To the Graduate Council:

I am submitting herewith a dissertation written by Dora H. Marmon entitled "Core Competencies of Professional Service Providers in Federally Funded Education Programs". I have examined the final paper copy of this dissertation in form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy with a major in Human Ecology.

Ernest W. Brewer, Major Professor, HRD

We have read this dissertation
and recommend its acceptance:

Gregory C. Petty, Professor, HRD

Julia A. Malia, Associate Professor, CFS

Connie Hollingsworth, Assistant Professor, HRD

Accepted for the Council:

Vice Provost and
Dean of Graduate Studies

CORE COMPETENCIES OF PROFESSIONAL SERVICE PROVIDERS IN FEDERALLYFUNDED EDUCATION PROGRAMS

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee

Dora H. Marmon
December 2002

Thesis
2002b
.M375

DEDICATION

This dissertation is dedicated to Steve and to Janet in grateful appreciation.

ACKNOWLEDGMENTS

I am most grateful to each person who has made this journey possible. First, to my committee members, I am most appreciative. To my committee chair, Dr. Ernest W. Brewer, Professor, Human Resource Development, I could never fully express my gratitude for your encouragement each step of the way, for providing the financial backing for the study, for your excellent HRD courses, and the list goes on. To Dr. Gregory C. Petty, Professor, Human Resource Development, many thanks for assist me in developing the conceptual framework for this study. Also, thanks for coauthoring, along with Dr. Brewer, the text and for teaching the graduate level foundations course. I truly enjoyed it and learned a lot.

To Dr. Connie Hollingsworth, Assistant Professsor, Human Resource Development, thank you for your assistance as a committee member, for the excellent class on grantwriting, and for hosting the Saturday gatherings of the Dead Thesis Society. Your interest in graduate students is remarkable. I also appreciate your attention to detail. Thank you, Dr. Julia A. Malia, Associate Professor, Child and Family Studies, for being willing to join the committee at a late date. I appreciate your willingness to do so, your encouragement and insights, and your sense of humor.

To my son, Steve, I am most appreciative of your moral support, your suggestions, and your technical assistance. To Joel Coates, a big thanks for your encouragement and assistance, especially with WSAs, and to John Dever, many thanks for your technical assistance. I really appreciate it. To Cary Springer, statistics consultant, thanks for your invaluable assistance with this study.

Many thanks also to the panel of experts, the pilot participants, and to those who responded to the survey. Without these people, the study could not have been accomplished. Finally, to family members and friends, thanks for your belief in me at times when I faltered. Thanks for your encouragement to complete the task.

ABSTRACT

The purpose of this national study was to identify core competencies for administrators and other professional service providers in selected federally funded education programs. The population was administrators of Talent Search, Upward Bound, and Student Support Services projects. A proportional stratified random sample of 579 administrators received the survey; 354 responded. The usable response was 346 (59.8%).

A researcher-developed instrument was revised according to advice of a national panel of experts. The instrument was piloted and again revised prior to the national survey. The overall Cronbach's alpha for the instrument was .97. The 100-item questionnaire was divided into 18 core competency categories: Administration, Admissions, Advising, Curricula, Extra-curricula, Financial Aid, Follow Up and Evaluation, Grantwriting, Information, Interpersonal Skills, Leadership, Motivation, Planning, Professional Development, Public Relations, Recruitment, Teaching, and Technology.

Two research questions guided the study: Are there significant differences in perceived core competencies according to specific demographic variables? and Are there significant differences in perceived core competencies for respondents as compared to core competencies respondents believe are needed by those professional service providers whom they supervise? Nine null hypotheses were developed to address the first research question; one null hypothesis was used to address the second question.

Significance at the .05 level or lower was found for the demographic variables Years in Position, Years in TRIO, Program, Institution, Race, and Gender. There was no significance for Age, Education, or Region.

The last hypothesis was also significant at the .05 level or lower for differences between perceived core competencies for administrators and for those whom they supervised. Significance was found for 17 of the 18 core competency categories. Only Motivation was not significant.

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CHAPTER I

INTRODUCTION

Human resource development has been essential for ongoing program effectiveness (Phillips, 1997). This is true for administrators and for other professional service providers in the federally funded programs known as "TRIO" programs. Thus, Professional Development must be an ongoing concern for professional service providers, who assist low-income, first-generation students in completing high school, selecting career paths, entering college or other postsecondary training programs, and persisting to completion. To accomplish this, professional service providers must (a) motivate, (b) provide academic enrichment, (c) advise, and (d) provide information on institutional selection and on Financial Aid for some of America's most at-risk students. To serve the target populations effectively, professional service providers must have the core competency categories required to fulfill their roles.

In this chapter, I present (a) background information; (b) statement of the research problem; (c) purpose of the study; (d) rationale for the study; (e) research objectives; (f) research questions, assumptions, limitations, and delimitations for the study; and (g) operational definitions. The chapter ends with a chapter summary.

Background Information

TRIO programs, so named because originally there were three, were started in 1964 under the Johnson administration as a part of America's War on Poverty (Council of Opportunity in Education, 2000). The programs were established to assist low-income and first-generation students in finishing high school and in completing programs of postsecondary education. Upward Bound has targeted high school students, and Talent

Search has targeted both middle school and high school students. Student Support Services was provided for in the Higher Education Amendments of 1968 (COE, 2000). Student Support Services served students in community colleges and in 4-year institutions of higher education. Other programs were added later, but the name TRIO has remained as a title for all the programs.

Researchers have presented conflicting information regarding the effectiveness of these programs. A major national study undertaken by Mathematica Policy Research, Moore, Fasciano, Jacobson, Myers, and Waldman (1997) found no significant differences between classic Upward Bound participants and a control group. However, numerous other researchers have affirmed the effectiveness of these early intervention programs. Thomas, Farrow, and Martinex (1998) found that Student Support Services at Rutgers University "is the key factor in the strong graduation rates" (p. 402) of Rutgers' low-income, first-generation students. Other researchers (Mahoney, 1998; Mohammadi, 1996; Wallace & Abel, 1997; Yanosko, 1980) found similar results. *A Profile of the Talent Search Program: 1998-99* (United States DOE, 2002) reported favorable national outcomes of Talent Search for student retention when they were in Grades 6 through 12, as well as for the number of participants entering postsecondary education.

To develop uniformly superior TRIO programs, there has been a need to identify core competency categories needed for effective services (Harrison, 1989). This information is needed for selection of professional service providers and for ongoing professional training of those professional service providers.

Statement of the Problem

Conflicting information on the effectiveness of TRIO programs in meeting mandated objectives has made it imperative to identify those professional skills and competencies necessary for effective service delivery, since core competencies are considered essential for successful programs (Harrison, 1989). A needs assessment must be completed as a basis for planning and delivering training and development programs (Harrison). There has been little research on the core competency categories for professional service providers in federally funded education programs. One study (Ray, 1994) assessed core competency categories of Student Support Services professional service providers in Region IV (eight southeastern states). Another, by Harrison, assessed core competency categories of Educational Opportunity Center professional service providers, and Kolvitz (1999) researched the special core competency categories of professional service providers who worked with deaf and hard-of-hearing students. Her national study included Disabled Student Services professional service providers. No studies have been found for the core competency categories of Talent Search or for Upward Bound administrators or other professional service providers, and no national studies have been found on Student Support Services administrators or for other professional service providers.

Purpose of the Study

I conducted this study to identify the skills and abilities needed by effective TRIO professional service providers. This list can be used to develop core competency categories for effective administrators and professional service providers in the federally funded education programs included in the study. Training in those core competency

categories is necessary for effectiveness in serving the target populations of the Talent Search, Upward Bound, and Student Support Services programs. Knowledge of the necessary core competency categories is considered essential to effective training programs, because needs assessment has been the basis for developing and implementing training programs (Kirkpatrick, 1998). The professional service providers chosen for this study were selected because they represented administrators of the largest of the federally funded education programs in the TRIO group.

Rationale for the Study

TRIO programs serve those students who are at high risk for lack of perseverance in high school and for academic failure of those who enroll in postsecondary education (Mitchell, 1997; Terezini, Springer, Yaeger, Pascarella, & Nora, 1996). Since these students must compete in college and at work with those who have come from culturally rich, economically endowed backgrounds, the effectiveness of TRIO programs has been important to their successful completion of both secondary and postsecondary education (Wallace & Abel, 1997). Yet, sometimes these programs have failed or have succeeded only partially due to lack of appropriate service delivery (Elena-Hindes, 1999; Kolvitz, 1999; Ray, 1994; Stokes & Hodge, 2000; Yanosko, 1980).

Ineffective service delivery has been identified in the areas of (a) lack of organization and coordination of services, (b) inadequate ability to motivate adolescents and adults, (c) ineffective academic enrichment services, and (d) first-year attrition of Upward Bound students (Stokes & Hodge, 2000; Yanosko, 1980). In a national study undertaken by Mathematica Policy Research, Moore et al. (1997) found that one-half of Upward Bound students did not continue in the program beyond the first year.

Deficiencies also have been found when considering various demographic variables including the number of students served and staff size (Kolvitz, 1999). To develop effective administration and direct services delivery, needs assessment and effective staff development programs are considered necessary (Ray, 1994).

Inadequate Organization and Coordination of Student Support Services

One of the recommendations from Ray's (1994) study of Student Support Services professional service providers in Region IV (North Carolina, South Carolina, Georgia, Alabama, Kentucky, Tennessee, Mississippi, and Florida) was that efforts be made to improve learning experiences. Moore et al. (1997), in a national evaluation of Upward Bound programs undertaken by Mathematica Policy Research, saw a need for improved measures for evaluating overall project performance and activities. Another researcher (Elena-Hindes, 1999), in her study of Student Support Services professional service providers in two rural community colleges, found that, while some services were helpful to students, students complained of serious problems with scheduling of tutoring services and of tutors repeatedly not keeping appointments.

Upward Bound Persistence and Academic Enrichment

Researchers in a study undertaken by Mathematica Policy Research have examined overall grade point averages, math skills, and English improvement among Upward Bound students (Myers & Schirm, 1997). These researchers agreed that, while Upward Bound students gained in self-esteem and in higher career expectations, neither their Algebra I, nor their freshman English achievement, nor their overall high school freshman grade point averages were improved after one year, compared to control groups

of non-Upward Bound students. Unfortunately, attrition rates were high after one year. Those who persisted beyond the first year, however, showed improved academic skills. Hopefully, professional development can enable TRIO administrators and the professional service providers whom they supervise to motivate students and to assist them in reaching their educational goals.

Talent Search Outcomes

The Talent Search program offers college orientation activities, test-taking and study skills development, counseling, and academic advising" (Chou et al., 2002, p. ix). However, studies of Talent Search projects have been sparce. A Mathematica Policy Research report (Chou et al.) reported outcomes in terms of participation only. Specific outcomes of participation were not presented.

Contributions of the Current Study

A list of core competency categories is a vital tool (Gilley & Eggland, 1989) for determining initial qualifications and for providing inservice training for the professional service providers who are serving in the 1,979 TRIO programs (COE, 2000) included in the present study. This tool could guide administrators of the targeted programs in selecting new employees and in providing inservice training for the professional service providers whom they supervise. In the area of student motivation, for example, if professional service providers were deficient in knowledge of adolescent and adult learning needs, that could result in ineffective efforts to motivate program participants. This could be an area in which human resource developers might serve as change agents in teaching TRIO professional service providers to adapt methodology to the needs of their students.

Research Questions

I developed two research questions to guide the proposed study. From these questions, null hypotheses were developed and tested. The research questions were

1. Are core competency categories for professional service providers different according to selected demographic variables?

2. Are core competency categories different for administrators from those needed by the professional service providers whom they supervise?

Null Hypotheses

I developed 10 null hypotheses to address the research questions. The first nine used demographics as the independent variables included in research question one; the last null hypothesis addresses the second research question. Following are the null hypotheses

H_O 1: There are no significant differences in the 18 core competency categories for TRIO administrators according to Program.

H_O 2: There are no significant differences in the 18 core competency categories for TRIO administrators according to Institution.

H_O 3: There are no significant differences in the 18 core competency categories for TRIO administrators according to Region.

H_O 4: There are no significant differences in the 18 core competency categories for TRIO administrators according to Years in Position.

H_O 5: There are no significant differences in the 18 core competency categories for TRIO administrators according to Years in TRIO.

H_O 6: There are no significant differences in the 18 core competency categories for TRIO administrators according to Education.

H_O 7: There are no significant differences in the 18 core competency categories for TRIO administrators according to Gender.

H_O 8: There are no significant differences in the 18 core competency categories for TRIO administrators according to Age.

H_O *9*: There are no significant differences in the 18 core competency categories needed by TRIO administrators according to Race.

H_O *10*: There are no significant differences in core competency categories for TRIO administrators compared to administrators' perceptions of core competencies for professional service providers whom they supervise.

Assumptions, Limitations, and Delimitations

There were several assumptions and limitations and two delimitations for the current study. These are presented in this section.

Assumptions

Several assumptions guided the study. These assumptions were

1. I assumed that the survey instrument contained an exhaustive list of core competency categories for professional service providers in each of the TRIO programs under study.

2. I assumed that all participants in the study had the same understandings as those of the researcher regarding the meanings of all core competency tasks.

3. I assumed that all participants responded thoughtfully and honestly to each of the survey questions.

4. I assumed that participants were representative of the population from which the sample was drawn.

Limitations

Four research limitations were applicable to the study. They were

1. The results of the proposed study were limited by the response rate to the mail survey.

2. The survey instrument for the proposed study was limited to those core competency categories discussed in the related literature and those suggested by the panel of content experts (see Appendix A).

3. Survey results were limited by the accuracy of participants' interpretation of the survey tasks.

4. The population for the proposed survey was limited to the contact persons for each program listed in the sampling frame.

Delimitations

There were two delimitations for this study. They were

1. The study utilized a sampling frame that contained a comprehensive listing of all Talent Search, Upward Bound, and Student Support Services programs funded during the 2000-2001 program year.

2. All who served as administrators and who were listed in the sampling frame were eligible for inclusion in the study.

Operational Definitions

Operational definitions are presented in this section. These are definitions for terms as they were used in the current study.

1. *Administrator*: professional service provider whose primary responsibilities include selection, training, and supervision of other employees; grant writing; and overall responsibility for compliance with grant requirements (for administrative job titles, see TRIO titles definition).

2. *Adult learners*: students who are more than 24 years of age. Their learning styles and needs differ from those of younger students because of their maturity and life experiences.

3. *Age*: demographic variable for each respondent's chronological age by category. Categories used in the current study were: less than 25 years, 25-35 years, 36-45 years, 46-55 years, and over 55 years.

4. *At-risk students*: students whose parents do not have 4-year college degrees or whose family income is less than one and one-half times the poverty level according to current federal guidelines. Many meet both criteria; some are non-traditional students as well.

5. *Content experts*: professional service providers and professional journal editors who, through demonstrated expertise over time, are recognized as highly proficient and knowledgeable in federally funded education programs.

6. *Core competency categories*: skills and abilities grouped by category. They may be either acquired or innate and are essential for effective work by professional service providers. Core competency categories for the current

study included Administration, Admissions, Advising, Curricula, Extra-curricula, Financial Aid, Follow Up and Evaluation, Grantwriting, Information, Interpersonal Skills, Leadership, Motivation, Planning, Professional Development, Public Relations, Recruitment, Teaching and Technology.

7. *Education*: demographic variable indicating each respondent's amount of postsecondary education. Categories for the current study were less than an associate degree, associate degree, less than a 4-year college degree, Baccalaureate degree, some graduate work, Master's degree, post master's work doctorate degree.

8. *Educator*: generic term for any professional service provider in any educational institution. The term includes the following positions: administrator, coach, counselor, teacher, or tutor.

9. *Federally funded education program*: three of several TRIO programs funded by the United States Congress to encourage first-generation and low-income students to enter and complete programs of postsecondary education. These programs are: Talent Search, Upward Bound, and Student Support Services.

10. *First-generation students*: students neither of whose parents has obtained a four-degree college degree.

11. *Gender*: classification of human research participants according to physical characteristics as either male or female.

12. *Grade point average*: students' average of final grades for all courses attempted during a designated period. Grade point averages represent only courses taken for credit and for which a numeric-equivalent grade is assigned.

13. *Institution*: agency that administers a grant for a TRIO program.

14. *Low-income students*: students whose family income does not exceed one and one-half times the current federal poverty guidelines.

15. *Mentor*: one who serves as a role model to another person or persons in the pursuit of an identified goal.

16. *Motivation*: desire coupled with action to reach an identified goal.

17. *Needs assessment*: process for identifying deficiencies in job performance for the purpose of developing and delivering Professional Development programs.

18. *Non-traditional students:* postsecondary students who do not fit the traditional profile of single, economically dependent students who have just graduated from high school. They are over age 24, many are employed full- or part-time, and many are parents of young children.

19. *Other professional service provider:* employee of a federally funded education program who provides professional services excluding administrative services.

20. *Persistence:* successful continuance and completion of a program of secondary or postsecondary education.

21. *Professional service provider:* employee of a federally funded education program who provides such services as administration, tutoring, mentoring, teaching, giving information, and advising.

23. *Race:* classification of people who share specific genetic characteristics such as skin color and hair texture. Classifications used in the current study are those used by the United States Census Bureau. They are: African American, Asian American, Hispanic, Latino, White, and Other.

24. *Region:* demographic variable according to geographic area. There are 10 TRIO regions. These are collapsed into 5 regions for data analysis in the current study.

25. *School counselor:* an employee of an elementary or a secondary school who provides guidance services to students. These services can include advising, counseling, career education, and referrals to other individuals or agencies for professional services.

25. *Self-esteem:* an individual's estimate of his or her intrinsic value.

27. *Student Support Services:* federally funded education program that serves eligible college students. The goal is to increase retention rates. Activities include services for disabled college students, tutoring, financial aid, and academic advising.

28. *Talent Search:* federally funded education program that serves eligible students in Grades Six through Twelve. Services include advising; provision of information about college admissions, scholarships, and other financial assistance programs, and career information; and academic advising.

29. *TRIO administrator:* TRIO project employee whose job title is one of the following: coordinator, administrator, director, assistant director, associate director, dean of students, associate dean of students, assistant dean of

students, TRIO director, TRIO associate director, TRIO assistant director, TRIO program director, or director of TRIO programs.

30. *TRIO program:* any of the federally funded education programs that serve low-income and first-generation potential college graduates except the Gear Up program. Named TRIO in recognition of the first three programs, TRIO programs now include (a) classic Upward Bound, Math and Science Upward Bound, and Veterans Upward Bound programs; (b) regular Student Support Services and Disabled Student Support Services programs; (c) Educational Opportunity Centers; (d) Ronald E. McNair Post-Baccalaureate Achievement program; (e) TRIO Training Grant program; and (f) Demonstration Grant program.

31. *TRIO project:* local site of a TRIO program.

32. *TRIO title:* specific job title of participants in the current study, including panel members, piloting the instrument participants, and respondents to the national survey.

33. *Tutor:* a professional service provider who gives academic assistance to individuals or small groups of students.

34. *Upward Bound program:* federally funded education program that assists eligible students in attaining high school completion and in entering programs of higher education. Services include tutoring; providing academic enrichment, study skills instruction; and providing information on college admissions, scholarships, and other financial aid programs. Both classic Upward Bound and Math and Science Upward Bound programs serve eligible high school students; the Veterans Upward Bound program serves eligible military veterans.

35. *Years in position:* demographic variable for reporting respondents' number of years serving in their current positions. Categories for the current study are: less than 1 year, 1-3 years, 4-8 years, 9-15 years, and over 15 years.

