Table 33**  
**Overall Rating, 1977-81**

| <i>Year</i>                  | <i>1977-78</i>  |                 | <i>1978-79</i>  |                 | <i>1979-80</i>  |                 | <i>1980-81</i>  |                 | <i>Four-Year Totals</i> |                 |
|------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|
| <i>Frequency</i>             | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i> | <i>Relative</i> | <i>Absolute</i>         | <i>Relative</i> |
| <b><i>Excellent</i></b>      | 409             | 40.4%           | 411             | 39.5%           | 457             | 39.3%           | 469             | 42.9%           | 1746                    | 40.5%           |
| <b><i>Good</i></b>           | 464             | 45.8%           | 504             | 48.4%           | 541             | 46.6%           | 456             | 41.8%           | 1965                    | 45.6%           |
| <b><i>Fair</i></b>           | 112             | 11.1%           | 96              | 9.2%            | 128             | 11.0%           | 118             | 10.8%           | 454                     | 10.5%           |
| <b><i>Poor</i></b>           | 24              | 2.4%            | 21              | 2.0%            | 32              | 2.8%            | 33              | 3.0%            | 110                     | 2.6%            |
| <b><i>Level Positive</i></b> | 86.2%           |                 | 87.9%           |                 | 85.9%           |                 | 84.7%           |                 | 86.1%                   |                 |
| <b><i>Blank</i></b>          | 4               | 0.4%            | 9               | 0.9%            | 4               | 0.3%            | 16              | 1.5%            | 33                      | 0.8%            |
| <b><i>TOTAL</i></b>          | 1013            |                 | 1041            |                 | 1162            |                 | 1092            |                 | 4308                    |                 |

**Table 34**  
**Student Perception of Use of Skills, 1980-81**

| Frequency                                                                                     | Degree of Occurrence |          |              |          |           |          |          |          |          |          | Mean | Standard Deviation |
|-----------------------------------------------------------------------------------------------|----------------------|----------|--------------|----------|-----------|----------|----------|----------|----------|----------|------|--------------------|
|                                                                                               | Very Often           |          | Fairly Often |          | Sometimes |          | Rarely   |          | Never    |          |      |                    |
|                                                                                               | Absolute             | Relative | Absolute     | Relative | Absolute  | Relative | Absolute | Relative | Absolute | Relative |      |                    |
| Research & Investigation<br>(To Question, Seek Knowledge and Search for Data)                 | 191                  | 17.5%    | 184          | 16.8%    | 209       | 19.1%    | 145      | 13.3%    | 341      | 31.2%    | 2.76 | 1.496              |
| Communication & Persuasion<br>(To Express Knowledge and Ideas to Others)                      | 343                  | 31.4%    | 300          | 27.5%    | 257       | 23.5%    | 113      | 10.3%    | 58       | 5.3%     | 3.71 | 1.177              |
| Organizational Management<br>(To Administer Others, Guide or Direct Groups to Complete Tasks) | 184                  | 16.8%    | 199          | 18.2%    | 205       | 18.8%    | 202      | 18.5%    | 277      | 25.4%    | 2.82 | 1.440              |
| Design & Planning<br>(To Image the Future & Design Plans or Programs)                         | 108                  | 9.9%     | 138          | 12.6%    | 207       | 19.0%    | 217      | 19.9%    | 394      | 36.1%    | 2.39 | 1.360              |
| Information Management<br>(To Organize Data and Knowledge In Writing)                         | 121                  | 11.1%    | 136          | 12.5%    | 170       | 15.6%    | 180      | 16.5%    | 458      | 41.9%    | 2.33 | 1.421              |
| Technical and Manual<br>(To Manipulate Objects or the Physical Environment)                   | 133                  | 12.2%    | 158          | 14.4%    | 237       | 21.7%    | 175      | 16.0%    | 361      | 33.1%    | 2.56 | 1.405              |

**Table 35**  
**Student Perception of Effect of Experience, 1980-81\***

| <i>Perceived Effect</i>                                                          | <i>Frequency<br/>Distribution</i> | <i>% of<br/>Cases</i> |
|----------------------------------------------------------------------------------|-----------------------------------|-----------------------|
| <i>Increased Awareness of Values</i>                                             | 653                               | 61.1%                 |
| <i>Increased Awareness of Skills</i>                                             | 705                               | 66.0%                 |
| <i>Developed Self-Confidence</i>                                                 | 641                               | 60.0%                 |
| <i>Forced to Plan Time Better</i>                                                | 426                               | 39.9%                 |
| <i>Gained Personal Feeling of Success and Self-Accomplishment</i>                | 617                               | 57.8%                 |
| <i>Increased Ability to Be Responsible for Self and Others</i>                   | 502                               | 47.0%                 |
| <i>Learned to Accept Consequences of Own Actions</i>                             | 232                               | 21.7%                 |
| <i>Learned to Take Risks</i>                                                     | 183                               | 17.1%                 |
| <i>Learned to Solve Problems</i>                                                 | 376                               | 35.2%                 |
| <i>Developed Awareness of Situational/Personal Differences in Others</i>         | 660                               | 61.8%                 |
| <i>Developed Awareness of Values of Others</i>                                   | 532                               | 49.8%                 |
| <i>Increased Acceptance of Differences in Others</i>                             | 554                               | 51.9%                 |
| <i>Developed Ability to Cooperate with Others</i>                                | 486                               | 45.5%                 |
| <i>Improved Communication Skills (Listening, Articulating, Presenting Ideas)</i> | 739                               | 69.2%                 |

\*Multiple Answers Permitted

**Table 36**  
**Cross Tabulation of Recommended or Required by Ethnicity, 1980-81**

| <i><b>Required</b></i> | <i><b>Black</b></i> | <i><b>Oriental</b></i> | <i><b>Hispanic</b></i> | <i><b>White</b></i> | <i><b>Native American</b></i> | <i><b>Other</b></i> | <i><b>Raw Total</b></i> |
|------------------------|---------------------|------------------------|------------------------|---------------------|-------------------------------|---------------------|-------------------------|
| <b>Yes</b>             | 16                  | 2                      | 3                      | 377                 | 7                             | 1                   | 406<br>(38.0%)          |
| <b>No</b>              | 18                  | 6                      | 4                      | 617                 | 9                             | 9                   | 663<br>(62.0%)          |
| <b>Column Total</b>    | 34<br>(3.2%)        | 8<br>(.7%)             | 7<br>(.7%)             | 994<br>(93.0%)      | 16<br>(1.5%)                  | 10<br>(.9%)         | 1069<br>(100.0%)        |

Raw Chi Square = 5.38357

5 Degrees of Freedom

Significance = 0.3709

Kendall's Tau 0.01582

Significance = 0.1488

**Table 37**  
**Cross Tabulation of Required by Academic Unit by Age, 1980-81**

| <i><b>Required</b></i>     | <i><b>19 or Younger</b></i> | <i><b>20</b></i> | <i><b>21</b></i> | <i><b>22</b></i> | <i><b>23-25</b></i> | <i><b>26 or Older</b></i> | <i><b>Raw Total</b></i> |
|----------------------------|-----------------------------|------------------|------------------|------------------|---------------------|---------------------------|-------------------------|
| <b>Yes</b>                 | 122                         | 124              | 91               | 42               | 21                  | 14                        | 414<br>(38.1%)          |
| <b>No</b>                  | 193                         | 161              | 141              | 79               | 64                  | 34                        | 672<br>(61.9%)          |
| <i><b>Column Total</b></i> | 315<br>(29.0%)              | 285<br>(26.2%)   | 232<br>(21.4%)   | 121<br>(11.1%)   | 85<br>(7.8%)        | 48<br>(4.4%)              | 1086<br>(100.0%)        |

Chi Square = 12.38929

With 5 Degrees of Freedom

Significance = 0.0298

Kendall's Tau 0.07083

Significance = 0.0162

**Table 38**  
**Cross Tabulation of Recommended or Required by Academic Unit by Class, 1980-81**

| <i>Required</i>     | <i>Freshman</i> | <i>Sophomore</i> | <i>Junior</i>  | <i>Senior</i>  | <i>Special</i> | <i>Graduate</i> | <i>Non-Student</i> | <i>Raw Total</i> |
|---------------------|-----------------|------------------|----------------|----------------|----------------|-----------------|--------------------|------------------|
| <b>Yes</b>          | 63              | 126              | 132            | 79             | 2              | 9               | 3                  | 414<br>(38.2%)   |
| <b>No</b>           | 103             | 166              | 195            | 150            | 9              | 33              | 14                 | 670<br>(61.8%)   |
| <b>Column Total</b> | 166<br>(15.3%)  | 292<br>(26.9%)   | 327<br>(30.2%) | 229<br>(21.1%) | 11<br>(1.0%)   | 42<br>(3.9%)    | 17<br>(1.6%)       | 1084<br>(100.0%) |

Chi Square = 14.93034

With 6 Degrees of Freedom

Significance = 0.0208

Kendall's Tau 0.08217

Significance = 0.0065

**Table 39**  
**Cross Tabulation of Recommended or Required by Academic Unit by Gender, 1980-81**

| <i><b>Required</b></i>     | <i><b>Male</b></i> | <i><b>Female</b></i> | <i><b>Raw Total</b></i> |
|----------------------------|--------------------|----------------------|-------------------------|
| <i><b>Yes</b></i>          | 91                 | 315                  | 406<br>(38.3%)          |
| <i><b>No</b></i>           | 208                | 447                  | 655<br>(61.7%)          |
| <i><b>Column Total</b></i> | 299                | 762                  | 1061<br>(100.0%)        |

Raw Chi Square = 10.80762      With 1 Degree of Freedom      Significance = 0.0010