36. *Years in TRIO:* demographic category for reporting respondents' number of years serving in any TRIO position. Categories for the current study are: less than 1 year, 1-3 years, 4-8 years, 9-15 years, and over 15 years.

Chapter Summary

Efforts to assist at-risk students in completing secondary education and persisting in postsecondary education have required extensive professional assistance. To assure

successful intervention, it is necessary to identify the competencies necessary for assisting the population targeted by TRIO programs. Once core competency categories are identified, human resource development personnel can assist professional service providers in acquiring the competencies they need and in transferring their new knowledge and skills to benefit their students. The purpose of the current study was to identify these core competency categories.

In this chapter, I have presented relevant background information and the rationale for the study. I also have presented research objectives and questions, null hypotheses, limitations, delimitations, and assumptions of the study as well as operational definitions of relevant terms.

CHAPTER II

REVIEW OF RELATED LITERATURE

In this chapter, I present (a) a conceptual framework for the current study, (b) theories of adolescent cognitive development and learning needs, (c) theories of adult learning, (d) historical background of non-traditional postsecondary students, (e) relevance of needs assessment for human resource development, (f) federally funded programs research, (g) related literature on competencies of effective service providers in education, including in TRIO programs, and (h) a chapter summary.

Conceptual Framework

Here I present relevant theories of motivation, adolescent learning, and adult learning. I also discuss the special needs of adult learners.

Theories of Self-Concept and of Motivation

I examined theories of human personality and how those theories were reflected in studies of the effects of aspects of self-concept and of motivation to learn. The human needs approach originally focused on industrial employees' needs and on the potential of the human needs approach for understanding and directing worker motivation. The Hawthorne experiments, conducted by Mayo from 1924 through 1927, awakened employers to the possibility of influencing employees' motivation (Dickson, 1973) to achieve and to maintain quality performance and cost efficiency. Since then, researchers of various aspects of motivation have grounded their work largely in the theories of industrial and organizational psychologists of the 1940s through the 1960s. Beginning with Maslow's Hierarchy of Needs Theory (Maslow, 1943) and continuing with Herzberg's Two-Factor Theory of Motivation (Herzberg, Mausuer, & Snyderman, 1959),

Vroom's Valence, Instrumentality, Expectancy (VIE) Theory (Vroom, 1964), Adam's Equity Theory (Adams, 1965), and Locke's Theory of Task Behavior (Locke, 1984), psychologists have sought to understand workers' needs and how those needs relate to job motivation. Evidence of the contributions of these theorists and those of James, Bandura, Rogers, and others (late 18th through mid 19th centuries) who have studied theories of the self has been used to investigate attitudes in many areas of employment, including education (see Chorney, 1997; Dickson, 1973; Grayson, 1995; Imel, 1994; Jones & Watson, 1990).

The Human Needs Perspective

Maslow's Hierarchy of Human Needs Theory

Maslow's (1943) theory identified five levels of needs: physiological, safety, social, ego, and self-actualizing. His use of the pyramid to depict the theory portrays the primacy of the lower levels, and he argued that only when a lower level need was substantially satisfied could an individual seek a higher level. Individuals who were concerned with safety issues, for example, would not yet be capable of motivation toward self-actualization. Implicit in this model is the notion that all true motivation is intrinsic. Common educational variables include violence in schools, feelings of adequacy, self-esteem, social support, and challenge.

Herzberg's Two-Factor Theory

Herzberg's (Herzberg et al., 1959) theory built upon Maslow's needs theory, describing lower-level needs (food, clothing, shelter, safety, rest) as 'hygiene factors', that is, needs which could lead to stress if they were not met. However, hygiene factors (including pay and workload) could not lead to intrinsic motivation. Only enrichers, to

use Herzberg's terms, could bring satisfaction. Enrichment factors in education include autonomy and challenge. Those factors represent the needs of ego and self-actualization on Maslow's scale. Common educational research themes related to Herzberg's theory include locus of control, autonomy, and social support.

Vroom's VIE Theory

Vroom's (1964) theory (valence, instrumentality, expectancy) of motivation postulated that all efforts led to results, or rewards. Positive results were motivating, whereas negative results were de-motivating for workers. Assessment of a reward was made according to the individual's personal system of values (valence), belief that the task would yield desired rewards (instrumentality), and relationship between effort and outcomes (expectancy). If any one of the factors were perceived to be entirely negative, the person would not be motivated to perform. This theory is highly individualistic, allowing for the perceptions of individuals to determine the motivation in any given circumstance and for their perceptions of their ability to fulfill a goal through their efforts. Educational research variables relevant to VIE include participative decision-making, relationship to concepts of the self, and altruism.

Locke's Theory of Task Behavior

Locke's (1984) theory postulated that individuals were most motivated to reach moderately difficult goals for rewards that would be realized as a direct result of meeting those goals. Employers and educators must provide necessary support elements, such as training and feedback. The immediacy, quality, and type (extrinsic or intrinsic) of rewards would determine the motivation to achieve future goals.

Self-Concept Theories

Leonard, Beauvais, and Scholl (1995) postulated that, although there have been many self based theories of personality, "All of these theories are based on the assumption that 'human beings have a fundamental need to maintain or enhance the phenomenal self '" (p. 3). They further stated, "Individuals are motivated to behave in ways that are consistent with existing self-perceptions" (p. 3). Therefore, Leonard et al. believed that the impact of self-perception was an important piece of information for understanding human motivation.

Various aspects of self-concept have been identified. How a person perceives the self is considered important in relation to workers' responses in such research theories as performance feedback, social feedback, and goal-setting. *Self-esteem*, sometimes subdivided into *chronic self-esteem* (relatively stable) and *socially influenced self-esteem* (situational, a function of expectations of others) is related to expectancy and social support. Efficacy beliefs have been studied in relation to individuals' performance, and to levels and effects of stress, especially depression (Bandura, 1982; Chorney, 1997; Pajares, 1996; Turner & Lloyd, 1999; Yang, Mohamed, & Beyerbach, 1999). Table 1 summarizes the theories and education research emphases for the theories discussed above.

Theories of Adolescent Cognitive Development and Learning Needs

Theories of adolescent motivation and learning have been considered under several aspects. Four of these aspects were human needs, cognitive development, behavior modification, resiliency, and persistence. Each is presented in this section.

Human Needs and Adolescent Motivation

Locke (1964), Maslow (1943), Vroom (1964), and Anderson and Midgley (1998) have examined adolescent motivation needs in three inter-related categories. Those categories, attribution, goal-setting, and autonomy, are presented below. Each has "particular relevance for young adolescent students" (Anderson & Midgley, p. 1).

Attribution. This theory deals with students' perceptions of their abilities and is closely related to self-esteem and efficacy. Anderson and Midgley (1998) stated that one's perceptions were closely related to motivation and that teachers and others working with middle school students must be encouraging to enhance students' self-expectations. Students with low attributions expected to fail and, therefore, set low educational goals for themselves. Teachers could assist them (and all students) by giving objective feedback, showing patience, and providing positive verbal reinforcement (Brewer & Marmon, 2000).

Goal-Setting. According to Leonard et al. (1995), "Individuals are motivated to behave in ways that are consistent with self-perceptions" (p. 3). Therefore, goal-setting would be most effective for students with a strong sense of self-efficacy. Vroom (1964) postulated that motivation to accomplish future goals was directly affected by both the results of previous efforts to reach goals and by the perceived value of reaching a goal. Attribution focused on students' self-perceptions as determining future successes or failures. Goal-setting theory considered reasons for obtaining their goals. Anderson and Midgley (1998) recommended the following strategies for enhancing positive attribution and for reaching classroom objectives: (a) groupings according to interest, (b) cooperative learning, (c) recognition of progress, and (d) enrichment activities.

Table 1

Self-Concept and Motivation Models and Education Research Emphases

Name	Theory	Education Research
Adams	Equity	Perceptions of Fairness and Equal Treatment
Bandura	Concept of the Self	Self-Concept, Efficacy, Esteem, Adequacy
Herzberg	Two-factor	Hygiene Factors and Motivation Factors
Locke	Theory of Task Behavior	Motivation, Rewards, Predictive Performance
Maslow	Hierarchy of Human Needs	Motivation According to Lowest Level Unmet
Vroom	Valence, Instrumentality, Expectancy	Individuality of Motivation, Perceived Worth of Effort

Autonomy. Because adolescence is a time of self-discovery and striving for independence, theorists have emphasized the importance of participative decision-making opportunities (Anderson & Midgley, 1998; Brewer & Marmon, 2000). Anderson and Midgley stated that self determination could be subcategorized as (a) sense of competence, (b) perceived relatedness to others, and (c) autonomy. They stated further that these inter-related aspects could be fostered in educational environments by providing adolescents with opportunities to choose among acceptable options, participative decision-making, and assisting them to develop intrinsically motivating educational goals.

Resiliency and Persistence

Resiliency and persistence in goals attainment have been linked to (a) self-awareness and to confidence in one's abilities (Conway, 2001); (b) commitment, autonomy, and challenge (Austin, 2001); and (c) environmental change (Edwards, 2000).

Conway stated that resilience in children requires love, support, and encouragement from parents or other significant adults in their lives. This ability to "bounce back" and to develop hardiness does not just happen, according to Austin. It required that the person develop a sense that success is possible despite setbacks for the one who is committed to a goal. Thus, the importance of self-perception is seen as an important factor. Other necessary ingredients are a sense of autonomy, or an ability and willingness to take charge of one's life, and a perspective that setbacks are challenges, not defeats.

Edwards (2000) discussed educational applications of resiliency theory. He believed that schools could promote resiliency in their students. However, he stated that to do so, "significant changes from common school practices are needed" (p. 1). Edwards believed that high expectations promote resiliency through development of enhanced perceptions of the student's worth and abilities. He stressed the importance of empowerment and of commitment to relevant, worthwhile, attainable goals. He recommended that schools foster participative decision-making and cooperative learning, authentic problem-solving situations and a caring atmosphere. Edwards also recommended integration of neighborhoods and schools to promote a sense of belonging and of empowerment.

Adolescent Cognitive Development and Learning Needs

Although Piaget's integrated stage theory (1972) was not intended to be rigid in its application, it placed adolescent cognitive development at the concrete operations stage, ages 7 to 11 years, and at the formal operations stage, ages 11 to adulthood. Piaget has not been considered a learning theorist; however, educational applications are evident

because he believed human thinking depends fundamentally on maturation of the brain (Craine, 1980). Thus, middle school and high school students could be considered capable of understanding concrete concepts, and they could begin to understand abstractions such as symbolic thinking and scientific reasoning. This means that young people in Upward Bound programs should be cognitively ready for realistic career planning and for setting attainable goals for their adult lives. Brewer and Marmon (2000) recommended that education counselors provide objective feedback and information and that they encourage high expectations.

Piaget's (1972) theory also suggests that adolescents are capable of understanding the consequences of human behavior. Thus, many researchers have recommended guided participative decision-making to help young people develop self-confidence and good judgment (Anderson & Midgley, 1998; Brewer & Marmon, 2000; Johnsion, Ostrow, Perna, & Etzel, 1997; Short & Rinehart, 1991). As summarized by Brewer and Marmon, "Effective teachers have learned that by empowering their students they greatly increase students' sense of ownership. This enhances not only their interest but their acceptance of responsibility for learning" (2000, p. 50).

Behavior Theory and Adolescent Learning

Skinner focused on environmental causes of human behavior. His mid-19th century experiments showed that human behavior often could be controlled or modified by reinforcing desired behaviors and by ignoring unwanted behaviors (Skinner, 1969). His theories have been useful in behavior modification to correct unproductive learning behaviors and in programmed instruction (Craine, 1980). Programmed instruction allows students to learn at their own pace, progressing in small steps that require mastery of each

previous step as the student moves from simple to complex stages of a concept. Craine noted that this approach in some ways resembles Montessori methods in that lessons are individualized and that skills are built in progressive stages. However, the teacher is much less in control in Montessori settings than in Skinner's programmed instruction; and learning goals are less arbitrary in Montessori.

Theories of Adult Learning

There have been differences of opinion among adult learning theorists as to the importance of the (a) role of traditional education strategies, such as lecture and other information-dispensing methodologies, (b) place of reflection in adult education, and (c) balance between individual change and social action. However, most have agreed on the primacy of self-directed learning, experiential learning, and problem solving activities. Such educational strategies as role-playing, internships, simulations, and case studies are widely recommended for building experience (Brookfield, 1991). Brookfield, along with Horton and Friere (1991), and Mezirow (1991) were among those who have emphasized the importance of critical examination of learners' assumptions based on their cultural backgrounds.

Adult Learners' Needs

According to Zemke and Zemke (1984), knowledge of adult learning can be divided into three categories: (a) adult learners' motivation, (b) effective curricular design for adults, and (c) what adult learners need to experience in the classroom. These researchers stated that adults' motivation to learn is based on needs arising from life-changing events such as job changes or due to other reasons for developing new skills or knowledge. Rose (1994) concurred with that observation. Adults are achievement-

oriented and are well motivated. In addition, Zemke and Zemke stated that adults often enjoy learning and see it as a way of supporting and enhancing self-esteem. Post and Killian (1992-1993) noted that adult learners tend to be achievement-oriented and that they often see learning as enjoyable when it is application-centered.

Due to adults' rich life experiences, they enjoy application courses in which they have opportunities to integrate old knowledge with new (Zemke & Zemke, 1984). Zemke and Zemke also believed that adult learners take fewer risks in the classroom and that personal errors are tied to their self-esteem. Imel (1994) concurred that adults are motivated, self-directed learners with rich life experiences to bring to their learning. She also noted that adults respond to practical needs for learning, are problem-oriented, and are motivated for intrinsic gains.

Zemke and Zemke (1984) recommended that these factors be considered in designing classroom activities. Adults learn best in environments that are psychologically comfortable and that offer intermittent changes in activity. Instructors should allow for student input into discussions and should encourage a diversity of thought. Imel (1994) also noted that the learning environment for adults must be simultaneously psychologically safe and challenging. Zemke and Zemke recommended that instructors incorporate sound learning theory in the classroom. For example, this would include using human needs theory group tasks and incorporating knowledge about kinesthetic learning for task skill development.

Roles of Adult Learners and of Their Educators

Philosophers of adult education have considered how beliefs related to educational practice. Following are some authors' theories and how those have affected their followers' goals and strategies.

Andragogy. Knowles (1980) presented the concept of andragogy, which stated that adults and children learn differently and, therefore, should be taught differently. He stressed the concept of individually selected learning goals and of individual differences in learners. The overall objective was the fuller development of the adult learner.

Andragogy is competency based and problem centered and has behavioral goals as a part of application. However, there is a potential weakness in that hands-on learning could lead to a lack of reflective learning (Brookfield, 1991). Without reflecting on what has been learned and evaluating the action phase, adults could miss much of their potential for more effective applications. Brookfield (1995) advocated integrating self-directed learning with more traditional forms of education. He also stated that critical thinking should focus on (a) questioning and reframing their understandings, (b) practice viewing the world through different perspectives as a way of critically examining their assumptions, and (c) examining dominant cultural values and their effects on minority cultures.

Students as Co-Creators of Knowledge. Tisdell and Taylor (1999-2000), in accord with Knowles, believed that adult learners functioned best as co-creators of knowledge. Within this framework, the learner is central to the learning process, and educators are facilitators and co-learners. Knowles also believed that frequently adults were self-taught.

Transformation Theory. Mezirow (1995) believed that adult learners should become autonomous, reflective, critical thinkers. Some would place high value on transforming their own lives by overcoming oppressive circumstances and others would become socially active citizens. Thus, one end of education for adults is to make fundamental changes in personal and societal processes that could lead to greater social and economic equality. According to Brookfield (1991), Mezirow's work in education has been criticized by educators in the United States and elsewhere for its intense focus on individualistic learning and on application to personal issues. Much application of Mezirow's work has been in issues related to women's place in society and on the needs of those with chronic illnesses (Mezirow, 1978, 1991, 1992).

Critical Theory and Social Change. Another approach to education, espoused by Freire (1970, 1994), especially emphasized societal change as the primary end of education for adult students who were disempowered in their current living environments. He saw the role of educators of those adults as co-learners and facilitators of action. "Friere saw adult education as a tool to promote revolutionary action that could change societies built on oppression and exploitation" (Ebert, 2000, p. 92).

Horton and Freire (1991) agreed on the importance of dialog as a primary learning tool. Both sought to foster positive social change to gain greater equality among all citizens. Both believed in the importance of action and of reflection in adult education.

Education for Corporate Leadership and for Personal Growth. Covey (1989) and Covey, Merrill, and Merrill (1994) believed empowerment was the key to personal responsibility and influence. This is another individualistic theory, except that Covey has a universal prescription for all persons. This prescription was laid out in detail in Covey's

Seven Habits of Highly Successful People: Restoring the Character Ethic (1989). The third habit, "Put First Things First," is discussed thoroughly in his book by that title (1994). The other habits flow from that one.

Covey (1989) depicted all human activity as falling within one of four quadrants: (a) important but not urgent, (b) important and urgent, (c) not important but urgent, and (d) not important and not urgent. According to Covey, the first quadrant (important but not urgent) is highly reflective. It calls for meditating regularly on one's important relationships and goals and for making an ongoing commitment to putting those persons and goals first in one's use of time. The names of authors of theories of adult learning, along with a listing of education research applications, are presented in Table 2.

Historical Background of Non-Traditional Postsecondary Students

The increased postsecondary enrollment of non-traditional students is well documented (Allen, 1994; Brewer, Marmon, & Coates, 2000; Jones & Watson, 1990; Post & Killian, 1992-1993). In this section, I discuss reasons for this phenomenon. In addition, I briefly present the needs of low-income and first-generation students that inspired the establishment of TRIO programs and efforts to assist those students in obtaining postsecondary education.

Characteristics of Non-Traditional Postsecondary Students

According to the United States Department of Education (2000), enrollment of non-traditional students in higher education increased by about 1.5 million students between 1985 and 1996; the greatest increase was among those 35 years of age or older. Another 500,000 are expected to enroll between 2000 and 2010. The increasing number

Table 2

Theories of Adult Learning and Education Research Emphases

Name	Theory	Education Research
Brookfield	Andragogy	Reflective Learning, Learning Experiences and Methods
Covey	Leadership	Reflection, Action, Personal Responsibility, Empowerment
Freire and Horton	Critical Theory and Social Change	Dialog, Reflection, Action, Empowerment
Imel	Adult Learners' Needs	Learning Experiences, Curriculum, Motivation, Self-Concept, Individual Differences,
Knowles	Andragogy	Teaching methods, Individual Differences
Mezirow	Transformative Learning	Problem-Solving, Social Action, Reflection, Individual Differences
Rose	Co-Creators of Learning	Self-Directed Learning, Individual Differences
Tisdell and Taylor	Co-Creators of Learning	Self-Directed Learning, Individual Differences
Zemke and Zemke	Adult Learners' Needs	Learning Experiences, Curriculum, Motivation, Self-Concept, Individual Differences

of non-traditional students in postsecondary education can be traced to two primary factors. Those factors are

1. The welfare-to-work efforts that began in the early 1990s led to some parents' needs to obtain job skills to support their families and

2. An increasingly high-tech economy has made many former job skills obsolete (Pierce, 1995).

By definition, many non-traditional students have families to support and lack appropriate job skills. A high number are not only low-income but also first-generation students (Terenzini et al., 1996). Thus, they face serious barriers to their progress. They

often lack basic academic skills of numeracy and literacy (Mitchell, 1997; Richardson & Skinner, 1992; Terenzini et al., 1996). According to Post and Killian (1992-1993) most non-traditional students have been away from formal education for 4 years or more and tend to have lowered self-esteem when returning to the classroom.