Kendall's Tau 0.08827      Significance = 0.0005

**Table 40**  
**Cross Tabulation of Participants' Motivation to Apply for a Volunteer Position by Age, 1980-81**

|                                                                       | <i>19 or Younger</i> | <i>20</i> | <i>21</i> | <i>22</i> | <i>23-25</i> | <i>26 or Older</i> | <i>Raw Total</i> |
|-----------------------------------------------------------------------|----------------------|-----------|-----------|-----------|--------------|--------------------|------------------|
| <i>To Complete Part of Course Requirement</i>                         | 44                   | 41        | 35        | 13        | 8            | 7                  | 148              |
| <i>To Gain Independent Study/ Internship/ Field Experience Credit</i> | 67                   | 65        | 58        | 22        | 14           | 6                  | 232              |
| <i>To Gain Admission into Major</i>                                   | 53                   | 46        | 18        | 6         | 6            | 5                  | 134              |
| <i>To Gain Admission into Graduate or Professional School</i>         | 43                   | 45        | 31        | 17        | 14           | 4                  | 154              |
| <i>To Explore Possible Career Choice</i>                              | 155                  | 147       | 118       | 59        | 37           | 13                 | 529              |
| <i>To Gain Experience in Career Field</i>                             | 202                  | 204       | 174       | 77        | 52           | 20                 | 729              |
| <i>To Develop Professional Contacts</i>                               | 66                   | 79        | 85        | 29        | 23           | 12                 | 294              |
| <i>To Help People</i>                                                 | 230                  | 204       | 148       | 76        | 54           | 32                 | 744              |
| <i>To Socialize With Others</i>                                       | 116                  | 98        | 68        | 29        | 27           | 12                 | 350              |
| <i>To Have Something to Do in Leisure Time</i>                        | 70                   | 46        | 45        | 21        | 20           | 9                  | 211              |
| <i>Other</i>                                                          | 46                   | 25        | 24        | 16        | 9            | 7                  | 127              |
| <i>Column Total</i>                                                   | 316                  | 285       | 233       | 122       | 85           | 49                 | 1090<br>(100.0%) |

191

(Totals Based on Responses)

Raw Chi Square = 81.292

With 50 Degrees of Freedom

Critical Chi Square = 67.5048 at  $\alpha = .05$

Significant at .05 Level and Null Can Be Rejected

**Table 41**  
**Cross Tabulation of Participants' Motivation to Apply for a Volunteer Position by Class, 1980-81**

|                                                                       | <i>Freshman</i> | <i>Sophomore</i> | <i>Junior</i> | <i>Senior</i> | <i>Special</i> | <i>Graduate</i> | <i>Non-Student</i> | <i>Raw Total</i> |
|-----------------------------------------------------------------------|-----------------|------------------|---------------|---------------|----------------|-----------------|--------------------|------------------|
| <i>To Complete Part of Course Requirement</i>                         | 18              | 54               | 45            | 26            | 0              | 4               | 1                  | 148              |
| <i>To Gain Independent Study/ Internship/ Field Experience Credit</i> | 35              | 61               | 74            | 56            | 0              | 2               | 4                  | 232              |
| <i>To Gain Admission into Major</i>                                   | 33              | 58               | 32            | 9             | 2              | 0               | 0                  | 134              |
| <i>To Gain Admission into Graduate or Professional School</i>         | 22              | 35               | 53            | 29            | 1              | 9               | 5                  | 154              |
| <i>To Explore Possible Career Choice</i>                              | 89              | 140              | 170           | 106           | 4              | 13              | 7                  | 529              |
| <i>To Gain Experience in Career Field</i>                             | 99              | 203              | 231           | 158           | 4              | 21              | 11                 | 727              |
| <i>To Develop Professional Contacts</i>                               | 35              | 71               | 103           | 70            | 2              | 8               | 5                  | 294              |
| <i>To Help People</i>                                                 | 114             | 223              | 214           | 145           | 8              | 27              | 11                 | 742              |
| <i>To Socialize With Others</i>                                       | 59              | 119              | 95            | 57            | 4              | 14              | 2                  | 350              |
| <i>To Have Something to Do in Leisure Time</i>                        | 36              | 57               | 45            | 50            | 2              | 13              | 7                  | 210              |
| <i>Other</i>                                                          | 32              | 27               | 35            | 26            | 0              | 5               | 1                  | 126              |
| <i>Column Total</i>                                                   | 166             | 292              | 327           | 231           | 11             | 42              | 18                 | 1087<br>(100.0%) |

192

(Totals Based on Responses)

Raw Chi Square = 132.06

With 60 Degrees of Freedom

Critical Chi Square = 79.08 at  $\alpha = .05$

Significant at .05 Level and Null Can Be Rejected

**Table 42**  
**Cross Tabulation of Participants' Motivation to Apply for a Volunteer Position by Gender, 1980-81**

|                                                                       | <i>Male</i> | <i>Female</i> | <i>Raw Total</i> |
|-----------------------------------------------------------------------|-------------|---------------|------------------|
| <i>To Complete Part of Course Requirement</i>                         | 21          | 126           | 147              |
| <i>To Gain Independent Study/ Internship/ Field Experience Credit</i> | 60          | 165           | 225              |
| <i>To Gain Admission into Major</i>                                   | 12          | 118           | 130              |
| <i>To Gain Admission into Graduate or Professional School</i>         | 75          | 78            | 153              |
| <i>To Explore Possible Career Choice</i>                              | 145         | 373           | 518              |
| <i>To Gain Experience in Career Field</i>                             | 193         | 522           | 715              |
| <i>To Develop Professional Contacts</i>                               | 88          | 195           | 283              |
| <i>To Help People</i>                                                 | 199         | 528           | 727              |
| <i>To Socialize With Others</i>                                       | 98          | 245           | 343              |
| <i>To Have Something to Do in Leisure Time</i>                        | 58          | 148           | 206              |
| <i>Other</i>                                                          | 39          | 86            | 125              |
| <i>Column Total</i>                                                   | 300         | 765           | 1065<br>(100.0%) |

(Totals Based on Responses)

Raw Chi Square = 72.63

With 10 Degrees of Freedom

Critical Chi Square = 18.3070 at  $\alpha = .05$

Significant at .05 Level and Null Can Be Rejected

**Table 43**  
**Cross Tabulation of Participants' Motivation to Apply for Volunteer Position by Race, 1980-81**

|                                                                       | <i>Black</i> | <i>Oriental</i> | <i>Hispanic</i> | <i>White</i> | <i>Native American</i> | <i>Other</i> | <i>Raw Total</i> |
|-----------------------------------------------------------------------|--------------|-----------------|-----------------|--------------|------------------------|--------------|------------------|
| <i>To Complete Part of Course Requirement</i>                         | 5            | 1               | 2               | 135          | 4                      | 0            | 147              |
| <i>To Gain Independent Study/ Internship/ Field Experience Credit</i> | 10           | 1               | 2               | 203          | 11                     | 2            | 229              |
| <i>To Gain Admission into Major</i>                                   | 5            | 0               | 2               | 120          | 4                      | 0            | 131              |
| <i>To Gain Admission into Graduate or Professional School</i>         | 3            | 1               | 0               | 144          | 3                      | 3            | 154              |
| <i>To Explore Possible Career Choice</i>                              | 15           | 3               | 2               | 486          | 12                     | 5            | 523              |
| <i>To Gain Experience in Career Field</i>                             | 23           | 4               | 4               | 674          | 9                      | 6            | 720              |
| <i>To Develop Professional Contacts</i>                               | 11           | 1               | 1               | 269          | 5                      | 2            | 289              |
| <i>To Help People</i>                                                 | 29           | 5               | 7               | 677          | 9                      | 9            | 736              |
| <i>To Socialize With Others</i>                                       | 9            | 4               | 4               | 321          | 4                      | 6            | 348              |
| <i>To Have Something to Do in Leisure Time</i>                        | 9            | 2               | 0               | 194          | 3                      | 3            | 211              |
| <i>Other</i>                                                          | 1            | 1               | 1               | 115          | 2                      | 5            | 125              |
| <i>Column Total</i>                                                   | 34           | 8               | 7               | 999          | 16                     | 9            | 1073<br>(100.0%) |

(Totals Based on Responses)

194

Raw Chi Square = 88.09

With 50 Degrees of Freedom

Critical Chi Square = 67.5048 at  $\alpha = .05$

Significant at .05 Level and Null Can Be Rejected

**Table 44**  
**Cross Tabulation of Effect of Experience on Career Plans by Age, 1980-81**

|                                   | <i>19 or Younger</i> | <i>20</i>      | <i>21</i>      | <i>22</i>      | <i>23-25</i> | <i>26 or Older</i> | <i>Raw Total</i> |
|-----------------------------------|----------------------|----------------|----------------|----------------|--------------|--------------------|------------------|
| <b>Confirmed Previous Choice</b>  | 133                  | 118            | 101            | 56             | 31           | 17                 | 456<br>(42.3%)   |
| <b>Questioned Previous Choice</b> | 53                   | 34             | 35             | 9              | 10           | 7                  | 148<br>(13.7%)   |
| <b>Changed Previous Choice</b>    | 24                   | 23             | 9              | 3              | 3            | 1                  | 63<br>(5.8%)     |
| <b>No Effect</b>                  | 102                  | 107            | 87             | 53             | 41           | 22                 | 412<br>(38.2%)   |
| <b>Column Total</b>               | 312<br>(28.9%)       | 282<br>(26.1%) | 232<br>(21.5%) | 121<br>(11.2%) | 85<br>(7.9%) | 47<br>(4.4%)       | 1079<br>(100.0%) |

Raw Chi Square = 25.57849

With 15 Degrees of Freedom

Significance = 0.0427

Kendall's Tau 0.04113

Significance = 0.0466

**Table 45**  
**Cross Tabulation of Effect of Experience on Career Plans by Class, 1980-81**

|                                   | <i>Freshman</i> | <i>Sophomore</i> | <i>Junior</i>  | <i>Senior</i>  | <i>Special</i> | <i>Graduate</i> | <i>Non-Student</i> | <i>Raw Total</i> |
|-----------------------------------|-----------------|------------------|----------------|----------------|----------------|-----------------|--------------------|------------------|
| <b>Confirmed Previous Choice</b>  | 64              | 127              | 138            | 103            | 2              | 17              | 4                  | 455<br>(42.2%)   |
| <b>Questioned Previous Choice</b> | 37              | 32               | 44             | 28             | 2              | 1               | 4                  | 148<br>(13.7%)   |
| <b>Changed Previous Choice</b>    | 12              | 22               | 24             | 3              | 0              | 2               | 0                  | 63<br>(5.8%)     |
| <b>No Effect</b>                  | 52              | 109              | 118            | 95             | 7              | 22              | 8                  | 411<br>(38.2%)   |
| <b>Column Total</b>               | 165<br>(15.3%)  | 290<br>(26.9%)   | 324<br>(30.1%) | 229<br>(21.3%) | 11<br>(1.0%)   | 42<br>(3.9%)    | 16<br>(1.5%)       | 1077<br>(100.0%) |