Wallace and Abel (1997) defined minority status as including those who have been marginalized because of race, gender, ethnic status, or physical limitations. Those students have been found to lack self-confidence and motivation because of social isolation. Wallace and Abel stated that the primary reason that non-traditional students did not complete training or courses of instruction was their "inability to socially integrate into the collegiate environment" (p. 6). Elena-Hindes (1999) stressed the importance to marginalized students of having strong family support and of cultural integration into their college communities. Poverty has increased their needs to accept low-paying jobs for personal and family survival. They need assistance to find the time, funds, and mentoring needed for academic success and to improve their financial status.

Characteristics of Low-Income and First-Generation Students

First-generation college students, those for whom neither parent had a 4-year college degree, often are members of ethnic minorities; and even more frequently, they come from poor and working-class families (Jones & Watson, 1990; Mitchell, 1997; Pardon, 1992). To succeed in college, these students must overcome the cultural disadvantages of having few, if any, mentors at home and the academic disadvantages of their skill deficits. Characteristics of these students include

1. lower reading and math skills (Mitchell, 1997; Richardson & Skinner, 1992; Terenzini et al., 1996);

2. lower self-expectations with regard to level of degree attainment (Riehl, 1994; Terenzini et al., 1996);

3. discouragement from lower teacher expectations in college and in high school (Richardson & Skinner, 1992);

4. high drop-out rates during the first semester of college (Riehl, 1994);

5. longer time needed to finish degree programs due to intermittent, part-time attendance (Zwerling, 1992);

6. tendency to take fewer humanities courses and more technical training classes (Terenzini et al., 1996); and

7. less time for extracurricular activities (Grayson, 1995).

Since these students must compete in college and at work with those who come from culturally rich, economically endowed backgrounds, the need for federally funded educational programs at all levels of education is evident. Those programs provide tutoring, mentoring, career and academic advising, and assistance with obtaining information for financial assistance and for appropriate college enrollment.

Peer learning to overcome marginalization was studied by Braxton, Milem, and Sullivan (2000). They focused on active learning as a way to deter first-year college students from dropping out of school was important for all students who felt marginalized. Braxton et al. stated, "Almost one-half of students entering two-year colleges and more than one-fourth of students entering four-year collegiate institutions leave at the end of their first year" (p. 569). Those researchers also referenced the work of Tinto, who studied the social needs of marginalized students. Braxton et al. found that first-year college students who were engaged in active learning, including cooperative learning and other peer group work, were more likely to continue their college educations.

Gordon, Young, and Carlyle (2001) also investigated the importance of group learning activities for college freshmen. Their study was conducted at a large midwestern university. Gordon et al. found that there was a "greater degree of involvement and persistence in achieving academic success" (p. 37) among students who were involved in learning communities, studying in peer groups, and interacting with faculty. They, too, cited the work of Tinto and others who have written about the importance to first-year students, especially marginalized students, of having academic and social involvement with their peers. Gaining a sense of belonging aids students who are at risk because of cultural estrangement; this is seen as the classic situation for many first-generation college students.

Relevance of Needs Assessment for Human Resource Development

According to Oblinger and Rush (1997), "Employees are expected to engage in a constant quest to build their expertise, both in depth and breadth" (p. 6). This is true because effectiveness depend not only on basic professional preparation but also on continual Professional Development. Seeking different learning experiences requires self-knowledge regarding training needs.

Analysis of need for training must be based on key tasks and skills needed for the job, and that can best be determined by an ongoing needs assessment. This process, then, encourages an integrated, systematic approach to professional development. Phillips (1997) stated, "Human resource development must be integrated into the overall strategic and operational framework of the organization. It cannot be an isolated, event-based activity, unrelated to the mainstream function" (p. 1).

Models of Instructional Design

Phillips' (1997) Complete Results-Based Human Resource Development Model has a list of 18 tasks. First among them was, "Conduct a Needs Assessment and Develop Tentative Objectives" (p. 52). Phillips also listed 13 questions for developing a needs assessment. Among those questions were

1. Is there a performance problem?
2. What is the gap between desired and actual performance?
3. How important is the problem?
4. What happens if we do nothing?
5. Does a lack of skill contribute to the problem?

Gilley and Eggland (1989) also discussed the importance of needs assessment for professional development courses. They listed four reasons for conducting a thorough needs assessment. Those reasons were to (a) identify specific problem areas in the organization, (b) obtain management commitment for training, (c) develop data for evaluation, and (d) determine the costs and benefits of training (pp. 198-199).

Without appropriate needs assessment, training could be irrelevant and program evaluation a futile, disappointing, frustrating activity. Findings of needs assessment are considered crucial for "supporting new directions for pre-service training and for ongoing Professional Development" (Kolvitz, 1999, p. 6). It was important also, according to Ray (1994), to learn of tangent, non-essential competencies. By distinguishing between essential and non-essential competencies, human resource development personnel could keep appropriate focus on real training needs.

Transfer-of-Training Issues

Needs assessment and effective design and implementation of professional training are but three stages of the instructional design model. Evaluation of results and redesign must be considered essential as well. Programs that lack appropriate gains in knowledge and skills or that lack transfer of training to on-the-job improvements contribute to a waste of resources. Yet, research has shown that such transfers did not always occur. Yamnill and McLean (2001) published a theoretical paper in which they discussed three factors that affected transfer of training. Those factors were (a) motivation to change following training, (b) training design that contributed to successful transfer, and (c) organizational factors that supported transfer. These researchers used an eclectic theoretical framework, relying on Vroom's expectancy theory, Adams' equity theory, and Lock's goal-setting theory. Yamnill and McLean (2001) concluded that, "All three sets of theories help HRD professional service providers [to] better understand the factors supporting transfer of training" (p. 205).

Focusing on the moderating effects of work environments, Richman-Hirsch (2001) conducted a study on the effectiveness of goal-setting versus the effectiveness of self-management training. Richman-Hirsch stated that successful transfer consisted of two parts: maintenance of new skills after returning to the job and generalization of the application to new tasks or settings. In her study, participants were university employees taking customer service training through the university's HRD department ($N = 257$). The course focused on service, teamwork, communication, and "the prevention of common university student problems" (p. 110).

Richman-Hirsch (2001) found that goal-setting intervention was effective with trainees, whose colleagues saw significant generalized behavior changes when compared to those trainees for whom the intervention was self-management. She also found that employees' perceptions of the work environment affected transfer. A supportive environment was significant for aiding transfer for goal-setting trainees. However, it made no significant difference with regard to self-management trainees. One conclusion of the study was that

> this study demonstrated that a short post-training intervention on goal-setting may lead to enhanced transfer of training. This effect, however, was moderated by characteristics of the work environment. Goal-setting reaped the greatest benefits in transfer when trainees worked in a supportive environment. (p. 119)

Wallace, Shin, Bartholomay, and Stahl (2001) studied competencies needed by teachers who supervised the work of paraprofessionals. Their study subcategorized competencies to include communication, planning, modeling, training, and management. Findings indicated that there were significant variations in perceptions of importance and perceptions of practice of the competencies. Wallace et al. concluded that better pre-service and more thorough in-service training programs were needed so that the identified competencies could be learned and practiced in the educational setting.

Federally Funded Programs Research

In this review, I examine research on the effectiveness of selected TRIO programs and on the perceived core competency categories of professional service providers. The section begins with a brief history of TRIO funding.

History of TRIO Funding

When the original TRIO programs were funded in 1965, it was for one pilot year. That year was a good one, and funding has increased each year since (Hewitt, 1998). The first funding level was $100 million dollars. Today it is near a billion dollars, with increases not only in dollars but in types of programs. Hewitt declared that TRIO has survived because of general perceptions of program effectiveness. That has been based on antidotal evidence, such as that described by Coles (1998) in her excellent article, *TRIO Achievers: The Promise of the Future,* and on research that supported the effectiveness of specific programs (Allen, 1994; Alessi, Boubion, Hegeman, & Alexander, 1994; Brewer et al., 2000; Gunter, 2002; Stokes & Hodge, 2000). Hewitt also asserted, "TRIO Programs' neutral ideology appeals to conservative and liberal politicians alike" (p. 71).

Another reason for continued TRIO funding could be that, unlike many government programs, TRIO programs were always local projects (Coles, 1998). Coles noted that these local projects provided direct services to students. She also affirmed that, "access and retention services are an essential component of the federal strategy to ensure equal educational opportunity" (p. 434) and that TRIO programs enjoyed widespread grassroots support. Thus, gaining congressional approval for sustaining the programs has not proved to be difficult. However, as Hewitt (1998) noted, there have been "attempts by national leaders to eliminate the United States Department of Education" (p. 71). Hewitt believed that an important reason for the rejection of that notion was the perceptions of TRIO's successful interventions for low-income and first-generation students.

Effectiveness of Selected Federally Funded Education Programs

The effectiveness of TRIO programs has been attributed to professional service providers' communication skills such as caring, encouraging, and empathy and to effective teaching and advising strategies. Implicit in those findings were identified competencies such as (a) knowledge of pedagogy and andragogy; (b) interpersonal skills characteristics such as honesty, fairness, and case management skills; and (c) planning and organization skills.

The literature also reflected unevenness in service quality. Reasons included duplication of some counseling services, lack of commitment reflected in missed appointments, and lack of understanding of adult learning needs. Also, researchers have not always found that TRIO programs were effective.

Talent Search Studies

Brewer and Nagy (1982) conducted one of the earliest research studies of the effectiveness of Talent Search. They compared guidance activities of Talent Search professional service providers in selected programs with guidance activities of school counselors in the same high schools. Of the 158 projects included in the national sample, 66% of the recipients completed the surveys. Conclusions from that study were that Talent Search and school counselors performed some guidance tasks approximately equally. However, Talent Search performed much needed, otherwise inadequate services to low-income and first-generation students in the areas of Financial Aid. That was a significant finding, since the TRIO population is considered less likely than students that are more affluent to seek out the financial aid information.

In another study (Brewer & Morgan, 1984), Talent Search overall program effectiveness was the focus. Brewer and Morgan studied "the impact of supplementary career counseling, technical assistance in college admission and Financial Aid, and rate of postsecondary school enrollment" (p. 14). A control group of students with similar educational and socioeconomic demographics was studied for comparison. Results of that study showed that there were significant differences at the .05 level for providing information on college admission; applying for financial aid was significant at the .01 level. Thus, Talent Search programs' effectiveness was found to be effective in those two areas. However, there were no significant differences between Talent Search students and the control group on percentage of students enrolling in postsecondary education.

A Profile of Talent Search Programs 1998-1999 (United States Department of Education, 2002), reported on a survey study to which 355 of the 361 projects responded. Fifty-two percent were continuing projects; 48% were newly funded projects. Seventy-four percent of those individuals served by those projects fit both the low-income and first-generation criteria for eligibility. The report stated that 30% of Talent Search participants were middle school students, 65% were high school students, and 5% were high school dropouts. Some of the latter group had earned General Equivalency Diplomas. Reported outcomes included: 98% of middle school participants and 96% of high school participants remained in school; 94% of participants who began the period as 12 graders graduated by the end of the period; 71% of college-ready participants were admitted to, or enrolled in, a program of postsecondary education (p. x). It was stated also that increased use of academic services reflected "the increased focus on academic services in Talent Search in the 1990s" (p. 39).

Student Support Services Studies

In a study of students served by Student Support Services, Wallace and Abel (1997) conducted open-ended interviews with 20 students at a southern 4-year university. These researchers found that staff commitment was a prime factor for students' persistence in education. Students in the study reported feeling a sense of obligation because of the caring and personal investment of the professional service providers who assisted them.

In a 1991 study of another Student Support Services project in a university setting, Mahoney (1998) found that, of the 209 students in the study, 72% were retained until graduation and that most stated the project had been very helpful to them. In a second study of the same program, conducted by an independent firm, the program was found to be highly effective in retaining students. Students found the professional service providers to be empathetic, encouraging, and dedicated to helping students achieve their educational goals.

A similar study of Student Support Services at Rutgers University (Thomas et al., 1998) found that the network of services provided "is the key factor in the strong graduation rates" (p. 92). Elena-Hindes (1999), in a study of Student Support Services at two rural community colleges in northern California, also found that such services as the textbook lending library, academic advising, and personal counseling were helpful in retaining students until graduation or transfer to another college. Elena-Hindes also found that students in that study valued helpfulness and a caring attitude. However, students mentioned that tutors sometimes missed scheduled appointments. That was seen as an avoidable weakness in one of the programs.

In an interim report of a longitudinal national study of Student Support Services (1997), it was reported that supplemental academic services, especially peer tutoring, appeared to be effective. The most successful projects, according to that report, were home-based or blended programs that included services for both TRIO participants and participants not eligible for TRIO services. This report found that Student Support Services participants had a higher graduation rate than did a control group of students having similar demographic characteristics.

Upward Bound Studies

Classic Upward Bound and Upward Bound Math. A major thrust in classic Upward Bound, according to Stokes and Hodge (2000), has been motivation of adolescent students to adopt healthful lifestyles. Respondents completed secondary analyses of high-risk behaviors among students in a southeastern state and nationally with students in one Upward Bound project in a southeastern city. While Upward Bound students compared favorably in some categories (i.e., carrying concealed weapons, smoking in the past month, use of marijuana), the Upward Bound students in the study reported (a) higher levels of riding with drivers who had been drinking than was the national average (28% and 15%, respectively), and (b) higher percentages of risky sexual behaviors.

In an interim report conducted by Mathematica Policy Research for the United States Department of Education, Moore, Fasciano, Jacobson, Myers, and Waldman (1997) found that one-half of Upward Bound students did not continue in the program beyond the first year. However, for those students who did continue in the program, gains were seen in (a) higher academic self-expectations, (b) higher grade point averages, (c)

lower high school attrition rates, (d) greater number of academic courses taken in high school. Moore et al. also reported that parents' expectations of Upward Bound students were higher than were those of other students having similar demographic characteristics (parents' educational achievement and family income).

In 1999, Myers and Schirm authored a final report for Phase 1 of the Mathematica Policy Research study. In comparing Upward Bound students to a control group, researchers found that Upward Bound students

3. were more likely to receive financial aid to attend college;
4. earned more non-remedial credits at postsecondary institutions; and
5. earned more non-remedial high school credits in math.

However, Upward Bound students were not significantly different from the control group in cumulative grade point averages and the percentages of students who enrolled in postsecondary institutions immediately after completing high school.

The Pell Institute (2002) issued an evaluation of the Mathematica Policy Research study of the Upward Bound program. The Pell Institute stated that (a) "the selection of the comparison group is problematic and contaminates the data;" (b) "they [control group participants] received services similar to those of Upward Bound students" (p. 2). Finally The Pell Institute noted that Myers and Schirm (1999) study stated that additional data would be collected in 1998 and 1999 and that the final results might be different from the reports released thus far.

Veterans Upward Bound. Yanosko (1980) studied the Veterans Upward Bound project at Humboldt State University. That 10-week college preparation project offered two math classes: a basic tutorial class involving 27 students and an algebra class of 31

students. Yanosko reported that 14 (52%) of the basic math students and 22 (71%) of the algebra students completed their courses of study. Of those students who completed the classes, 13 (92.9%) of the basic math students and 19 (86.4%) of the algebra students significantly improved their skills.

Competencies of Professional Service Providers

In a study of effective teaching strategies and behaviors for two Classic Upward Bound programs, Coron (1969) identified factors that contributed to successful teaching. Coron categorized these as

1. support (friendliness, caring, empathy, warmth, humor, respect, honesty, frankness, openness, impartiality, availability, enhancing students' self-esteem, and racially unbiased);

2. teaching strategies (facilitator of learning, establisher of climate for inquiry, inductive questioning, and use of peer tutoring);

3. student autonomy (unpressured and informal atmosphere, acceptance of students' idiosyncrasies, few rules and regulations, de-emphasis on external controls, emphasis on student's self evaluation and peer evaluation; and

4. dynamic and autonomous approach (freedom to experiment, small classes, willingness to change plans, and positive staff interaction).

In a study to assess the competencies of Student Support Services professional service providers, Ray (1994) surveyed professional service providers (teachers, advisors, and tutors) in TRIO Region IV (North Carolina, South Carolina, Georgia, Alabama, Kentucky, Tennessee, Mississippi, and Florida). She found a general lack of understanding of andragogy and noted that there was serious need for attention to three areas: "(1) the conceptual and theoretical framework of adult learning, (2) the design and implementation of learning experiences, and (3) the selection of methods, techniques, and materials" (p. 106). Other variables examined in Ray's study included helping learners to

become self-directed, planning and organization, and the design and implementation of Student Service Support programs.

In a study to identify special competencies of deafness specialists in postsecondary education programs, Kolvitz (1999) included those Student Support Services professional service providers who served in Disabled Student Services programs. Her survey instrument included 12 clusters: career planning and employment, case management, communication skills, consultation, counseling and advocacy, educational and vocational planning, legal aspects, professional development, program development and evaluation, public relations, support services, and understanding deafness. Findings were examined in relation to the demographic variables, comparing answers of respondents according to their hearing status, job, educational background, and other demographic characteristics. Kolvitz found that deaf and hard-of-hearing students made full use of Disabled Student Services programs. She also found that there existed an uneven quality of services across the nation, depending upon program size, host institution size, and availability of professional service providers who were themselves deaf or hard-of-hearing.

Related Literature on Competencies of Effective Service Provision in Education and in TRIO Programs

The work of TRIO administrators and of other TRIO professional service providers has been similar to that of school administrators, teachers, and counselors (Coron, 1969; Kolvitz, 1999; Ray, 1994; Wallace & Abel, 1997). In this section, I present literature from education, including TRIO programs, relevant to the following core competency categories: (a) Administration; (b) Admissions, Financial Aid, and Advising;

(c) Curricula and Planning; (d) Recruitment, Follow Up and Evaluation; (e) Information and Professional Development; (f) Interpersonal Skills, Leadership, and Public Relations; (g) Motivation and Teaching; and (h) Technology.

Administration Competencies

Southerland's (2002) study focused on project directors, stating that they were in positions of leadership in "enrollment, management, instructional and program planning, curriculum development, publishing, research and evaluation" (p. 4). Other researchers have studied effective schools and found their success was directly attributable to effective administrative personnel (Findley & Findley, 1992; Perez, Milstein, Wood, & Jacquez, 1999). Elementary and secondary school principals and other administrators were responsible for employee selection, training, and supervision (Perez et al.), policy development and enforcement (Findley & Findley), and budget development and accountability (Hertling, 1999). Brewer, Achilles, and Fuhriman, (1998) affirmed the importance of administrators in TRIO projects to reaching budget decisions, following relevant federal policies, and being responsible for employee selection and supervision. McGriff et al. (1994) also noted the importance of effective documentation for annual audits of project expenses and of services provided.

College Admissions, Financial Aid, and Advising

The University of Tennessee (2001-2002) has provided online handbooks for school counselors and other academic counselors and advisors. Those handbooks provide information for understanding ACT and SAT scores, admissions criteria and process, entrance exams, academic and career advising, and special service referrals. Career advising, development of Individual Education Plans, healthful lifestyle choices, and

advice on barriers to one's educational goals are basic service expectations in TRIO programs (Brewer et al., 1998)

Grantwriting Competencies

Brewer et al. (1998) provided comprehensive information for identifying appropriate requests for federal proposals, conducting research, and the writing of grant proposals. Others (Education Funding Research Council, 1998) have presented opportunities for principals and teachers to seek community, state, federal, and private foundations for basic or enrichment school programs. In addition, many efforts involve submitting applications for equipment, materials, and services, rather than for direct funding. Applicants included alcohol and drug abuse programs, community involvement programs, and local business technology programs (Brewer & Hollingsworth, 1999). In a period of expanding needs and of shrinking public school funding, grantwriting has become another avenue for securing educational funding.