196

Raw Chi Square = 40.95700

With 18 Degrees of Freedom

Significance = 0.0015

Kendall's Tau 0.02980

Significance = 0.1115

**Table 46**  
**Cross Tabulation of Effect of Experience on Career Plans by Gender, 1980-81**

|                                   | <i>Male</i> | <i>Female</i> | <i>Raw Total</i> |
|-----------------------------------|-------------|---------------|------------------|
| <i>Confirmed Previous Choice</i>  | 121         | 328           | 449<br>(42.6%)   |
| <i>Questioned Previous Choice</i> | 28          | 117           | 145<br>(13.7%)   |
| <i>Changed Previous Choice</i>    | 16          | 46            | 62<br>(5.9%)     |
| <i>Had No Effect</i>              | 132         | 267           | 399<br>(37.8%)   |
| <i>Column Total</i>               | 297         | 758           | 1055<br>(100.0%) |

Raw Chi Square = 10.89013    With 3 Degrees of Freedom    Significance = 0.0123

Kendall's Tau = - 0.05768                      Significance = 0.0263

**Table 47**  
**Cross Tabulation of Effect of Experience on Major Selection by Age, 1980-81**

|                                       | <i>19 or Younger</i> | <i>20</i> | <i>21</i> | <i>22</i> | <i>23-25</i> | <i>26 or Older</i> | <i>Raw Total</i> |
|---------------------------------------|----------------------|-----------|-----------|-----------|--------------|--------------------|------------------|
| <i>Confirmed<br/>Previous Choice</i>  | 111                  | 95        | 71        | 39        | 26           | 11                 | 353<br>(32.7%)   |
| <i>Questioned<br/>Previous Choice</i> | 50                   | 30        | 11        | 5         | 3            | 4                  | 103<br>(9.5%)    |
| <i>Changed<br/>Previous Choice</i>    | 18                   | 17        | 9         | 1         | 0            | 1                  | 46<br>(4.3%)     |
| <i>Had No Effect</i>                  | 133                  | 143       | 142       | 75        | 55           | 30                 | 578<br>(53.5%)   |
| <i>Column Total</i>                   | 312                  | 285       | 233       | 120       | 84           | 46                 | 1080<br>(100.0%) |

198

Raw Chi Square = 25.57849    With 15 Degrees of Freedom    Significance = 0.0427

Kendall's Tau = 0.04113    Significance = 0.0466

**Table 48**  
**Cross Tabulation of Effect of Experience on Major by Class, 1980-81**

|                                       | <i>Freshman</i> | <i>Sophomore</i> | <i>Junior</i> | <i>Senior</i> | <i>Special</i> | <i>Graduate</i> | <i>Non-Student</i> | <i>Raw Total</i> |
|---------------------------------------|-----------------|------------------|---------------|---------------|----------------|-----------------|--------------------|------------------|
| <i>Confirmed<br/>Previous Choice</i>  | 55              | 101              | 109           | 72            | 2              | 11              | 2                  | 352<br>(32.7%)   |
| <i>Questioned<br/>Previous Choice</i> | 35              | 32               | 23            | 11            | 1              | 0               | 1                  | 103<br>(9.6%)    |
| <i>Changed<br/>Previous Choice</i>    | 9               | 22               | 12            | 3             | 0              | 0               | 0                  | 46<br>(4.3%)     |
| <i>Had No Effect</i>                  | 65              | 136              | 182           | 144           | 8              | 31              | 11                 | 577<br>(53.5%)   |
| <i>Column Total</i>                   | 164             | 291              | 326           | 230           | 11             | 42              | 14                 | 1078<br>(100.0%) |

Raw Chi Square = 73.22198    With 18 Degrees of Freedom    Significance = 0.0000

Kendall's Tau = 0.10674    Significance = 0.0000

**Table 49**  
**Cross Tabulation of Effect of Experience on Major Selection by Gender, 1980-81**

|                                   | <i>Male</i> | <i>Female</i> | <i>Raw Total</i> |
|-----------------------------------|-------------|---------------|------------------|
| <i>Confirmed Previous Choice</i>  | 76          | 270           | 346<br>(32.8%)   |
| <i>Questioned Previous Choice</i> | 19          | 83            | 102<br>(9.7%)    |
| <i>Changed Previous Choice</i>    | 10          | 35            | 45<br>(4.3%)     |
| <i>Had No Effect</i>              | 194         | 368           | 562<br>(53.3%)   |
| <i>Column Total</i>               | 299         | 756           | 1055<br>(100.0%) |

Raw Chi Square = 23.05762    With 3 Degrees of Freedom    Significance = 0.0000

Kendall's Tau = - 0.12815                      Significance = 0.0000

**Table 50**  
**Cross Tabulation of Importance of Experience in Relation to Support from Others**  
**for Career Decisions by Age, 1980-81**

|                             | <i>19 or Younger</i> | <i>20</i> | <i>21</i> | <i>22</i> | <i>23-25</i> | <i>26 or Older</i> | <i>Raw Total</i> |
|-----------------------------|----------------------|-----------|-----------|-----------|--------------|--------------------|------------------|
| <i>Extremely Important</i>  | 72                   | 71        | 68        | 37        | 31           | 17                 | 296<br>(27.4%)   |
| <i>Somewhat Important</i>   | 64                   | 63        | 44        | 38        | 15           | 13                 | 237<br>(22.0%)   |
| <i>Of Little Importance</i> | 135                  | 111       | 93        | 37        | 29           | 9                  | 414<br>(38.4%)   |
| <i>Of No Importance</i>     | 41                   | 38        | 27        | 10        | 9            | 7                  | 132<br>(12.2%)   |
| <i>Column Total</i>         | 312                  | 283       | 232       | 122       | 84           | 46                 | 1079<br>(100.0%) |

Raw Chi Square = 26.61273    With 15 Degrees of Freedom    Significance = 0.0321

Kendall's Tau = - 0.08793    Significance = 0.0002

**Table 51**  
**Cross Tabulation of Importance of Experience on Broadening Knowledge**  
**of Career and Job Requirements by Class, 1980-81**

|                                    | <i>Freshman</i> | <i>Sophomore</i> | <i>Junior</i> | <i>Senior</i> | <i>Special</i> | <i>Graduate</i> | <i>Non-Student</i> | <i>Raw Total</i> |
|------------------------------------|-----------------|------------------|---------------|---------------|----------------|-----------------|--------------------|------------------|
| <b><i>Extremely Important</i></b>  | 23              | 50               | 45            | 48            | 4              | 9               | 2                  | 181<br>(16.8%)   |
| <b><i>Somewhat Important</i></b>   | 29              | 26               | 43            | 20            | 1              | 11              | 2                  | 132<br>(12.3%)   |
| <b><i>Of Little Importance</i></b> | 43              | 89               | 111           | 73            | 4              | 11              | 4                  | 335<br>(31.1%)   |
| <b><i>Of No Importance</i></b>     | 70              | 125              | 125           | 88            | 2              | 11              | 8                  | 429<br>(39.8%)   |
| <b><i>Column Total</i></b>         | 165             | 290              | 324           | 229           | 11             | 42              | 16                 | 1077<br>(100.0%) |

Raw Chi Square = 31.78539    With 18 Degrees of Freedom    Significance = 0.0233

Kendall's Tau = - 0.04583    Significance = 0.0330

**Table 52**  
**Cross Tabulation of Importance of Experience on Broadening Knowledge**  
**of Career and Job Requirements by Gender, 1980-81**

|                             | <i>Male</i> | <i>Female</i> | <i>Raw Total</i> |
|-----------------------------|-------------|---------------|------------------|
| <i>Extremely Important</i>  | 58          | 118           | 176<br>(16.7%)   |
| <i>Somewhat Important</i>   | 41          | 88            | 129<br>(12.2%)   |
| <i>Of Little Importance</i> | 101         | 226           | 327<br>(31.0%)   |
| <i>Of No Importance</i>     | 96          | 321           | 422<br>(40.0%)   |
| <i>Column Total</i>         | 296         | 758           | 1054<br>(100.0%) |

Raw Chi Square = 10.16054    With 3 Degrees of Freedom    Significance = 0.0173

Kendall's Tau = 0.09204    Significance = 0.0012

**Table 53**  
**Cross Tabulation of Importance of Experience**  
**in Focusing Choices by Gender, 1980-81**

|                             | <i>Male</i> | <i>Female</i> | <i>Raw Total</i> |
|-----------------------------|-------------|---------------|------------------|
| <i>Extremely Important</i>  | 70          | 137           | 207<br>(19.7%)   |
| <i>Somewhat Important</i>   | 74          | 126           | 200<br>(19.0%)   |
| <i>Of Little Importance</i> | 104         | 304           | 408<br>(38.8%)   |
| <i>Of No Importance</i>     | 47          | 190           | 237<br>(22.5%)   |
| <i>Column Total</i>         | 295         | 757           | 1052<br>(100.0%) |

Raw Chi Square = 20.60914    With 3 Degrees of Freedom    Significance = 0.0001

Kendall's Tau = 0.12859    Significance = 0.0000

**Table 54**  
**Cross Tabulation of Importance of Experience in Providing First Hand Exposure**  
**to Work Environment by Gender, 1980-81**

|                             | <i>Male</i> | <i>Female</i> | <i>Raw Total</i> |
|-----------------------------|-------------|---------------|------------------|
| <i>Extremely Important</i>  | 60          | 103           | 163<br>(15.4%)   |
| <i>Somewhat Important</i>   | 27          | 85            | 112<br>(10.6%)   |
| <i>Of Little Importance</i> | 88          | 217           | 305<br>(28.8%)   |
| <i>Of No Importance</i>     | 125         | 355           | 480<br>(45.3%)   |
| <i>Column Total</i>         | 300         | 760           | 1060<br>(100.0%) |

Raw Chi Square = 8.03968      With 3 Degrees of Freedom      Significance = 0.0452

Kendall's Tau = 0.05751      Significance = 0.0275

**Table 55**  
**Cross Tabulation of Importance of Experience to Participant Becoming Known to People in Field**  
**Who Could Recommend Him/Her to Potential Employers by Race, 1980-81**

|                             | <i>Black</i> | <i>Oriental</i> | <i>Hispanic</i> | <i>White</i> | <i>Native American</i> | <i>Other</i> | <i>Raw Total</i> |
|-----------------------------|--------------|-----------------|-----------------|--------------|------------------------|--------------|------------------|
| <i>Extremely Important</i>  | 9            | 3               | 3               | 363          | 3                      | 2            | 383<br>(36.1%)   |
| <i>Somewhat Important</i>   | 6            | 3               | 1               | 249          | 2                      | 5            | 266<br>(25.1%)   |
| <i>Of Little Importance</i> | 7            | 2               | 2               | 225          | 3                      | 1            | 240<br>(22.6%)   |
| <i>Of No Importance</i>     | 11           | 0               | 1               | 151          | 7                      | 1            | 171<br>(16.1%)   |
| <i>Column Total</i>         | 33           | 8               | 7               | 988          | 15                     | 9            | 1060<br>(100.0%) |