Planning Competencies

Planning has been found to be important for a number of areas. In this section, curricular, extra-curricular, and overall planning and organization are reviewed.

Curriculum Planning

Authors and researchers in the area of curriculum planning (Brookfield, 1991; Cote & Samelia, 1996; Griggs, 1989) all affirmed the importance of sequential planning and of developing basic academic skills, especially in language and mathematics. This includes content selection, scope, and sequencing of educational material.

Extra-Curricular Planning

Field trips and residential supervision have been basic elements of many Upward Bound projects, especially Upward Bound Regional Math and Science programs (Howe, Hori, Cox, & Robertson, 1994). Field trips and extra-curricular events, including sports and off-campus enrichment activities, also have long been features of Talent Search and Classic Upward Bound programs. Brewer and Marmon (2000) noted the importance of planning such events. They also advocated "participative decision making whenever possible" and of "involvement of parents and other professional service providers" (p. 108). One researcher (Byrd, 1994) stated that field trips could be of assistance to Upward Bound senior high school students who were engaged in career exploration, noting that "the provision of occupational information implies a belief that decisions are influenced by what the client knows about occupations" (p. 78). Alessi et al. (1994) also discussed planning for field trips, including the importance of gaining parental permissions. Alessi et al. even presented a form for documenting permission for field trips.

General Planning and Organization

General planning and organization skills have been crucial for effective educators at all levels (Brewer & Marmon, 2000; Cote & Samelia, 1996; Goleman, 1995; Griggs, 1989). This includes documentation of an over-all project plan, long-range planning, and preparation for unexpected happenings (Brewer & Marmon). Effective communication and definition of roles are included in planning (Griggs).

Recruitment, Follow Up and Evaluation

Brewer and Morgan (1984) noted that frequently TRIO professional service providers were content with their current levels of client participation, overlooking the

obvious possibility of clients' leaving the program for whatever reasons. Those practitioners and authors advised TRIO professional service providers to "build a recruitment program that will reach sufficient participants to fill all of the *slots* in your project as well as generating a waiting list" (p. 181). Southerland (2002) noted that project directors are key recruitment personnel.

According to McGriff et al. (1994), effective recruitment strategies are essential for Upward Bound Math and Science Regional Centers. Problems noted by those authors included budget problems, the program's relationship to the host institution with regard to summer residential programs, lack of understanding of the recruitment areas, and staff efforts.

Alessi et al. (1994) especially noted the importance of student recruitment for Upward Bound Math and Science Regional Centers. They recommended (a) development of a formal recruitment plan, (b) preparation of recruitment materials, (c) periodic review and revision of materials, (d) sending of recruitment materials to schools, and (e) evaluation of the recruitment program.

Evaluation has been a main component of successful grant proposals (Brewer et al., 1998). Such evaluations are "built-in and ongoing" (p. 173). Therefore, evaluating outcomes and preparing reports for the United States Department of Education and other stakeholders is crucial to program management. This encompasses evaluation of students' needs and progress, employee performance, and other aspects of reaching program objectives.

In discussing site visits and audits, Brewer et al. (1998) stated that one typical problem area was that "funds have not been allocated based on counts of eligible program

participants and/or funds have not always been used to benefit the intended recipients" (p. 295). Another typical problem area noted was "poor documentation on eligibility determinations of program participants" (p. 295). Therefore, it is imperative that professional service providers recruit and evaluate the eligibility of candidates for their project services. From another perspective, Wallace and Abel (1997) noted the importance of making eligible candidates aware of the availability of services.

Brewer et al. (1998) also noted the importance of all aspects of Follow Up and Evaluation of services. Follow Up and Evaluation included evaluating employees' job performance, assessing general outcomes of promised services, assessing students' basic academic needs, and amount of student participation and progress.

Information and Professional Development

Teacher competencies related to cultural, ethnic, and ethical issues have been treated by numerous researchers and practitioners (Brewer et al., 1998; Griggs, 1989; Hord, 1988). Brewer et al. addressed information and ethical standards with regard to diversity. They advised readers to, "Build into this section [of the grant proposal] a strong affirmative action plan" (p. 124).

Kolvitz (1999) investigated information and type of education relationships between professional service providers for deaf and hard-of-hearing students in higher education. She found that understanding deafness was strongly correlated with the type of education of the professional service provider.

Allesi et al. (1994) and by McGriff et al. (1994) noted the importance of documentation of services, including recruitment efforts. Alessi et al. advocated that the

project staff of Upward Bound Math and Science should be "knowledgeable about both federal and institutional regulations and policies" (p. 72).

Professional development in the area of technology was noted by Brewer and Hollingsworth (1999). "The need for ongoing skill training is especially great for teachers in the rapidly evolving fields of science and technology" (p. 105).

Such basic aspects of leadership as ethical use of persuasion and creativity are addressed extensively by Covey (1989). His thesis was that reflective, ethical, dedicated leadership is key to organizational success. "By centering our lives on correct principles, we create a solid foundation" (p. 122). He also stated that

> the challenge is to apply the principles of creative cooperation in our social interactions. The essence of synergy is to value differences–to respect them, to build on strengths, to compensate for weaknesses. Synergy is the essence of principle-centered leadership. (pp. 262-263)

Implicit in such leadership is open communication, trust, dedication, and respect for others. Southerland (2002) also cited the importance of a sense of humor, vision, and a reputation for integrity.

Interpersonal Skills, Leadership, and Public Relations

Many researchers and theorists (Brewer & Hollingsworth, 1999; Carr, 1995; Goleman, 1995; Oblinger & Rush, 1997; Otwell & Mullis 1997) have discussed the importance of interpersonal skills, leadership, and public relations skills for professional service providers in education and in counseling. Carr summarized it this way: "Managers use interpersonal skills constantly, since they can only get their jobs done by working with other people" (p. 227). He listed team management, persuasion, encouragement, and modeling among those necessary skills. Goleman discussed the

leadership efforts of persuasion, team building, and working toward common goals, saying, "Leadership is the art of persuading people to work toward a common goal" (p. 149). Southerland (2002) summarized, "Quality of leadership often determines the success of an organization" (p. 40).

Motivation and Teaching

Ability to use a variety of instructional materials; effective questioning strategies; and inclusion of learning experiences that reach the cognitive, affective, and kinesthetic domains are necessary for effective teaching (Brewer & Hollingsworth, 1999). "No method of instruction by which a teacher can convey information and concepts works equally well with all students" (p. 106). Brewer and Hollingsworth also emphasized, "instructors of science and math need a large arsenal of teaching techniques" (p. 128). They recommended use of hands-on materials and opportunities for practical problem solving. Effective use of those methods implies an ability to apply knowledge of pedagogy or, for adult students, andragogy; it also implies an ability to select and use appropriate strategies of instructional design.

Need for growth in basic skills among low-income and first-generation students was confirmed by Mitchell (1997) and by Terenzi et al. (1996), and effectiveness of tutoring in basic skills in Student Support Services projects was noted by Sweeney and de Silva (2000). Yanosko (1980) confirmed the importance of basic skills teaching and tutoring for students in a 10-week basic math class in a Veterans Upward Bound program. Emphasizing basic academic skills was also identified (Findley & Findley, 1992) as necessary for effective schools. Passing General Equivalency Diploma exams and preparing for college entrance testing have also been identified as goals of many

TRIO students (Brewer, Marmon, & Coates, 2000). Therefore, instructors and tutors in those programs must be prepared to assist in the process.

Gunter (2002) noted the importance of study skills to students' academic success. In his study of the success of Upward Bound projects, he noted that, "one important implication for academic performance is that Upward Bound programs should concentrate their efforts on improving study habits" (p. 66). He also discussed the importance of constructive feedback, recommending that programs give suggestions, techniques, and encouragement to their students in the area of academic performance.

With regard to the student management aspects of teaching, Brewer and Marmon (2000) advocated a proactive approach, rather than simply trying to handle problems as they arose. They also predicted that, in the coming years, teachers' education programs would emphasize "pedagogy, student management, and technology" (p. 178). Pizzaro (1994) discussed "negative behaviors that were interfering with school success" (p. 57). Brewer and Marmon, along with Pizzaro, recommended a problem-solving approach that emphasized use of coping skills for difficult life circumstances and developing positive attitudes as ways of improving behavior and educational results among adolescents.

Bucci and Reitzammer (1992) linked student management, motivation, and lowered attrition rates to specific teacher behaviors. They noted in their research that students at risk for failure frequently were seated farther away from the teacher, were called upon less, were given less praise, and were more likely to receive negative attention for inappropriate behaviors. Bucci and Reitzammer's recommendation was that teachers have and communicate high standards for each student.

Brewer and Marmon (2000) noted the importance of (a) relating new information to old, (b) providing integration for instructional continuity, (c) mastery teaching of basic skills, and (d) use of acceptable disciplinary practices. They also advocated providing individualized learning opportunities and giving students some choices in their educational activities (Brewer & Marmon, p. 58). Ability to use positive reinforcers was also noted by Brewer and Marmon as a needed skill for effective teachers.

Technology Tasks

Brewer (1994) discussed some technology that in the early 1990s had become innovative, such as fax machines, voice mail, and photo copiers. He also talked about some equipment that was becoming outdated and was little used in the mid-1990s, such as electric typewriters and voice dictation systems. How true were his words that "today's computer may be tomorrow's museum piece" (p. 7). Therefore, keeping current on computer technology can be expected to be a constant challenge. For the past decade, many have noted the importance for students and workers of up-to-date technology skills (Brewer; Kleinglass, 2002; McKenzie, 1999). McKenzie noted that computer technology would be essential for 21st century professional service providers and their students. Kleinglass added that use of technology was "an integral part" (p. 73) of what was necessary for workers, professors, and students.

Studies have indicated that lack of computer experience and efficacy was responsible for computer anxiety (McKenzie, 1999; Oblinger & Rush, 1999; Yang, Mohamed, & Beyerbach, 1999). In addition, many poor school districts have been unable to provide the kind and amount of hands-on experience students need (Farby & Higgs, 1997; Yang et al., 1999). Therefore, it is incumbent upon TRIO professional service

providers to teach basic computer skills to their students, including how to conduct Internet searches and how to prepare word documents. Ability to document and create recruitment materials through computer technology and to make presentations through use of technology are important skills for practitioners, according to the content experts for the present study.

Demographics Variables

In conducting studies of education programs, researchers have collected various demographic data. These data have been reported in their studies as descriptive statistics. Frequently, this demographic information has been analyzed to identify any significant relationship to dependent variables. Kolvitz (1999) included gender, experience in current position, educational level, and type of institution. Randall (2001) also included those demographic variables in a research question related to self-efficacy beliefs. Ray (1994) included gender, experience, educational level, and type of institution plus program type, position held, and race. Numerous studies of students, school counselors, and coaches have focused on relationships between dependent variables and subjects' race (Helms & Carter, 1991; Lee, Sutton, France, & Uhlemann, 1983; Lopez, Lopez, & Fong, 1991; Mahon, 1997; Wade & Bernstein, 1991). In addition, gender (Bernstein & Figioli, 1983; Bernstein, Hoffman, & Wade, 1987; Markland & Martinek, 1988; Petty, 1994; Silverman, Tyson, & Krampitz, 1991) and geographic area (Kennedy & Barker, 1987; Skovholt, Cognetta, & King, 1997) have been studied.

Chapter Summary

The literature relevant for this study included several disciplines. Among those disciplines were the psychology of adolescent and adult learning, as well as action

research into (a) secondary and postsecondary education, (b) some areas of employment, and (c) the effectiveness of TRIO programs in meeting legislative mandates. In this chapter, I have discussed (a) a conceptual framework, (b) theories of adolescent cognitive development and learning needs, and (c) theories of adult learning. In addition, I have discussed (a) an historical background of non-traditional postsecondary students, (b) relevance of needs assessment for human resource development, (c) federally funded programs research, and (d) related literature on competencies of effective service provision in education and in TRIO programs.

CHAPTER III

METHODS

I discuss in this chapter the research methods and procedures for the current study. This includes (a) research population, (b) survey instrument, (c) data collection, (d) data entry and data analysis, and (e) a chapter summary.

Research Population

The participants in this survey were administrators employed in 1,929 TRIO programs. The programs were Talent Search (n = 361), Upward Bound (n = 772), and Student Support Services (n = 796). These programs are in operation throughout the 50 states, in the Caribbean Islands, and in the Pacific Islands. The roles of the TRIO professional service providers involve them in (a) academic assessment, (b) tutoring, (c) career exploration, (d) financial aid advising, (e) motivating and mentoring, (f) making appropriate referrals for other services, (g) case management, (h) grant writing, and (i) grant management.

Population and Sampling Frame

The sampling frame consisted of lists supplied by the TRIO office for each of the programs to be surveyed. Those lists contained the names, host institutions, and states for all TRIO projects to be included in the study. In drawing the sample, I placed numbers in a box and drew out the appropriate number of programs. These numbers were matched with numbers assigned in chronological order to each project in the TRIO list for 2000-2001.

Then I took respondents' names and addresses from the 2000-2001 *Directory of TRIO Programs*. Each person listed in the directory is engaged in some or all of the

activities listed above. For cases in which an individual was listed for multiple programs, I telephoned the project office and obtained the name of the person directly responsible for the appropriate project, and I addressed the survey to that person. Six recipients notified me by telephone or by e-mail that they had replaced the person to whom the survey was addressed. I asked that the new person respond to the survey.

Sample Type and Sample Size

I used a stratified proportional random sampling procedure to identify potential participants for the study. Since the target populations were of unequal size, I used a stratified proportional sampling to avoid skewing the data towards the responses of the larger-number populations.

According to Gay and Airasian (2000), "For descriptive research, it is common to sample 10% to 20% of the population" (p. 134). Issac and Michaels (1995) advocated use of larger samples than statistically required as a method of reducing sampling error and for providing additional information when differences were small among subgroups. In addition, Salant and Dillman (1994) recommended drawing a larger sample than necessary to compensate for non-responses and for illegible or incomplete surveys. Therefore, I used a sample size of 30% to gain the most accurate possible representation of the three subgroups of the population.

An alternate approach to sampling by population sizes could be to consider anticipated numbers of persons served by the programs. However, I did not pursue this approach because the type and intensity of services provided was different for each program. Therefore, I decided it was more appropriate to sample according to population size.

Depicted in Table 3 are the numbers of administrators listed for the three TRIO programs. There was a total population of 1,929, with the subgroup sizes ranging from 361 for Talent Search, to 772 for Upward Bound, and 796 for Student Support Services. Thirty percent of the total population equals 579 administrators. I used a stratified proportional random sampling, rather than equal number stratified samplings to allow equivalent representation for Talent Search, which was less than one-half the size of either Upward Bound or Student Support Services. Since my purpose was to identify core competency categories for professional service providers in the target population, it was important that sampling provide for proportional representation of each subgroup. See Figure 1 for a depiction of the sampling process.

Survey Instrument

I conducted a review of related literature, including (a) developmental theories; theories of motivation; theories of adolescent learning and of adult learning; and research findings in education, psychology, and human resource development; (b) search of *The Mental Measurements Yearbook* (Buros, 1998); and (c) search of *Tests in Print* (Buros, 1999). I found one instrument, "*Measurement of Counselor Competencies*" (Percival, Dahm, & Dameron, 1993-1994), that represented an attempt to measure core competency categories of school counselors. Areas surveyed were competency, frequency, interest, and job demands for specific skills. However, according to reviewers Wantz (1998), there were numerous deficiencies in the instrument. It contained (a) no manual, (b) no theoretical framework, (c) no validity or reliability information, (d) measurement for school counselors only, and (e) no tasks relating to career planning or

Table 3

Numbers Needed for a Stratified Proportional Random Sample of the Population

Program Name	Population Size	Sample Size	Population Percent
Talent Search	361	108	30%
Upward Bound	772	232	30%
Student Support Services	796	239	30%
Totals	1,929	579	30%

student needs assessment. In addition, the instrument was designed for group administration.

Next, I searched *The Mental Measurements Yearbook* (Buros, 1998) and *Tests in Print* (Buros, 1994) for instruments to measure core competencies for tutors; none was found. A search for measurement of leadership skills yielded eight possibilities. However, none was deemed appropriate for this study. None was designed to be self-administered; several were intended to measure leadership skills for managers and team leaders in business and industrial environments. Some required both self-appraisal and appraisal by peers and supervisors.

In the review of related literature, I found one instrument that had been devised to measure necessary core competencies for professional service providers working with deaf and hard-of-hearing postsecondary students (Kolvitz, 1999) and also a study of core competencies of Student Support Services professional service providers (Ray, 1994). For Ray's study, she had adapted an instrument for assessing the competencies of Educational Opportunity Center professional service providers that Harrison (1989) had

developed. However, none of those instruments was designed to assess core competency categories of Talent Search or Upward Bound professional service providers.

I found no existing instrument suitable for the current study. Therefore, I developed an instrument to identify the core competency categories for this research population. Figure 1 shows the process I followed in developing this instrument. It begins with the literature review and culminating in the final revision of the document after piloting the instrument.

Identification of Core Competency Tasks

I identified a tentative list of specific core competencies tasks needed by professional service providers in Talent Search, Upward Bound, and Student Support Services programs. I drew upon the literature, covering such subjects as (a) motivation and of adolescent and adult learning, (b) characteristics of non-traditional, first-generation, and low-income students, and (c) research findings on characteristics of effective professional service providers in areas relevant to education and to human resource development. Bordens and Abbott (1991) stated that, in developing survey questionnaires, "related items should be presented together. This keeps your subject's attention on one issue at a time, rather than jumping from issue to issue" (p. 192). Therefore, identified core competency tasks were divided into the following core competency categories: Administration, Admissions, Advising, Curricula, Extra-Curricula, Financial Aid, Follow Up and Evaluation, Grantwriting, Information, Interpersonal Skills, Leadership, Motivation, Planning, Professional Development, Public Relations, Recruitment, Teaching, and Technology.