Raw Chi Square = 25.42590    With 15 Degrees of Freedom    Significance = 0.0445

Kendall's Tau = - 0.00084    Significance = 0.4705

**Table 56**  
**Cross Tabulation of Importance of Experience to Participants' Becoming Aware**  
**of How Educational Experience is Serving As Preparation for Career by Gender, 1980-81**

|                             | <i>Male</i> | <i>Female</i> | <i>Raw Total</i> |
|-----------------------------|-------------|---------------|------------------|
| <i>Extremely Important</i>  | 62          | 130           | 192<br>(18.2%)   |
| <i>Somewhat Important</i>   | 64          | 117           | 181<br>(17.1%)   |
| <i>Of Little Importance</i> | 122         | 290           | 412<br>(39.0%)   |
| <i>Of No Importance</i>     | 52          | 219           | 271<br>(25.7%)   |
| <i>Column Total</i>         | 300         | 756           | 1056<br>(100.0%) |

Raw Chi Square = 17.34395    With 3 Degrees of Freedom    Significance = 0.0006

Kendall's Tau = 0.11381    Significance = 0.0001

**Table 57**  
**Cross Tabulation of Importance of Experience to Participants' Gaining Awareness**  
**of Relationship Between Job Requirements and Personal Values by Age, 1980-81**

|                                    | <i>19 or Younger</i> | <i>20</i> | <i>21</i> | <i>22</i> | <i>23-25</i> | <i>26 or Older</i> | <i>Raw Total</i> |
|------------------------------------|----------------------|-----------|-----------|-----------|--------------|--------------------|------------------|
| <b><i>Extremely Important</i></b>  | 29                   | 33        | 28        | 22        | 14           | 12                 | 138<br>(12.8%)   |
| <b><i>Somewhat Important</i></b>   | 52                   | 41        | 30        | 14        | 13           | 6                  | 156<br>(14.4%)   |
| <b><i>Of Little Importance</i></b> | 110                  | 101       | 81        | 51        | 37           | 14                 | 394<br>(36.4%)   |
| <b><i>Of No Importance</i></b>     | 122                  | 108       | 94        | 35        | 20           | 14                 | 393<br>(36.4%)   |
| <b><i>Column Total</i></b>         | 313                  | 283       | 233       | 122       | 84           | 46                 | 1081<br>(100.0%) |

Raw Chi Square = 26.74974    With 15 Degrees of Freedom    Significance = 0.0308

Kendall's Tau = - 0.06713    Significance = 0.0035

**Table 58**  
**Cross Tabulation of Importance of Experience to Participants' Gaining Awareness**  
**of Relationship Between Job Requirements and Personal Values by Class, 1980-81**

|                             | <i>Freshman</i> | <i>Sophomore</i> | <i>Junior</i> | <i>Senior</i> | <i>Special</i> | <i>Graduate</i> | <i>Non-Student</i> | <i>Raw Total</i> |
|-----------------------------|-----------------|------------------|---------------|---------------|----------------|-----------------|--------------------|------------------|
| <i>Extremely Important</i>  | 11              | 33               | 41            | 38            | 1              | 12              | 2                  | 138<br>(12.8%)   |
| <i>Somewhat Important</i>   | 29              | 45               | 43            | 28            | 2              | 9               | 0                  | 156<br>(14.5%)   |
| <i>Of Little Importance</i> | 62              | 93               | 122           | 89            | 7              | 9               | 11                 | 393<br>(36.4%)   |
| <i>Of No Importance</i>     | 64              | 118              | 120           | 74            | 1              | 12              | 3                  | 392<br>(36.3%)   |
| <i>Column Total</i>         | 166             | 289              | 326           | 229           | 11             | 42              | 16                 | 1079<br>(100.0%) |

Raw Chi Square = 41.05540    With 18 Degrees of Freedom    Significance = 0.0015

Kendall's Tau = - 0.07212    Significance = 0.0019

**Table 59**  
**Cross Tabulation of Use of Research and Investigation Skills**  
**in Volunteer Work by Gender, 1980-81**

| <i>Frequency of Use</i>  | <i>Male</i> | <i>Female</i> | <i>Raw Total</i> |
|--------------------------|-------------|---------------|------------------|
| <i>Very Often</i>        | 81          | 250           | 331<br>(31.6%)   |
| <i>Fairly Often</i>      | 35          | 108           | 143<br>(13.7%)   |
| <i>Sometimes</i>         | 56          | 147           | 203<br>(19.4%)   |
| <i>Rarely</i>            | 54          | 127           | 181<br>(17.3%)   |
| <i>Practically Never</i> | 69          | 119           | 188<br>(18.0%)   |
| <i>Column Total</i>      | 295         | 751           | 1046<br>(100.0%) |