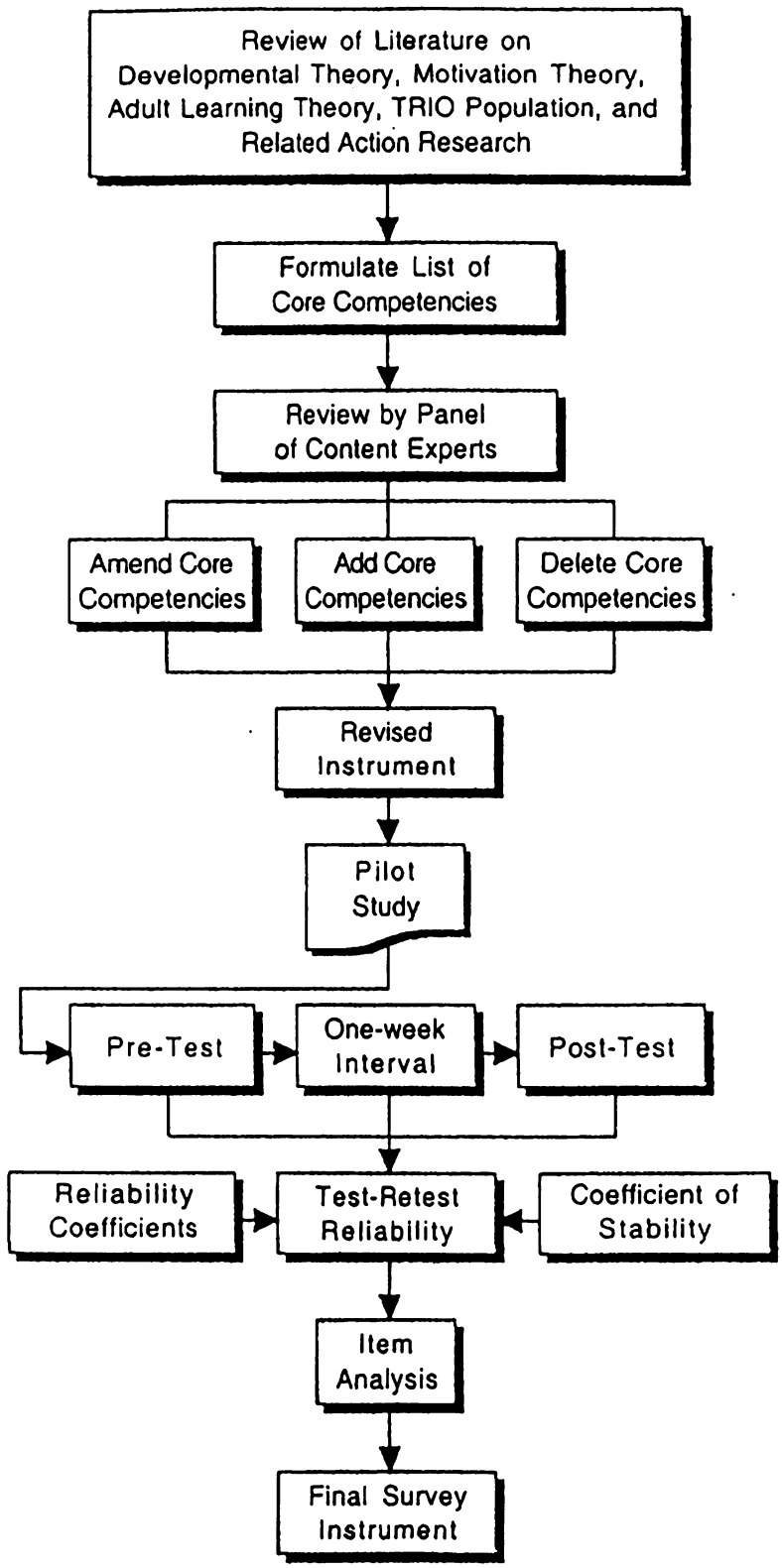


Figure 1. Flowchart for developing the instrument.

Content Experts

To assure content validity, I enlisted the assistance of a panel of content experts (see Appendix B for letter of invitation) to review the identified list of competency tasks and to make recommendations for additions, deletions, and restatement of tasks. The panel consisted of 12 nationally recognized TRIO professional journal editors and professional service providers in the identified programs. Another expert had been invited but was unable to participate due to time constraints. These experts were chosen because they were nationally recognized TRIO leaders (professional conferences and editorial work) and because they had administrative experience in each of the TRIO programs. Dr. Ernest W. Brewer, my committee chair, assisted with recommendations (personal conversation, November 10, 2001). One panel member is administrator of a program that provides training for professional service providers. Eleven of the panel members had experience in all the programs included in this study. Their mean length of TRIO experience was 14.3 years.

To avoid bias in the study, none of the panel members was included in the research survey. As a result of the input of the panel of content experts, I partially reorganized the instrument's core competency categories, reworded some tasks, eliminated redundant tasks, and combined two tasks. This reduced the number of tasks from 158 to 108. As noted in the next section of this chapter, the instrument was modified following the piloting of the instrument. The final instrument contained 100 task items.

Piloting the Instrument

I piloted the instrument before its distribution to the survey population. Subjects consisted of professional service providers employed in TRIO projects at a major

southeastern university. Appendix C contains a letter to participants for piloting the instrument. Of the 33 individuals receiving the invitation to participate, 27 responded. Respondents represented all of the TRIO programs included in this study. To prevent bias in the study, none of the pilot participants was included in the final study. Following the piloting, 8 more tasks were removed from the instrument. The final survey instrument contains 100 tasks.

Data Collection

I followed the procedures recommended for data collection by Dillman (2000), including the inclusion of a monetary token to help increase the response rate. As presented in Figure 2, collection procedures included the following stages:

1. advance notice alert to eligible participants that the survey would be mailed to them within the following 7 to 10 days. This was accomplished by an electronic mail message sent through the TRIO Listserv. Appendix E contains the e-mail message to the TRIO Listserv.

2. mailing 8 days later that consisted of a (a) cover letter (see Appendix E) explaining the purpose of the survey and requesting their participation, (b) the survey instrument, and (c) a token of $1.00 in appreciation for each participant's input, and (d) a stamped, addressed return envelope; and

3. Follow Up e-mails and telephone calls requesting each non-respondent's participation.

"To avoid non-response bias, you should develop strategies to increase your return rate" (Bordens & Abbott, 1991, p. 194). Dillman (2000) offered similar advice. Therefore, in Step 3, I used an alternate form of request.

Data Entry and Analysis

I entered data into an Excel database and then transferred it to the Statistical Package for the Social Sciences (SPSS). Using SPSS, I conducted parametric tests for

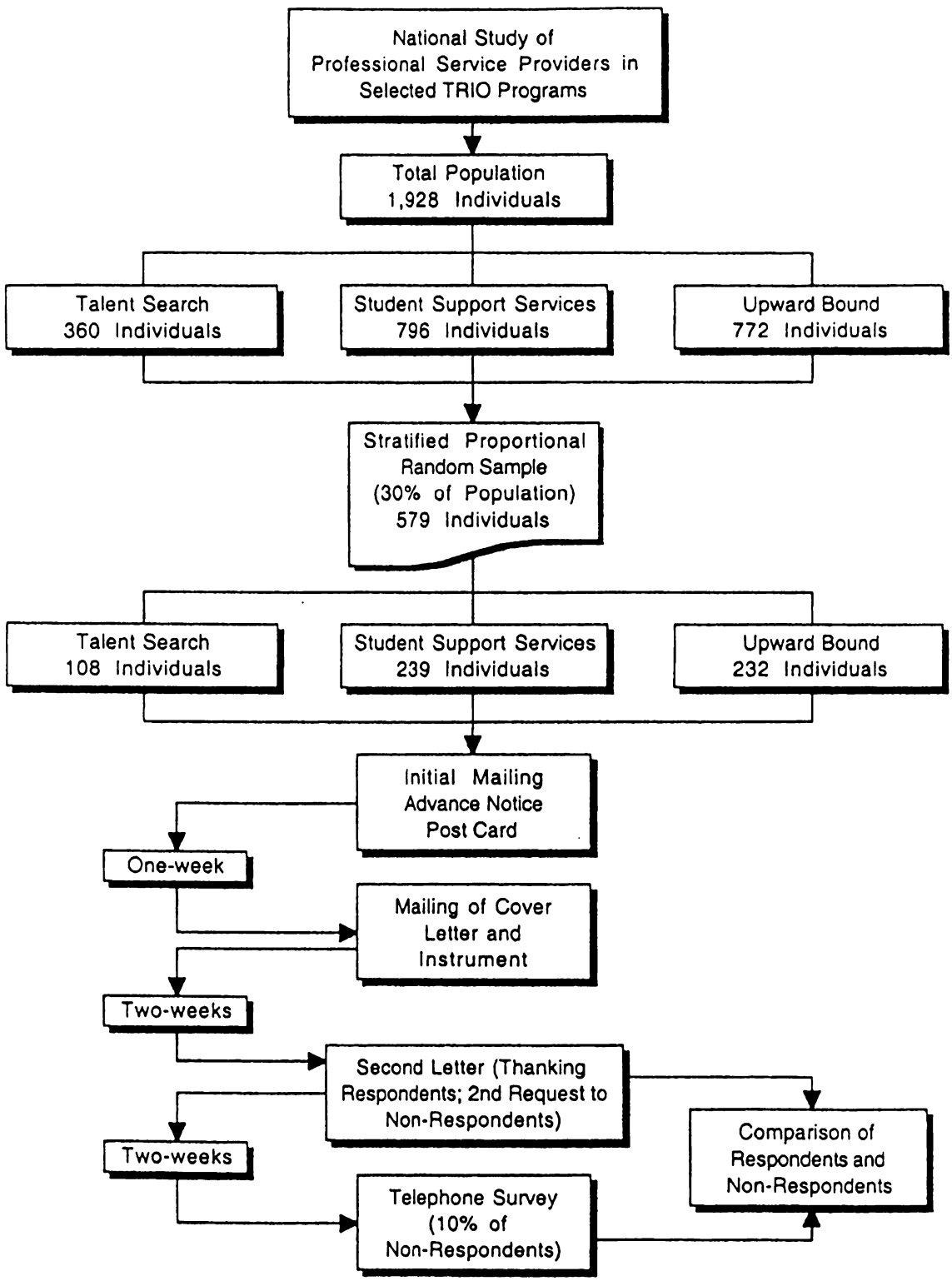


Figure 2. Flowchart for the sampling process.

each null hypothesis. I used multiple analyses of variances (MANOVAs) to test null hypotheses one through nine. Paired samples *t* tests were used for the final null hypothesis. When significance was found at the .05 level or lower, I examined mean differences. Descriptive statistics were generated for the demographic items.

Chapter Summary

To meet the objectives of the current study, I found no suitable instrument available. Therefore, I developed a 100-task survey instrument and a demographic questionnaire to satisfy the purpose of the current study. I pilot tested the instrument with the participation of professional service providers currently working in the three programs under investigation. The final survey instrument was mailed to 579 potential participants. Participants were selected through proportional stratified random sampling and represented each of the states and territories in which TRIO programs existed. This chapter included a discussion of the (a) research population, (b) survey instrument, (c) data collection, and (d) data entry and data analysis.

CHAPTER IV

RESEARCH FINDINGS

In this chapter, I present the research findings of the current study. Included are discussions of the (a) research population and sample, (b) instrumentation for the study, (c) data collection and analysis, (d) response rate, (e) alpha reliability, (f) demographic characteristics, (g) null hypotheses, and (h) chapter summary.

Research Population and Sample

As explained in Chapter III, the research population for this national study was administrators in three TRIO programs: Talent Search, Upward Bound, and Student Support Services. They represented the 1,929 programs funded for the 2000-2001 program year.

Since the target sub-populations were of unequal size, I used a proportional stratified random sampling to avoid skewing the data towards the responses of the larger-number populations. I used a sample size of 30% for each targeted program to gain the most accurate representation possible.

Instrumentation for the Study

In my review of literature, I found no suitable instrument for this study. Therefore, I developed an instrument to identify the core competency categories for this research population. (The procedures involved in developing and validating the instrument are detailed in Chapter III.) The 18 identified core competency categories (see Table 4) were divided into the following core competency categories: Administration, Admissions, Advising, Curricula, Extra-Curricula, Financial Aid, Follow Up and Evaluation, Grantwriting, Information, Interpersonal Skills, Leadership, Motivation,

Table 4

Sources for Core Competency Categories and of Demographics Included in the Survey Instrument

Core Competency Categories	Sources for Tasks
Administration	Brewer, Achilles, Fuhriman, & Hollingsworth (1997, 2001); (content expert) *Education Department General Administrative Regulations* (2000)
Admissions	Handbook for Counselors (The University of Tennessee, 2001-2002); Kolvitz (1999); Ray (1994)
Advising	Handbook for Counselors (The University of Tennessee, 2001-2002); Harrison (1989); Kolvitz, 1999)
Curricula	Griggs (1989); Harris, Galvan, & York (2000).
Extra-Curricula	Brewer & Marmon (2000)
Financial Aid	Harrison (1989); (content expert); Ibrahim, Helms, & Thompson (1983)
Follow Up and Evaluation	Brewer et al. (2001); (content expert); Harrison (1989); Phillips, (1997)
Grantwriting	Brewer et al. (2001); Education Funding Research Council (1998)
Information	Halverson (1999); Helms & Carter (1991); Schwartz (1998)
Interpersonal Skills	Brewer & Marmon (2000); (content expert); Goleman (1995); Kolvitz (1999); Piajores (1996); Schwarz (1998)
Leadership	Brewer & Marmon (2001); Glasser (1993, 1996); Otwell, & Mullis (1997).
Motivation	Brewer & Marmon (2000); Harrison (1989); Vroom (1964)
Planning	Cote & Samelia (1996); Goleman (1995); Griggs (1989)
Professional Development	Brewer & Marmon (2000); Education Funding Research Council (1998); Hord (1988); Kolvitz (1999)
Public Relations	Brewer & Marmon (2001); Goleman (1995); Kolvitz (1999)
Recruitment	Brewer et al. (1998); Mahoney (1998); Thomas, Farrow, & Martinez (1998); Wallace & Abel (1997)
Teaching	Brewer & Marmon (2000); Brookfield (1995); (content expert); Griggs (1989); Harrison (1989); Knowles (1980); Martinello (1998); Oblinger & Rush (1997); Piaget (1972)
Technology	Brewer & Hollingsworth (1999); Brewer & Marmon (2000); Clinton (1997); Farby & Higgs (1997)
Demographics	Harrison (1989); Helmes & Carter (1991); Kolvitz (1999); Ray (1994); Randall (2001); Skovholt, Cognetta, & King (1997)

Planning, Professional Development, Public Relations, Recruitment, Teaching, and Technology (see Table 4).

Survey Instrument

The survey instrument consisted of two parts. Part I contained the task items related to core competency categories, identified through my review of literature and revised according to recommendations of a panel of content experts and findings from piloting of the instrument. Part II of the survey requested demographic information. Personal, geographic, and institutional items for this part of the instrument were designed to address null hypotheses related to any significant differences in findings as affected by those independent variables. For Part I, participants used a Likert-type scale to respond to tasks related to their own work. For the last null hypothesis, respondents used an identical Likert-type scale to respond to the same tasks related to the work of those whom the respondents supervised (see Appendix G for the survey instrument).

When a researcher is using a Likert-type scale, Neuman (2000) advised using a scale of 4 to 8, noting that, "a researcher can combine or collapse categories after the data are collected, but data collected with crude categories [of two or three] cannot be made more precise later" (p. 182). Therefore, I used a 7-point Likert-type scale for participants' responses to each item in Part I of the survey according to the following directions: 1 - Never, 2 -Seldom, 3 - Occasionally, 4 - Frequently, 5 - Usually, 6 - Almost Always, and 7 - Always.

Core Competency Categories

The developmental survey instrument contained 18 core competency categories with tasks or skills for each of them. In this section, I discuss each of the 18 core competency categories.

Administration

The core competency category Administration concerns those professional services and activities that are necessary for the general operation and management of a TRIO project. Those services include (a) professional service providers selection and supervision, (b) budget decisions, and (c) assuring that contract agreements are met and that the program is prepared for an audit.

Admissions

The Admissions core competency category consists of those direct services that involve assisting students in gaining access to postsecondary institutions. Such services involve the TRIO professional service provider in providing information on a variety of postsecondary institutions and on the admissions requirements of each. Admissions services could also involve liaison activities between students and teachers or school administrators. To perform admissions tasks, the TRIO professional service provider must have the skills and information needed to interpret students' transcripts and their college admissions test scores.

Advising

This core competency category involves the professional service provider in assisting students in reaching their educational goals. Areas include academics, career selection, lifestyle, and conflict resolution. Understanding and helping students to

understand a variety of tests and inventories is a requisite for providing competent advising services. Advising can involve making appropriate referrals for special services in the areas of education, psychology, or social services. This core competency category also includes assisting students with problem solving to address obstacles to their educational goals achievement.

Curricula

This core competency category addresses academic work in TRIO programs. Curriculum planning tasks address content, scope and sequence of English, math, science, and foreign language. This core competency category involves both core curricula and academic enrichment activities.

Extra-Curricula

The prefix *extra* means "outside of a thing or beyond the scope of" *(New Webster's Dictionary and Thesaurus of the English Language,* 1993, p. 335). Therefore, the extra-curricular core competency category refers to activities and events that extend classroom learning. This includes planning and supervising students away from campus and in campus residential programs.

Financial Aid

Financial Aid for TRIO students is that monetary assistance that students can acquire through grants, scholarships, and loans. Professional service providers who provide direct services to students in this core competency category provide information to students and their parents, assist with applications, and sometimes provide liaison services on behalf of students.

Follow Up and Evaluation

This core competency category involves TRIO professional service providers in validating and documenting program outcomes. Included are assessments of both employee performance and student outcomes. Follow Up and evaluation encompasses the planning, implementation, and documentation of results.

Grantwriting

TRIO programs are federally funded grant programs. Skilled responses to requests for proposals are essential to gaining funding. Grantwriting is, therefore, a core competency category. It includes appropriate research and writing tasks.

Information

Germane to the core competency category Information is understanding of relevant issues for program operation. This includes the areas of ethics and diversity, as well as awareness of the appropriate federal policies and procedures that govern TRIO projects.

Interpersonal Skills

This core competency category is concerned with relationships between and among people. It involves those skills and attitudes that communicate positive, non-judgmental regard for others. Effective professional service delivery requires use of intuition and experience in developing others' self-efficacy and in encouraging positive and appropriate human interactions.

Leadership

Leadership means "to show the way by accompanying" (*New Webster's Dictionary and Thesaurus of the English Language,* 1993, p. 561). This core competency

category requires that professional service providers embody and instill in others dedication, ethical values, cooperation, and a positive vision. Constructive feedback and creative recommendations for improvement are among the tasks that require leadership.

Motivation

Competency in the area of motivation is rooted in most theories of personality discussed in Chapter II (see Adams, 1965; Bandura, 1982; Herzberg, Mausner, & Snyderman, 1959; Locke, 1984; Maslow, 1943; Vroom, 1964). Basic to this core competency category is an understanding and appropriate application of extrinsic and intrinsic motivators to help students attain their education goals.

Planning

Effective planning is foundational to effective project operation. As a core competency category, planning involves initiative, foresight, adaptability, communication, oversight, and documentation. Planning as a core competency category applies much leverage because its affects are systemic.

Professional Development

Professional Development as a core competency category involves professional service providers as both consumers and providers of training relative to their professional responsibilities. It includes orientation, point-of-service training, and off-site training. This core competency also includes identification and recommendation of appropriate Professional Development opportunities for others.

Public Relations. This core competency category is directed at creating public awareness and positive public perceptions of TRIO programs. It includes strategies,

materials development, and presentation activities. Public Relations is essential to the community relationships TRIO projects need for maximal program effectiveness.

Recruitment

Requisite for appropriate professional service delivery is the recruitment of appropriate candidates for TRIO services. Recruitment as a core competency category involves materials design and development, public awareness activities, and eligibility screening.

Teaching

Teaching as a core competency category refers to professional service providers' (a) provision of information and learning activities for students; (b) application of appropriate student and classroom management techniques; and (c) development of materials. Foundational to all is an understanding of students' learning needs.

Technology

This core competency category is ever-changing; it requires continual learning on the part of TRIO administrators and other professional service providers. Technology tasks included in this core competency category involve using a variety of types of computer hardware software and teaching computer literacy skills to students. This core competency category affects administrative functioning as well.

Piloting the Instrument

I piloted the instrument to ensure that the wording of the tasks was understood and that subjects attached the meaning to the tasks that was intended and to determine the test-retest reliability by having pilot participants complete the test twice, at 1-week intervals. Next, I conducted an item analysis to determine the reliability of the instrument.

The overall Cronbach reliability coefficient for the first test was .9752; for the retest, the alpha was .9721. Test-retest coefficients for each of the 108 tasks ranged from .9986 to .3082. Lowest alphas occurred in the core competency category Interpersonal Skills. The criterion alpha was set at .5500. Therefore, I removed 8 tasks from the instrument to eliminate lowest reliability tasks. The revised 100-item instrument was sent to national survey participants.

Feedback from subjects who took part in piloting the instrument indicated that there was some lack of clarity in 4 tasks and for the directions for completing the instrument. Therefore, I revised wording of tasks as needed to improve respondents' understanding of the tasks, and I made a major revision in the directions. The scale on the final version of the instrument was 1 - No Importance, 2 - Little Importance, 3 - Below-Average Importance, 4 - Average Importance, 5 - Above-Average Importance, 6 - Very Important, and 7 - Highest Importance. On the final version of the instrument, respondents were asked to respond separately for themselves and for those whom they supervised (see Appendix F, which shows the survey instrument).

Validity and Reliability of the Survey Instrument

Content validity was assured through two means: First, I selected tasks for the instrument from the reviewed literature and from Internet job postings (see Table 4, page 66). Second, I relied on the input of content experts who evaluated the instrument and made recommendations for changes or additions. Test-retest reliability was assessed through a Pearson's product moment correlation coefficient analysis, a pilot study, and a Follow Up completed by the same subjects after a 1-week interval. In addition, a

Cronbach *alpha* was calculated to determine the internal reliability of the 18 core competency categories as well as the overall reliability.

Data Collection

I followed the procedures outlined in Chapter III. Three weeks after the initial mailing, 299 administrators had returned surveys. I sent 108 Follow Up e-mails and made 172 telephone calls requesting each non-respondent's participation.

Data Entry

Data were entered into an Excel database and transferred to the Statistical Package for the Social Sciences (SPSS). In doing so, I followed the advice of Bordens and Abbott (1991) concerning checking for errors. There are two types of errors to look for: (a) transcription errors (errors in copying data to another program) and (b) misplaced data errors, or "numbers entered in wrong columns of a data file" (p. 391). I ran frequencies for the demographic data. Table 6 presents the respondents' information.

Data Analyses

Descriptive statistics were generated for the demographic items. Descriptive statistics are measures of central tendency. They define the sample with respect to the demographic variables. These statistics include count, percentages, mean, median, mode, standard deviation, and variance. All have importance for the choice to use inferential statistics to test the null hypotheses because normal distribution and homogeneity of variance are assumptions for the use of parametric tests (Ferguson & Takane, 1989; Hurlburt, 1998; Shavelson, 1988; Triola, 1989).

Using SPSS, I conducted statistical analyses to test the null hypotheses. Multiple analyses of variance (MANOVAs) were conducted to test null hypotheses one through nine. I examined differences in means to further identify significant differences.

I used paired samples *t* tests to test H_O 10. Gay (1996) recommended the Scheffe test for multiple comparisons. "The Scheffe test is appropriate for making any and all possible comparisons involving a set of means" (p. 480). However, while agreeing with Gay's statement, other authors (Hurlburt, 1998; Ferguson & Takane, 1989; Shavelson, 1988) recommended that when the necessary conditions were met, the paired samples *t* test was preferable to the Scheffe test because the paired samples *t* test was more powerful. The necessary conditions for using the paired samples *t* test are (a) interval or ratio data; (b) 2 independent samples and (c) normal distribution. Since the data for the current study met those conditions, the paired samples *t* test was used for each core competency category for the last hypothesis.

A significance level of .05 or lower was used as the criterion for analyses of all null hypotheses. The significance level represents the probability of making a Type I error (Gay, 1996; Triola, 1989). Triola and others (Ferguson & Takane, 1989; Hurlburt, 1998; Shavelson, 1988) stated that the typical significance level for the behavioral sciences was .05. Gay (1996) stated, "For most studies, [an alpha of] .05 is a reasonable probability level" (p. 474). Shavelson (1988) concurred that "this margin or error [.05] seems reasonable since it is much more probable that extreme sample means are drawn from an alternate population with a different mean" (p. 249). Therefore, I selected .05 for the current study.

Response Rate

I mailed the *Core Competencies of TRIO Professional Service Providers* to 579 TRIO administrators in the United States and its territories where TRIO programs are offered. The United States Postal Service returned 3 questionnaires as undeliverable; six other questionnaires were returned not complete. A total of 354 questionnaires (61.1%) were completed and returned. However, 8 were unusable: 1 was received too late for inclusion; 1 did not indicate a job title, and 6 indicated job titles other than Administration. Usable returns included 346 (59.8%) questionnaires.

Alpha Reliability

A Cronbach *alpha* was calculated for the *Core Competencies of TRIO Professional Service Providers* to test the internal consistency reliability of the survey instrument. Table 5 depicts the results of the analysis for each of the 18 core competency categories and for the entire 100-item instrument. The criterion alpha for each core competency category was .7000, as recommended by Feguson and Takane (1989). As noted in the table, 17 of the alpha coefficients ranged between .7080 and .9569. However, 1 core competency category was lower. That core competency category was Follow Up and Evaluation. The core competency category Follow Up and Evaluation had an *alpha* of .6116. An *alpha* of *.6116* is below the minimum of .7000 level recommended Ferguson and Takane and below that of the other core competency categories in the current study. Therefore, the core competency category Follow Up and Evaluation is deemed less reliable than are the 17 other core competency categories. The overall Cronbach *alpha* was .9700. Since a theoretically perfect positive correlation is 1.0000, the overall *alpha* of .9700 is deemed highly reliable.

Table 5

Survey Instrument Reliability Analysis

Core Competency Category	Number Items	Number Cases	Alpha Coefficient
Admissions	4	320	.8270
Advising	10	317	.9386
Curricula	3	333	.9265
Extra-Curricula	3	327	.7080
Financial Aid	3	334	.8697
Follow Up and Evaluation	5	323	.6116
Grantwriting	3	339	.8820
Information	2	344	.8902
Interpersonal Skills	11	329	.8446
Leadership	10	330	.8927
Motivation	2	337	.8715
Planning	8	335	.8996
Professional Development	4	337	.7505
Public Relations	3	336	.7876
Recruitment	3	328	.7881
Teaching	15	289	.9569
Technology	5	320	.7731
Overall			.9700

Demographic Characteristics

Respondents provided demographic information about themselves, their professional backgrounds, and their projects. The demographics are presented in this section and are shown in Table 6. All respondents included in the analysis were administrators; however, there were levels of responsibility, as designated by differences in Title. Project Directors accounted for 261 (75.4%) of the respondents; TRIO Directors accounted for 50 (14.5%). There were 5 (1.4%) other administration respondents. Years in Position designated how long respondents had served in their current roles. For Years in Position, 218 (64.3%) had been in their current positions four years or more. Years in TRIO designated the number of years respondents had worked in professional positions in TRIO programs. Most respondents, 286 (83.4%), had been with TRIO programs 4 years or more. Education referred to respondents' progress in postsecondary education programs. Most respondents, 296 (87.1%) had a Master's degree or beyond. The demographic Gender referred to respondents' designations of male and female. Of all respondents, 232 (67.4%) were females; 112 (32.6%) were males. The demographic variable Age referred to applicant' category for chronological age. A majority of respondents, 206 (61.5%) were 46 years of age or older. One demographic variable referred to respondents' Race. A majority, 177 (53.5%) were White; 101 (30.5%) were African American. Forty-one (12.3%) were Asian American, Hispanic, Latino, or Other. Fifteen respondents (3.6%) did not state their Race.

The independent variable Program referred to the TRIO project or project in which respondents were currently employed. Responses were: Talent Search, 55 (15.9%), Upward Bound, 117 (41.9%), and Student Support Services, 107(38.4%).

Table 6

Respondents' Demographic Information (N = 346)

Demographic Category	Frequency Count	Valid Percent	Cumulative Percent
Title			
Coordinator	14	4.0	4.0
Assistant Director	10	2.9	6.9
Associate Director	6	1.7	8.7
Project Director	261	75.4	84.1
TRIO Director	50	14.5	98.6
Other	5	1.4	100
Years in position			
Less than 1 year	27	8.0	8.0
1-3 years	94	27.7	35.7
4-8 years	100	29.5	65.2
9-15 years	68	20.1	85.3
Over 15 years	50	14.7	100
Missing values	7		
Years in TRIO			
Less than 1 year	11	3.2	3.2
1-3 years	46	13.4	16.6
4-8 years	96	28.0	44.6
9-15 years	93	27.1	71.7
Over 15 years	97	28.3	100
Missing values			
Education			
Associate degree	1	0.3	0.3
Less than 4 years college	3	0.9	1.2
Baccalaureate degree	12	3.5	4.7
Some graduate work	28	8.2	12.9
Masters degree	186	54.7	67.6
Post masters work	80	23.5	91.2
Doctorate degree	30	8.8	100
Missing values	6		
Gender			
Male	112	32.6	32.6
Female	232	67.4	100

Table 6 (continued)

Demographic Category	Frequency Count	Valid Percent	Cumulative Percent
Age			
25-35 years	58	17.3	17.3
36-45	71	21.2	38.5
46-55	137	40.9	79.4
56 and older	69	20.6	100
Missing values	11		
Race			
African American	101	30.5	30.5
Asian American	7	2.1	32.6
Hispanic	21	6.3	39.0
Latino	13	3.9	42.9
White	177	53.5	96.4
Missing values	15		
Program			
Talent Search	55	15.9	15.9
Upward Bound	117	41.9	57.8
Student Support Services	107	38.4	100
Institution			
Public 4-year	121	35.4	35.4
Public 2-year	130	38.0	73.4
Private 4-year	62	18.1	91.5
Private 2-year	9	2.6	94.1
Community	12	3.6	97.6
Other	8	2.3	100
Missing values	4		
Region			
Region I	21	6.1	6.1
Region II	34	9.8	15.9
Region III	35	10.1	26.0
Region IV	74	21.4	47.4
Region V	54	15.6	63.0
Region VI	40	11.6	74.6
Region VII	26	8.1	82.6
Region VIII	18	5.2	87.8
Region IX	38	11.0	98.7
Region X	6	1.7	100

The demographic variable Institution referred to host institutions for the projects in which respondents served. There were 121 (35.4%) of the respondents who served in public 4-year institutions; 130 (38.0%) were in public 2-year institutions; 62 (18.1% were in private 4-year institutions; 9 (2.6%) were in private 2-year institutions. There were 12 (3.6%), hosted by community agencies, and 8 (2.3%) respondents checked Other.

Finally, the demographic variable Region is reported. On the demographic questionnaire, the question related to Region was "State your office is located in". This way of asking for the information was recommended by my doctoral committee to circumvent respondents' possible lack of knowledge regarding the TRIO region in which their project was located. When entering this information into the Excel database, I coded the variable as Region; the frequencies are reported by Region, rather than by State. As Table 6 shows, the range of the number of respondents by Region ranged from 74 in Region IV to 6 in Region X. The total number of respondents included in the study was 346. Table 6 presents demographic frequencies for respondents and their projects.

Null Hypotheses

In this section, I present analyses of each of the 10 null hypotheses. The first 9 were addressed using MANOVAs. For H_O 10, I used a paired samples *t* test to compare mean differences between respondents' answers for themselves with respondents' answers for those professional service providers whom they supervised. Hurlburt (1998) stated that the *F* value "should be significantly higher than 1 if the null hypothesis is not true" (p. 290).

Null Hypothesis One

There are no significant differences in the 18 core competency categories for TRIO administrators according to Program.

Analysis of the first null hypothesis was limited to the respondents who indicated they served in one project only because it was important that respondents answer for a single project rather than for multiple projects. Otherwise, analysis by Program would not have been clear because for those answering for multiple programs there would be no way to know for which project or projects their responses pertained. The analysis by Program used Talent Search, Upward Bound, and Student Support Services as the independent variables. Analysis required that each respondent's information be categorized in only one of those demographic categories.

For this hypothesis, the MANOVA revealed statistically significant differences, with $p = <.001$. The $F = 6.131$ (36.000, 476.000) also was robust because it was well above 1. Therefore, the hypothesis was rejected, and the alternate hypothesis was accepted: There are significant differences in the 18 core competency categories for TRIO administrators according to Program. Table 7 presents the results of the MANOVA.

In the following analysis, significant mean differences were found for 6 of the 18 core competency categories: Grantwriting, Admissions, Curriculum, Extra-Curricular, Follow Up, and Teaching. F values were significant, as seen in Table 8.

As Table 9 shows, Upward Bound rated each significant core competency category as being more important than did either Talent Search or Student Support Services. The mean differences were large enough to make five of the six core

Table 7

Multivariate Test for Program

Effect	Test	Value	*F*	Hypothesis	Error	Significance
Program	Wilks' Lambda	.467	6.131	36.000	476.000	<.001

$p \leq 05$.

Table 8

Test of Between-Subjects Effects by Program

Core Competency Category	Type III Sum of Squares	Mean Square	*F*	Significance
Admissions	26.665	13.333	8.945	< .001
Curricula	206.290	103.145	43.243	< .001
Extra-Curricula	107.662	53.831	33.644	< .001
Follow Up and Evaluation	8.166	4.083	7.254	< .001
Grantwriting	15.671	7.836	5.894	.003
Teaching	38.031	19.015	10.045	< .001

$p \leq .05$

Table 9

Estimated Marginal Means by Program

Core Competency Category	Mean	Standard Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Admissions				
Student Support Services	4.663	.126	4.415	4.911
Upward Bound	5.385	.116	5.156	5.614
Talent Search	4.974	.166	4.647	5.301
Curricula				
Student Support Services	3.752	.159	3.438	4.065
Upward Bound	5.718	.147	5.428	6.008
Talent Search	4.880	.210	3.907	4.735
Extra-Curricula				
Student Support Services	4.020	.130	3.763	4.276
Upward Bound	5.458	.121	5.220	5.695
Talent Search	4.321	.172	4.198	4.876
Follow Up and Evaluation				
Student Support Services	5.979	.077	5.826	6.131
Upward Bound	6.243	.072	6.102	6.384
Talent Search	5.792	.102	5.591	5.993
Grantwriting				
Student Support Services	6.110	.119	5.876	6.344
Upward Bound	6.645	.110	6.429	6.862
Talent Search	5.562	.157	6.253	6.871
Teaching				
Student Support Services	4.368	.142	4.089	4.648
Upward Bound	5.145	.131	4.887	5.403
Talent Search	4.369	.187	4.001	4.738

categories significant at the p = <.001 level. This is further indicated by the high *F* values for all significant core competency categories.Table 9 reflects statistics only for the significant core competency categories.

Null Hypothesis Two

There are no significant differences in the 18 core competency categories for TRIO administrators according to Institution.

To test the second null hypothesis, the demographic category Institution was collapsed, and I used information only from 4-year institutions and from two-year institutions. Those demographic categories were collapsed so that both public and private 4-year institutions and both public and private 2-year institutions were the independent variables used to test the second null hypothesis. The purpose of collapsing categories and of eliminating from the analysis the community agencies and Others was to gain statistical power for the analyses.

The MANOVA for Institution was significant at the .05 level. The *p* value was .029. Also, $F = 1.771$ (18.000, 278.000), was significantly higher than would be found if this were not significant. Therefore, the hypothesis was rejected (see Table 10), and the alternate hypothesis was supported: There are significant differences in the 18 core competency categories for TRIO administrators according to Institution. Five core competency categories were found to have significant differences by Institution. Table 11 shows the between-subjects effects for Curriculum, Follow Up and evaluation, Grantwriting, Information, and Interpersonal Skills

Table 12 depicts the means, standard error, and 95% confidence intervals for each significant core competency category. Respondents from public and private 4-year

Table 10

Multivariate Test for Institution

Effect	Test	Value	*F*	Hypothesis	Error	Significance
Institution	Wilks' Lambda	.898	1.771	18.000	278.000	.029

$p \leq .05$

Table 11

Test of Between-subjects Effects by Host Institution

Core Competency Category	Type III Sum of Squares	Mean Square	*F*	Significance
Curricula	29.059	29.059	9.466	.002
Follow Up and Evaluation	4.090	4.090	7.290	.007
Grants	12.879	12.879	10.076	.002
Information	3.252	3.252	4.075	.044
Interpersonal Skills	1.435	1.435	4.760	.030

$p \leq .05$

Table 12

Estimated Marginal Means by Institution

Core Competency Category	Mean	Standard Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Curricula				
4-year	4.908	.133	4.646	5.171
2-year	4.274	.157	3.965	4.584
Follow Up and Evaluation				
4-year	6.136	.057	6.023	6.248
2-year	5.898	.067	5.765	6.030
Grantwriting				
4-year	6.618	.086	6.449	6.788
2-year	6.196	.102	5.996	6.396
Information				
4-year	6.555	.068	6.421	6.689
2-year	6.343	.080	6.185	6.501
Interpersonal Skills				
4-year	6.353	.042	6.271	6.435
2-year	6.212	.049	6.115	6.309

institutions ranked each significant core competency category higher than did respondents public and private 2-year institutions.

Null Hypothesis Three

There are no significant differences in the 18 core competency categories for TRIO administrators according to Region.

For the sake of stronger statistical analyses, I combined Regions as follows: Northeast and Mid-Atlantic (Regions I, II, III), Southeast (Region IV), Midwest (Region V), Southwest (Regions VI, VII); and West (Regions VIII, IX, X). These collapsed demographic categories were used to analyze null hypothesis 3.The MANOVA for Region showed $p = .096$. $F = 1.233$ (72.000, 1166.306), indicating that this finding was not statistically significant. "F should be expected to be about 1 if the null hypothesis is true" (Hulburt, 1998, p. 290). Since findings for Region did not reach significance, the third null hypothesis was not rejected (see Table 13).

Null Hypothesis Four

There are no significant differences in the 18 core competency categories for TRIO administrators according to Years in Position.

The MANOVA for Years in Position revealed significance, with $p = .020$, $F = 1.455$ (54.000, 864.902) (see Table 14). Therefore, the hypothesis was rejected, and the alternate hypothesis was accepted: There are significant differences in the 18 core competency categories for TRIO administrators according to Years in Position.
The Interpersonal Skills and the Teaching core competency categories were found to be significant. Table 15 shows the between-subjects effects for Years in Position, and

Table 13

Multivariate Test by Region

Effect	Test	Value	*F*	Hypothesis	Error	Significance
Region	Wilks' Lambda	.749	1.233	72.000	1166.306	.096

$p \leq .05$

Table 14

Multivariate Test for Years in Position

Effect	Test	Value	*F*	Hypothesis	Error	Significance
Years in Position	Wilks' Lambda	.772	1.455	54.000	864.902	.020

$p \leq .05$

Table 15

Test of Between-subjects Effects by Years in Position

Core Competency Category	Type III Sum of Squares	Mean Square	*F*	Significance
Interpersonal Skills	3.341	1.114	3.665	.013
Teaching	15.897	5.299	4.428	.005

$p \leq .05$

Table 16 presents the estimated marginal means. For Tables 15 and 16, core competency categories are reported only if they were significant at .05 or lower.

Null Hypothesis Five

There are no significant differences in the 18 core competency categories for TRIO administrators according to Years in TRIO.

The MANOVA for this hypothesis was significant at the .05 level. As Table 17 shows, $p = .008$. $F = 1.54$ (54.000, 876.820), indicating significant differences between the mean squares. Therefore, the hypothesis was rejected, and the alternate hypothesis was accepted: There are significant differences in the 18 core competency categories for TRIO administrators according to Years in TRIO.

Only the core competency category Administration was significant for Years in TRIO. In that core competency category, those with Over 15 years experience ranked Administration higher than did other groups, with mean differences being greater between those with Over 15 years in TRIO and those with 4-8 Years in TRIO. Tables 18 and 19 depict these findings.