Raw Chi Square = 10.24028    With 4 Degrees of Freedom    Significance = 0.0366

Kendall's Tau = - 0.09190    Significance = 0.0017

**Table 60**  
**Cross Tabulation of Use of Information Management Skill**  
**in Volunteer Work by Race, 1980-81**

| <i>Frequency of Use</i>  | <i>Black</i> | <i>Oriental</i> | <i>Hispanic</i> | <i>White</i> | <i>Native American</i> | <i>Other</i> | <i>Raw Total</i> |
|--------------------------|--------------|-----------------|-----------------|--------------|------------------------|--------------|------------------|
| <i>Very Often</i>        | 10           | 2               | 3               | 432          | 3                      | 4            | 454<br>(43.2%)   |
| <i>Fairly Often</i>      | 5            | 4               | 2               | 163          | 2                      | 0            | 176<br>(16.8%)   |
| <i>Sometimes</i>         | 11           | 0               | 2               | 145          | 4                      | 4            | 166<br>(15.8%)   |
| <i>Rarely</i>            | 4            | 0               | 0               | 124          | 5                      | 0            | 133<br>(12.7%)   |
| <i>Practically Never</i> | 4            | 2               | 0               | 113          | 1                      | 1            | 121<br>(11.5%)   |
| <i>Column Total</i>      | 34           | 8               | 7               | 977          | 15                     | 9            | 1050<br>(100.0%) |

Raw Chi Square = 36.50666    With 20 Degrees of Freedom    Significance = 0.0134

Kendall's Tau = - 0.00166    Significance = 0.4388

**Table 61**  
**Cross Tabulation of Use of Information Management Skills**  
**in Volunteer Work by Class, 1980-81**

| <i>Frequency of Use</i>  | <i>Freshman</i> | <i>Sophomore</i> | <i>Junior</i> | <i>Senior</i> | <i>Special</i> | <i>Graduate</i> | <i>Non-Student</i> | <i>Raw Total</i> |
|--------------------------|-----------------|------------------|---------------|---------------|----------------|-----------------|--------------------|------------------|
| <i>Very Often</i>        | 78              | 128              | 131           | 83            | 5              | 23              | 9                  | 457<br>(43.0%)   |
| <i>Fairly Often</i>      | 29              | 51               | 51            | 35            | 5              | 6               | 2                  | 179<br>(16.8%)   |
| <i>Sometimes</i>         | 30              | 47               | 45            | 39            | 1              | 6               | 2                  | 170<br>(16.0%)   |
| <i>Rarely</i>            | 21              | 34               | 49            | 30            | 0              | 2               | 0                  | 136<br>(12.8%)   |
| <i>Practically Never</i> | 4               | 26               | 43            | 41            | 0              | 3               | 4                  | 121<br>(11.4%)   |
| <i>Column Total</i>      | 162             | 286              | 319           | 228           | 11             | 40              | 17                 | 1063<br>(100.0%) |

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Raw Chi Square = 48.56710    With 24 Degrees of Freedom    Significance = 0.0021

Kendall's Tau = 0.06010    Significance = 0.0055

**Table 62**  
**Cross Tabulation of Use of Information Management Skills**  
**in Volunteer Work by Age, 1980-81**

| <i>Frequency of Use</i>  | <i>19 or Younger</i> | <i>20</i> | <i>21</i> | <i>22</i> | <i>23-25</i> | <i>26 or Older</i> | <i>Raw Total</i> |
|--------------------------|----------------------|-----------|-----------|-----------|--------------|--------------------|------------------|
| <i>Very Often</i>        | 140                  | 124       | 90        | 45        | 29           | 30                 | 458<br>(43.0%)   |
| <i>Fairly Often</i>      | 58                   | 43        | 36        | 24        | 14           | 5                  | 180<br>(16.9%)   |
| <i>Sometimes</i>         | 59                   | 37        | 33        | 18        | 18           | 5                  | 170<br>(16.0%)   |
| <i>Rarely</i>            | 39                   | 33        | 37        | 16        | 10           | 1                  | 136<br>(12.8%)   |
| <i>Practically Never</i> | 13                   | 39        | 35        | 17        | 13           | 4                  | 121<br>(11.4%)   |
| <i>Column Total</i>      | 309                  | 276       | 231       | 120       | 84           | 45                 | 1065<br>(100.0%) |

Raw Chi Square = 45.16873    With 20 Degrees of Freedom    Significance = 0.0010

Kendall's Tau = 0.04789    Significance = 0.0216

**Table 63**  
**Cross Tabulation of Use of Technical and Manual Skills**  
**in Volunteer Work by Race, 1980-81**

| <i>Frequency of Use</i>  | <i>Black</i> | <i>Oriental</i> | <i>Hispanic</i> | <i>White</i> | <i>Native American</i> | <i>Other</i> | <i>Raw Total</i> |
|--------------------------|--------------|-----------------|-----------------|--------------|------------------------|--------------|------------------|
| <i>Very Often</i>        | 13           | 0               | 2               | 337          | 0                      | 5            | 357<br>(34.0%)   |
| <i>Fairly Often</i>      | 5            | 3               | 1               | 158          | 2                      | 1            | 170<br>(16.2%)   |
| <i>Sometimes</i>         | 8            | 4               | 3               | 215          | 2                      | 2            | 234<br>(22.3%)   |
| <i>Rarely</i>            | 5            | 0               | 0               | 147          | 5                      | 0            | 157<br>(14.9%)   |
| <i>Practically Never</i> | 2            | 1               | 1               | 122          | 6                      | 1            | 133<br>(12.7%)   |
| <i>Column Total</i>      | 33           | 8               | 7               | 979          | 15                     | 9            | 1051<br>(100.0%) |

Raw Chi Square = 33.73663    With 20 Degrees of Freedom    Significance = 0.0280

Kendall's Tau = 0.01748    Significance = 0.0547

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