Table 16

Estimated Marginal Means by Years in Position

Core Competency Category	Mean	Standard Error	95% confidence interval	
			Lower bound	Upper bound
Interpersonal Skills				
3 years or less	6.380	.052	6.277	6.483
4-8 years	6.355	.057	6.243	6.467
9-15 years	6.187	.069	6.051	6.324
Over 15 years	6.110	.084	5.945	6.275
Teaching				
3 years or less	5.517	.104	5.313	5.721
4-8 years	5.453	.113	5.231	5.675
9-15 years	5.375	.138	5.103	5.646
Over 15 years	4.823	.167	4.495	5.152

Table 17

Multivariate Tests for Years in TRIO

Effect	Test	Value	*F*	Hypothesis	Error	Significance
Years in TRIO	Wilks' Lambda	.762	1.54	54.000	876.820	.008

$p \leq .05$

Table 18

Test of Between-subjects Effects by Years in TRIO

Core Competency Category	Type III Sum of Squares	Mean Square	*F*	Significance
Administration	4.082	1.361	*4.191*	.006

$p \leq .05$, *df*, 3

Table 19

Estimated Marginal Means by Years in TRIO

Core Competency Category	Mean	Standard Error	95% confidence interval	
			Lower bound	Upper bound
Administration				
4-8 years	6.418	.061	6.299	6.538
9-15 years	6.567	.061	6.447	6.687
Over 15 years	6.230	.061	6.603	6.420

Null Hypothesis Six

There are no significant differences in the 18 core competency categories for TRIO administrators according to Education.

For Education, the MANOVA yielded a $p = .402$. with $F = 1.034$ (72.000, 1142.713). Therefore, the null hypothesis was not rejected (see Table 20).

Null Hypothesis Seven

There are no significant differences in the 18 core competency categories for TRIO administrators according to Gender.

The MANOVA for Gender was significant, with $p=.017$, $F=1.880$ (18.000, 298.0009). Table 21 shows these results. The seventh hypothesis was rejected. The alternate hypothesis: There are significant differences in the 18 core competency categories for TRIO administrators according to Gender, was accepted.

Between-subjects effects showed statistical significance for the Administration and Interpersonal Skills core competency categories. The mean effects by Gender showed that Males considered Administration to be more important than did Females and that Females considered Interpersonal Skills to be more important than did Males. Tables 22 and 23 present these findings.

Null Hypothesis Eight

There are no significant differences in the 18 core competency categories for TRIO administrators according to Age. I ran a MANOVA for Age.

Results were not significant at the .05 level, with $p = .120$. $F = 1.239$ (54.000, 855.963). Therefore, null hypothesis 8 is not rejected (see Table 24).

Table 20

Multivariate Test by Education

Effect	Test	Value	*F*	Hypothesis	Error	Significance
Education	Wilks' Lambda	.780	1.034	72.000	1142.713	.402

$p \leq .05$

Table 21

Multivariate Test for Gender

Effect	Test	Value	*F*	Hypothesis	Error	Significance
Gender	Wilks' Lambda	.898	1.880	18.000	298.0009	.017

$p \leq .05$

Null Hypothesis Nine

There are no significant differences in the 18 core competency categories for TRIO administrators according to Race.

For the demographic variable Race, the MANOVA was significant, with $p = <$ .001. $F = 3.336$ (18.000, 236.000). Results are seen in Table 25. The hypothesis is rejected, and the alternate hypothesis is accepted: There are significant differences in the 18 core competency categories for TRIO administrators according to Race.

For Race, every core competency category except Financial Aid showed significance at the .05 level or lower. Table 26 reflects the between-subjects effects for Race. Note that the core competency category Financial Aid is not included in Table 26 because for that core competency category there were no significant differences at .05 or lower.

Table 22

Test of Between-Subjects Effects by Gender

Core Competency Category	Type III Sum of Squares	Mean Square	*F*	Significance
Administration	14.570	14.570	4.678	.031
Interpersonal Skills	1.277	1.277	4.134	.043

$p \leq .05$, *df*,1

Table 23

Estimated Marginal Means by Gender

Core Competency Category	Gender	Mean	Standard Error	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Administration	Male	4.974	.174	4.632	5.316
	Female	4.516	.121	4.279	4.754
Interpersonal Skills	Male	6.206	.055	6.098	6.314
	Female	6.342	.038	6.267	6.416

Table 24

Multivariate Test for Age

Effect	Test	Value	*F*	Hypothesis	Error	Significance
Age	Wilks' Lambda	.799	1.239	54.000	855.963	.120

$p \leq .05$

Table 25

Multivariate Test for Race

Effect	Test	Value	*F*	Hypothesis	Error	Significance
Race	Wilks' Lambda	.797	3.336	18.000	236.000	<.001

$p \leq .05$

Table 26

Test of Between-subjects Effects by Race

Core Competency Category	Type III Sum of Squares	Mean Square	*F*	Significance
Administration	3.738	3.738	10.959	<.001
Admissions	25.194	25.194	14.733	<.001
Advising	11.035	11.035	8.008	.005
Curricula	36.382	36.382	11.857	.001
Extra-Curricula	40.933	40.933	20.800	<.001
Follow Up and Evaluation	4.446	4.446	7.621	.006
Grantwriting	15.984	15.984	11.372	.001
Information	11.243	11.243	15.382	<.001
Interpersonal Skills	1.631	1.631	5.206	.023
Leadership	2.309	2.309	8.100	.005
Motivation	13.332	13.332	14.662	<.001
Planning	7.239	7.239	15.814	<.001
Professional Development	11.749	11.749	16.398	<.001
Public Relations	10.884	10.884	13.827	<.001
Recruitment	13.776	13.776	9.592	.002
Teaching	16.933	16.933	8.531	.004
Technology	5.092	5.092	4.091	.044

$p \leq .05$

For each core competency category that showed significance, African Americans ranked the core competency category as more important than did White respondents. This information is presented in the Estimated Marginal Means for Significant Core Competency Categories by Race, Table 27. Note that the core competency category Financial Aid is not included in the table because there was no significance at the .05 level for that core competency category.

Null Hypothesis Ten

There are no significant differences according to core competency category for TRIO administrators compared to administrators' perceptions of core competency categories for professional service providers whom they supervise.

I completed a two-tailed paired samples t test, which is used to test the null hypothesis that no differences exist between the means of the two groups. The results were statistically significant, with $p = <.001$ for 17 of the 18 core competency categories. Only the core competency category Motivation failed to show significance at the .05 level. Therefore, that core competency category is not included in Table 28. Table 28 shows the results of the significant core competency categories only. Hypothesis 10 was rejected, and the alternate hypothesis was supported: There are significant differences according to core competency category for TRIO administrators compared to administrators' perceptions of core competency categories for professional service providers whom they supervise.

Paired samples tests and paired samples statistics for significant core competency caregories are shown in Tables 29 and 30. Note that the core competency category Motivation is not included because there was not significance at the .05 level for that core

Table 27

Estimated Marginal Means by Race

Core Competency Category	Mean	Standard Error	95% confidence interval	
			Lower bound	Upper bound
Administration				
African American	6.731	.062	6.609	6.852
White	6.477	.045	6.388	6.567
Admissions				
African American	5.259	.138	4.988	5.531
White	4.602	.102	4.401	4.802
Advising				
African American	5.294	.124	5.050	5.537
White	4.858	.091	4.678	5.038
Curricula				
African American	5.017	.185	4.653	5.380
White	4.226	.136	3.958	4.495
Extra-Curricula				
African American	5.122	.148	4.831	5.413
White	4.284	.109	4.069	4.499
Follow Up				
African American	6.171	.081	6.012	6.329
White	5.894	.059	4.777	5.500
Grantwriting				
African American	6.726	.125	6.480	6.972
White	6.202	.092	6.020	6.384
Information				
African American	6.767	.090	6.589	6.944
White	6.327	.067	6.196	6.214
Interpersonal Skills				
African-American	6.223	.044	6.137	6.309
White	6.108	.043	5.970	6.272
Leadership				
African American	6.570	.056	6.459	6.680
White	6.371	.042	6.289	6.452
Motivation				
African American	6.172	.100	5.974	6.370
White	5.694	.074	5.548	5.840
Planning				
African American	6.543	.071	6.402	6.683
White	6.190	.053	6.087	6.294

Table 27 (Continued)

Core Competency Category	Mean	Standard Error	95% confidence interval	
			Lower bound	Upper bound
Professional Development				
African American	6.154	.089	5.978	6.329
White	5.705	.066	5.575	5.834
Public Relations				
African American	6.222	.094	6.038	6.406
White	5.790	.069	5.654	5.926
Recruitment				
African American	6.117	.126	5.868	6.365
White	5.630	.093	5.447	5.814
Teaching				
African American	4.881	.149	4.588	5.173
White	4.341	.110	4.125	4.557
Technology				
African American	5.491	.118	5.259	5.722
White	5.195	.087	5.024	5.366

Table 28

Paired Samples Test for Administrators' Self-Perceptions and Administrators' Perceptions of Professionals They Supervise

Core Competency Category	*df*	Significance (2-tailed)
Administration	331	<.001
Admissions	330	<.001
Advising	337	<.001
Curricula	332	<.001
Extra-Curricula	334	<.001
Financial Aid	333	<.001
Follow Up and Evaluation	338	<.001
Grantwriting	327	<.001
Information	334	<.001
Interpersonal Skills	338	.049
Leadership	334	<.001
Planning	330	<.001
Professional Development	329	<.001
Public Relations	334	<.001
Recruitment	334	<.001
Teaching	336	<.001
Technology	334	<.001

$p \leq .05$

Table 29

Paired Samples Statistics for Administrators' Self-Perceptions and Administrators' Perceptions of Professionals They Supervise

Core Competency Category	Mean Difference	Standard Deviation	Standard Error Mean	95% Confidence Level		
				Lower bound	Upper bound	*t*
Administration	2.0315	1.17892	.06470	1.9042	2.1588	31.398
Admissions	0.4237	1.43258	.07874	.2688	.5786	5.381
Advising	-0.9575	1.14297	.06217	1.0798	-.8352	15.401
Curricula	-0.3509	1.38641	.07597	-.5003	-.2014	-4.618
Extra-Curricula	-0.7900	1.28778	.07360	-.9285	-.6516	11.229
Financial Aid	-0.8388	1.39451	.07630	-.9889	-.6887	10.993
Follow Up and Evaluation	0.8879	1.06378	.05778	.7742	1.0015	15.367
Grantwriting	2.3013	1.82753	.10091	2.1028	2.4998	22.806
Information	0.2328	0.81037	.04428	.1457	.3199	5.259
Interpersonal Skills	-0.0511	0.47701	.02591	-.1020	-.0001	-1.972
Leadership	0.4717	0.71120	.03886	.3953	.5482	12.140
Planning	1.2669	1.11635	.06136	1.1462	1.3876	20.297
Professional Development	1.2576	1.12553	.06196	1.1357	1.3795	20.297
Public Relations	0.6607	1.07005	.58460	.5457	.7757	11.301
Recruitment	-0.2562	1.35852	.07422	-.4022	-.1102	-3.452
Teaching	-0.9517	1.18678	.06465	1.0789	-.8246	14.722
Technology	-0.4431	1.02694	.05611	-.5535	-.3328	-7.898

Table 30

Paired Samples Statistics for Administrators' Self-Perceptions and Administrators' Perceptions of Professionals They Supervise

Core Competency Category	Personnel	Mean	N	Standard Deviation	Standard Error Mean
Administration	Respondent	6.5774	332	0.57689	.03166
	Others	4.5459	332	1.18198	.06487
Admissions	Respondent	4.9668	331	1.33270	.07325
	Others	4.5431	331	1.18402	.06508
Advising	Respondent	5.0898	338	1.19723	.06512
	Others	6.0473	338	0.77609	.04221
Curricula	Respondent	4.6612	333	1.80047	.09867
	Others	5.0120	333	1.78304	.09771
Extra-Curricula	Respondent	4.6940	335	1.48232	.08099
	Others	5.4841	335	1.35747	.07417
Financial Aid	Respondent	5.4281	334	1.35788	.07430
	Others	6.2670	334	0.93392	.05110
Follow Up and Evaluation	Respondent	6.0682	339	0.75173	.04083
	Others	5.1803	339	1.15561	.06276
Grantwriting	Respondent	6.4746	328	1.09024	.06020
	Others	4.1733	328	1.67182	.09231
Information	Respondent	6.5060	335	0.85819	.04689
	Others	6.2731	335	0.95444	.05215
Interpersonal Skills	Respondent	6.3242	339	0.55518	.03015
	Others	6.3753	339	0.66812	.03629
Leadership	Respondent	6.4950	335	0.52143	.02849
	Others	6.0232	335	0.87859	.04800
Planning	Respondent	6.3619	331	0.66667	.03664
	Others	5.0950	331	1.17750	.06472

Table 30 (continued)

Core Competency Category	Personnel	Mean	N	Standard Deviation	Standard Error Mean
Professional Development	Respondent	5.9073	330	0.85549	.04709
	Others	4.6497	330	1.26376	.06957
Public Relations	Respondent	5.9965	335	0.92737	.05067
	Others	5.3352	335	1.17756	.06434
Recruitment	Respondent	5.8756	335	1.19906	.06551
	Others	6.1318	335	1.97454	.05871
Teaching	Respondent	4.6497	337	1.49480	.08143
	Others	5.6014	337	1.18610	.06461
Technology	Respondent	5.3967	335	1.13755	.06215
	Others	5.8399	335	0.96811	.05289

competency category. Table 30 reflects that respondents believed they, as administrators, were more responsible for Administration and for competencies related to Administration than were the professional service providers whom they supervised. The *t* scores were quite robust for Administration, Admissions, Follow Up, Grantwriting, Leadership, Planning, and Professional Development. Also, respondents indicated that the professional service providers whom they supervised needed certain competencies to a greater extent than did program administrators. Those *t* scores were robust for Advising and Teaching.

Table 30 presents the means for administrators' perceptions of the importance of significant core competency categories and for administrators' perceptions of the importance of core competency categories for those professional service providers whom they supervise. The core competency category Motivation is not included in Table 30

because significance at the .05 level was not found for that core competency category. Table 30 also shows for some tasks standard deviations of over 1.3 on a 7-point scale, indicating a wide range of perceptions among respondents.

Chapter Summary

In this chapter, I discussed the findings of the study. These included a presentation of demographic frequencies and of statistical findings relative to each of the 10 null hypotheses. Hypotheses one through nine used demographic variables as the independent variables. Three of those null hypotheses were not rejected; no significance was found for core competency categories by Region, Education, or Age of respondents. Six of the first nine null hypotheses were rejected. Significance was found for core competency categories according to Program, Institution, Years in Position, Years in TRIO, Gender, and Race. than were the professional service providers whom they supervised. The *t* scores were quite robust for Administration, Admissions, Follow Up, Grantwriting, Leadership, Planning, and Professional Development. Also, respondents indicated that the professional service providers whom they supervised needed certain competencies to a greater extent than did program administrators. Those *t* scores were robust for Advising and Teaching

Null hypothesis 10 dealt with perceived core competency needs of administrators, compared to administrators' perceptions of core competency needs of those professional service providers whom they supervised. This Null hypothesis was rejected. Significance at the .05 level or lower were found for 17 of the 18 core competency categories. Only the core competency category Motivation did not show significance at the .05 level.

This chapter included a discussion of the (a) research population and sample, (b) instrumentation for the study, (c) data collection and analysis, (d) response rate, (e) alpha reliability, (f) demographic characteristics, and (g) null hypotheses.

CHAPTER V

SUMMARIES, DISCUSSION, AND RECOMMENDATIONS

In this chapter, I present summaries, discussion, and recommendations relative to this study. They include a (a) summary of the methodology, (b) summary of findings, (c) discussion of major findings, (d) contributions of the current study to human resource development and to TRIO programs, (e) recommendations for further study, (f) summary of the study, and (g) chapter summary.

Summary of the Methodology

My purpose in conducting this national study was to identify core competency categories needed by administrators and by other professional service providers in federally funded education programs. Three TRIO programs, Talent Search, Upward Bound, and Student Support Services, were studied.

I developed two research questions to guide the study. To address the research questions, 10 null hypotheses were developed. For nine null hypotheses, demographic categories were the independent variables. For the last null hypothesis, I compared respondents' perceptions of core competency categories needed for their work with respondents' perceptions of core competency categories needed by the professional service providers whom they supervised.

Following a literature review and a search of *Mental Measurements Handbook* and *Tests in Print* (1994), I concluded that no suitable instrument was available for this study. Therefore, I compiled a list of tasks, submitted it to a panel of content experts, and revised the list according to the panel's recommendations. I began with a list of tasks

because, according to Phillips (1997), a list of job tasks is needed to develop a list of core competency categories for training purposes. Next, I developed a survey instrument and pilot tested it, using professional service providers in each of the target programs. The instrument was further refined following the pilot test. The population for the current study consisted of administrators of those programs selected for the study. The sample was chosen in a proportional stratified random way.

Summary of Findings

Findings included demographic information and statistical findings relative to the null hypotheses. These are presented in this section.

Demographic Information

Demographic information for respondents revealed that two-thirds were females. Almost two-thirds were White; nearly 30% were African Americans. The remaining respondents listed their race as Hispanic, Latino, or Other. Most respondents had Master's degrees or beyond. Most were working in programs hosted by public institutions of higher education.

The average respondent was an administrator of a program with several years' experience in multiple TRIO programs. The average respondent was White, Female, and had at least a Master' degree. This average respondent was employed in a TRIO project hosted by a public institution of higher education.

Support for the Null Hypotheses

There were no significant differences found in the 18 core competency categories for administrators based on Age, Education, or Region. There were significant differences at the .05 level or lower for 6 of the demographic variables: Program, Years

in Position, Years in TRIO, Host Institution, Gender, and Race. Null Hypothesis 10 concerned differences in perceived competency needs of administrators and administrators' perceptions of competencies needed by those professional service providers whom they supervised. Analysis revealed significant differences for that hypothesis as well. Therefore, 7 of the 10 null hypotheses were rejected.

Comparison With Findings in Other Studies

I found no studies based certain demographics as the independent variables. Those variables were Institution, Program, Education, and Age. However, there were studies using the demographic variables Race, Gender, Years in Position, Years in TRIO, and Region. These studies are reviewed in this section.

Race and Ethnicity

Brewer and Marmon (2000) reported that Wade and Bernstein (1991) found that Professional Development to sensitize counselors to race and ethnic values favorably affected counselors' work with high school students. However, Lopez et al. (1991) reported that Mexican-American students had a strong preference for Latino counselors whenever they had a choice. Kolvitz (1999) found no differences according to race.

In the current study, there were significant differences by Race. For every core competency category except Financial Aid, African Americans reported higher mean scores than did White respondents.

Gender of Counselors

Helms and Carter (1991) found that African Americans of both genders preferred White male counselors. Those researchers attributed their findings to the fact that those counselors had other demographic similarities to the students who preferred them (such

as socio-economic backgrounds). Tinselly and Harris (1976) found that male and female secondary students had differing expectations of school counselors. Male students expected good counselors to be analytical and non-judgmental. However, many female students wanted counselors to be permissive and understanding. Bernstein and Figioli (1983) found that male students believed male counselors were more credible in providing vocational counseling. In her study of core competencies needed by deafness specialists in higher education, Kolvitz (1999) found no significant differences according to gender.

In the current study, there were significant differences in the 18 core competency categories according to Gender. Males ranked the Administration core competency category significantly higher than did females; Females ranked the Interpersonal Skills core competency category higher than did males.

Years in Position and Years in TRIO

Some researchers have found significant differences in expectations according to years of experience. In the current study, I found significant differences in the 18 core competency categories according to respondents' Years in Position and according respondents' to Years in TRIO. For Years in Position, those with fewest years ranked the Interpersonal Skills and the Teaching core competency categories as somewhat more important than did those with 9 years' or more experience. For Years in TRIO, those with fewer years' experience ranked the Interpersonal Skills and the Teaching core competency categories as more important than did respondents with more years of experience. Those with more experience ranked the Administration core competency category as being of more importance than did respondents with less experience.

Regional Differences

Most differences I have found in the literature according to regional differences related to rural versus urban or suburban settings (Elena-Hindes, 1999; Jacobson, 1986; Kennedy & Barker, 1987). I found none based on Regions in the sense of the TRIO Regions.

Although the current research found no significant differences on the MANOVA by Region, there were significant differences by Region on an item analysis. The Tukey's honestly significant differences test revealed significance, with $F = 1.289$ (400, 370.68), and $p = .007$. Between-subject differences confirmed significant findings for 46 of the 100 tasks. Appendix G reflects an interesting pattern in those results: For 44 of the 46 tasks for which significant differences were found, the Southeast reported greater importance than did one or more other Regions.

Discussion of Major Findings

Two null hypotheses had dramatically significant findings. Those null hypotheses dealt with differences according to Program and with differences according to administrators' perceptions of their own core competency needs, as compared to administrators' perceptions of the core competency categories needed by the professional service providers whom they supervised.

Type of Program

Findings in this study were that several direct services were of greater importance for Upward Bound professional service providers than for either Talent Search or Student Support Services. These included Teaching, Advising, and Admissions. On the other hand, Student Support Services respondents found Financial Aid competencies to be

more important than did either of the other two programs included in the current study. These findings are not surprising because Student Support Services professional service providers work with students in postsecondary education, whereas Talent Search students are in Grades 6 through 12; Upward Bound students are enrolled in Grades 9 through 12.

Administrators' and Other Professional Service Providers' Competencies

Respondents perceived that their roles required greater competence in Administration, Admissions, Follow Up, Grantwriting, Information, Planning, Professional Development and Public Relations than did the work of other professional service providers whom they supervised. Respondents also stated that some core competency categories were of greater importance for professional service providers whom they supervised. Those core competency categories included Advising, Curricula, Extra-curricula, Recruiting, Teaching, and Technology. Such findings are not unexpected. The respondents were administrators; they ranked administrative and overall project responsibilities as of most importance in their roles. Respondents ranked the core competency categories involving direct services to students as most important for the professional service providers whom they supervised.

Contributions of the Current Study to Human Resource Development and to TRIO Programs

The current study addressed the core competency needs of professional service providers in federally funded education programs in the United States and its territories. Three TRIO programs were included in the study. Those programs were Talent Search, Upward Bound, and Student Support Services. No previous studies were found to identify the core competency categories for this population, and I found no national

studies on the performance competency of TRIO administrators or other TRIO professional service providers. Therefore, the current study holds great potential for contributing to the field of knowledge for these professional service providers.

The contributions of the current study are in two main areas: development of the instrument, *Core Competencies of TRIO professionals,* and findings. The contributions of each area are discussed in this section.

Contribution of the Survey Instrument

I developed a needs assessment instrument that was based on findings from literature and the recommendations of 12 experts in the field. This instrument can be used to identify training needs among TRIO professional service providers. It could be used, also, as a tool for selecting qualified applicants for professional positions in TRIO projects. I followed recognized procedures to assure that the instrument was valid and reliable for identifying the core competency categories needed by TRIO administrators and other TRIO professional service providers.

Following the piloting of the instrument, I modified it based on the recommendations of those participants. Each phase of the study (instrument development and expert input, piloting of the instrument, and the national survey) was distinct, with no respondent participating in more than one phase of the study. Therefore, the content validity of the instrument is assured, and there was little chance of bias in using a researcher-developed instrument to conduct the study. The overall Cronbach's *alpha* for the instrument, *Core Competencies of TRIO Professionals,* was .9700; only 1 of the 18 core competency categories was below .7000. Therefore, the internal reliability of the instrument was deemed acceptable.

Needs assessment is the first step in the development of effective Professional Development courses. *Core Competencies of TRIO Professionals*, the instrument developed as a part of the current study, can be an invaluable aid to administrators, to providers of Professional Development courses, and to all who work in a professional capacity with TRIO students. This instrument can serve as a foundation for planning Professional Development activities for TRIO programs.

Contributions of Major Findings

Major findings included those according to Program and according to differences by TRIO job title (core competency categories respondents believed were important for their work and the core competency categories respondents believed were important for the work of professional service providers whom they supervised). Also, while not statistically significant on the MANOVA, an item analysis revealed an interesting pattern by Region. These contributions to Professional Development in TRIO programs are discussed in this section.

Contribution of Findings by Program

Differences in the 18 core competency categories by Program carry important implications for Professional Development because these differences highlight the significance for each competency category according to students' ages and according to their educational levels. Talent Search and Upward Bound programs serve those students who have not yet finished high school or who have not enrolled in programs of postsecondary education. Findings of the current study highlighted their needs for Advising, Admissions, and related pre-college services. For Student Support Services programs, Financial Aid is significant even above those of the pre-college programs.

Contribution of Findings by TRIO Job Title

Respondents to the current study indicated that there are differences between the core competency categories necessary for their own work and the core competency categories needed by the professional service providers whom they supervise. Therefore, when hiring administrators for TRIO projects, it is necessary to assure candidates' qualifications for specific core competency categories, especially Administration, Admissions, Advising, Follow Up and Evaluation, Grantwriting, Information, Interpersonal Skills, Leadership, Planning, Professional Development, and Public Relations. Also, ongoing professional development courses in those core competency categories would be most helpful to administrators.

Furthermore, for professional service providers other than administrators, the core competency categories of most importance are those dealing with direct services, including Advising, Admissions, Curricula, Extra-Curricula, Financial Aid, Interpersonal Skills, Recruitment, Teaching, and Technology. Those should be the areas for selection and training of professional service providers other than administrators.

Need for Further Study

Finding ways to increase the effectiveness of TRIO programs is urgent due to need for accountability for federal funding (Brewer et al., 1998) and to a need for all citizens, including those who are at risk for academic failure, to become productive members of the national economy (United States Department of Labor DOL, 2000). Based on these two needs, further study is recommended to assist TRIO professional service providers and human resource development professionals in their efforts to improve program results.

Call for Accountability

The importance of accountability for spending in TRIO projects has been noted by several authors (Brewer et al., 1998; Harrison, 1989). As discussed by Brewer et al., writing successful federal grant proposals and conducting credible programs was highly competitive. This is because of funding shortages and because so many citizens are eligible for and needed the services offered by TRIO programs.

Importance for the National Economy

With regard to needs of the national economy, several statements from the recent National Skills Summit (United States DOL, 2000) apply. Then Secretary of Labor Herman began the summit by emphasizing that the nation had a *skills* shortage, rather than a *worker* shortage. (United States DOL). Important for Veterans Upward Bound programs was her recognition of veterans as an 'untapped pool' of workers for a new era (United States DOL).

Allen Greenspan, Chairman of the Federal Reserve, stated that, according to a recent study, workers were increasingly fearful of losing their jobs. He emphasize that having workers who were highly skilled was an immediate need (United States DOL).

Larry Perlman, Chairman of the Twenty-First Century Workshop Commission, stated that the problem was how to increase the rate at which workers gained new skills.(United States DOL, 2000).

Therefore, it is imperative that TRIO administrators and human resource development personnel have full information on the core competency categories needed, and that professional service providers become fully competent. Several research issues

seem appropriate for further study, and the following recommendations for further study are directed to that end.

Topics for Further Study

Several research topics are recommended to further the findings of the current study. Such research efforts would address the needs for highly trained workers and the mandate for accountability of funding for TRIO programs. Those research topics are discussed in this section.

Differences by Region

Administrators in the Southeast consistently indicated that they believed core competency category task items were of more importance than did administrators in others parts of the United States. An item analysis revealed significant differences at the .05 level for 46 of the 100 survey items. For 44 of those items, respondents from the Southeast (Region IV) rated the items as being more important than did respondents from one or more of the other regions. Awareness of the importance of competency could be related to the opportunities for professional training in the Southeast (seven training workshops during the 2001-2002 year). However, other factors could be involved. Ann above-average number of Southeast professional service providers are African Americans; African Americans tended to rank most core competency categories as more important than did White respondents. Therefore, perhaps the link is to race, rather than to gender. Or, perhaps the link is to educational or other characteristics of the student populations served in various regions of the United States. It would be helpful to know why other areas of the country ranked items lower than did administrators in the Southeast.

TRIO Host Institutions

An overwhelming majority of TRIO programs are hosted by public two-year and public four-year institutions of higher learning. That could indicate that most eligible potential students turn to public institutions. On the other hand, there could be other factors that account for the general lack of private college sponsorship. If so, many eligible participants in the programs could be excluded. Further study could lead to helpful information regarding this issue.

Perceptions of Non-Administrative Professional Services Providers

Another important area for study is the perceptions of professional service providers other than administrators of TRIO programs. It should be useful to learn how they would rank the importance of the core competency categories for their own work.

Delphi Study

A Delphi study of TRIO training professional service providers could provide additional information on perceived importance of competencies. The perspective of those who provide the Professional Development programs could provide a needed balance to the perceptions of TRIO administrators. If, in such a study, it were difficult to reach consensus, a Delphi study could be combined with Nominal Group Technique as the last phase of the study. In doing so, voting on the list of competencies could complete the recommended research. Another possibility with a Delphi study would be to add participants for the final round. Ker, Williams, Reid, Dunkley and Steele (2001) recommended adding participants to the last round of a Delphi study to further refine the research issue.

Perceptions According to Experience

It would be interesting to learn why respondents with several years in their positions and with several years in TRIO ranked administrative tasks higher than did other respondents and why those with fewer years of service ranked interpersonal skills competencies, teaching, and technology as higher than did respondents with more years of service. Perhaps newer administrators were more reliant on persuasion, or perhaps they were less interested in administrative tasks. A study of this facet might reveal differences in values or in adaptive capabilities between the groups.

Transfer-of-Training Study

The importance of transfer of training in TRIO is not found in the literature. There is agreement on the need for Professional Development. The degree of organizational support for training as well as the ability of TRIO professional service providers to apply new skills and to generalize the circumstances that are appropriate for transference of training are not known. Without effective transfer of training as outlined by Yamnill and McLean (2001), additional training would be wasteful. Therefore, there is need for further study of this issue.

Secondary Data Analysis

A secondary data analysis using data from the current study could prove to be fruitful. In the dataset for this study, there were missing values. Some participants noted on their returned surveys that those tasks did not apply for their programs. If missing values were replaced with 1s, indicating No Importance, results might be significantly different. Certainly means would be adjusted downward, making it possible to determine

which core competency categories were deemed more important than other core competency categories.

Replication of the Current Study With Other Populations

Finally, a replication of this study with other populations, using a revision of the instrument *Core Competencies of Professional service providers,* would be useful. Appropriate populations for such a study could be school administrators, guidance counselors. Another population might be Economic Opportunity Centers, a TRIO program that was not a part of the current study.

Summary of the Study

The purpose of this study was to identify core competency categories of professional service providers in selected TRIO programs. To accomplish this, I developed a survey instrument, piloted the instrument, and conducted a national stratified proportional random sample survey of Talent Search, Upward Bound, and Student Support Services programs in the United States and its territories.

Two research questions were developed to guide the study. For the first research question, I examined nine null hypotheses. Each considered core competency categories according to a demographic variable. The demographic variables were: Title, Program, Host Institution, Region, Years in Position, Years in TRIO, Age, Education, Gender, and Race. No significance was found for Age, Education, or Region. Significance at the .05 level was found for Program, Host Institution, Years in Position, Years in TRIO, Gender, and Race.

In the second research question, I considered respondents' rankings of the core competency categories for themselves and for those professional service providers whom they supervised. I found significance for the 10th Null hypothesis, which dealt with this question.

For further study, I made several recommendations. These included further study of some of the demographic variables. Also, I recommended a study of the perceptions of professional service providers who are not administrators to identify necessary core competency categories for their work and a Delphi study of the perceptions of TRIO Professional Development personnel. Another recommendation was that the current database be used, replacing missing values with 1s; 1s would indicate that those tasks were of no importance. Finally, I suggested that this study be replicated using other populations.

Chapter Summary

In this chapter I presented the major findings of this study. This included This includes the (a) summary of the methodology, (b) summary of findings, (c) discussion of major findings, (d) contributions of the current study to human resource development and to TRIO programs, (e) recommendations for further study, (f) summary of the study, and (g) chapter summary.

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APPENDICES

APPENDIX A

List of Panel of Experts

Paul Beasley, Student Support Services Director, University of North Carolina

Michael Berry, Talent Search Director, Northern Kentucky University

Rubye Byrd, TRIO Director, Morehouse State University, KY

Dan Connell, Editor, Journal of Educational Opportunity, Morehouse State University, KY

Ronnie Gross, TRIO Director, East Tennessee State University

Randy Gunter, TRIO Director, Georgia Southern University

Charlene Manco, Director of TRIO Training Programs, Northern Kentucky University

Ben McCune, Editor, Journal of Education Opportunity, Florida A&M University

Carl McGuire, Student Support Services Director, Grace University, IA

David Megquire, TRIO Director, University of Maine

Cynthia Park, TRIO Director, San Diego State University, CA

Doreatha Tyson, Talent Search Director, Savannah State University, GA

Dorothy Yarborough, TRIO Director, Piedmont Community College, NC

APPENDIX B

Dear _____:

I would like to call on your professional expertise as a colleague and as a friend of TRIO. Dora Marmon, a Ph.D. student whose committee I chair, has chosen as her research topic the core competencies of professional service providers in TRIO programs nationwide. Dora has served as a VUB educational specialist for approximately five years. I would appreciate your serving on a panel of experts to help her finalize her survey instrument. Please just:

1. review the competency items;
2. identify any additions, deletions, or modifications that should be made;
3. make notations on the page; and
4. fax them to me at (865) 974-3916 *or* return them in the enclosed addressed envelope.

In addition, she needs to include in the documentation specific information about her panel of experts (you). Please also provide the following:

Number of years you have been with TRIO _____
Type of TRIO program or programs in which you have served
Positions you have held with TRIO projects

Please assist us by returning your recommendations within the next two weeks. This will help us to identify competencies needed to make all of our programs more effective. I greatly appreciate your contribution.

Yours truly,

Ernest W. Brewer
Professor and TRIO Director

Enc: List of Competencies
xc: Dora Marmon, Ph.D. student

APPENDIX C

MEMORANDUM

TO: Federal Programs Professional Service Providers

FROM: Ernest W. Brewer, Professor and Director of Federal Programs

RE: Stage Two: *Survey of Core Competencies for Professional Service Providers for TRIO Programs*

DATE: Wednesday, January 16, 2002

Thank you for your participation last week in the pilot study of Dora Marmon's study. As I mentioned in the cover letter on January 9, the pilot study is a two-stage process.

I understand there was some confusion last week as to how to respond. Some of you stated you that you responded according to your own work responsibilities; others answered for themselves and for other professional service providers in their programs. Since analysis will include a test-retest correlation, it is important that you respond from the same perspective as the one you took last week. Therefore, if you considered only your own job responsibilities, do the same with your response to the enclosed copy of the instrument. However, if you responded considering both your own and others' responsibilities in your program, respond the same way again.

Please take a few minutes to complete the instrument according to the perspective you took on the first copy, and return it to me (Dr. Brewer) as soon as possible. For those who fax the return, the number is 974-3961. Responses are confidential. The code number will be used for tracking purposes only. If you have any questions, please feel free to call me at 974-8924. Many thanks for your assistance.

Enclosure

xc: Dora Marmon, Counselor, VPC

APPENDIX D

Date:
Tuesday, 19 Feb 2002 10:54:34 -0800 (PST)
From:
"Dora Marmon" <doramarmon@yahoo.com> | Block Address | Add to Address Book
Subject:
Survey: Core Competencies of TRIO professionals
To:
"TRIO Listserv" <TRIO@LISTSERV.NODAK.EDU>

You may receive this survey and find that it is addressed to your predecessor in the program. If so, please complete the survey and return it in the enclosed return envelope. Your response will be greatly appreciated. Thanks

Dora Marmon
Upward Bound Counselor/Instructor

APPENDIX E

THE UNIVERSITY OF TENNESSEE



Department of Human Resource Development
25 HPER Building
1914 Andy Holt Ave.
Knoxville, Tennessee 37996-2745
(865) 974-4466
FAX: (865) 974-3961
ewbrewer@utkux.utcc.utk.edu

February 12, 2002

Dear

I am a full-time counselor/instructor in an Upward Bound program at The University of Tennessee. I am also a Ph.D. candidate in Human Resource Development at UT, and am conducting a national survey of supervisors of TRIO programs to identify the tasks and competencies needed by TRIO professional employees. The purpose of the study is to provide an empirical basis for recruiting, hiring, giving initial training, and planning ongoing development for professional staff in TRIO programs.

You were selected in a stratified random drawing of TRIO supervisors listed in the 2001 COE Directory, and your participation is very important to the success of the research. Please take a few minutes to complete the enclosed survey and return it to me in the enclosed addressed, stamped envelope by March 15, 2002. I am enclosing a small token in appreciation of your assistance.

Your response is completely confidential. The code number is for follow-up purposes only. Individual data or comments will not be reported. Only aggregate data will be used.

If you would like a summary of the results of this study, please check the box on the survey, and you will receive it.

Thank you very much for your participation. If you have questions, you may reach me at my e-mail address: doramarmon@yahoo.com.

Sincerely,

Dora Marmon

Dora Marmon,
Upward Bound Counselor/ Instructor

xc: Dr. Ernest W. Brewer, Professor and TRIO Director

Takes only about 20 minutes to complete.

APPENDIX F

Information About Respondents, Their Programs, and Their Institutions

Purpose: The purpose of this sheet is to gather information about you, your program, and your institution. This information will be used in the findings and conclusions of the study. Only group data will be used.

Instructions: Please check the number of the most appropriate response or fill in the blanks that are provided. Please respond to each item on this form. Thanks.

1. **Your official TRIO title**

   - ❑ Counselor
   - ❑ Instructor
   - ❑ Coordinator
   - ❑ Assistant Director
   - ❑ Assocate Director
   - ❑ Project Director
   - ❑ TRIO Director
   - ❑ Other (please specific):_____

2. **Project(s) you are working with** (check as many as appropriate)

   - ❑ Educational Opportunity Center
   - ❑ Student Support Services
   - ❑ Ronald E. McNair Post-Baccalacureate Program
   - ❑ Talent Search
   - ❑ Upward Bound (Classic)
   - ❑ Upward Bound (Math and Science)
   - ❑ Upward Bound (Veterans)
   - ❑ Other (please specific):_____

3. **Years in current position**

   - ❑ Less than 1 year
   - ❑ 1-3 years
   - ❑ 4-8 years
   - ❑ 9-15 years
   - ❑ More than 15 years

4. **Years you have been working in TRIO**

   - ❑ Less than 1 year
   - ❑ 1-3 years
   - ❑ 4-8 years
   - ❑ 9-15 years
   - ❑ More than 15 years

5. **Type of institution that you work for**

   - ❑ 4-year public university/college
   - ❑ 4-year private university/college
   - ❑ 2-year public college
   - ❑ 2-year private college
   - ❑ Community agency
   - ❑ Other (please specific):_____

6. **State your office is located in** _____

7. **Your educational level is**

   - ❑ Less than an associate degree
   - ❑ Associate degree
   - ❑ Less than an 4-year college degree
   - ❑ Baccalaureate degree (4-yr college degree)
   - ❑ Some graduate work
   - ❑ Masters degree
   - ❑ Post masters work
   - ❑ Doctorate degree

8. **Gender**

   - ❑ Male
   - ❑ Female

9. **Age**

   - ❑ Less than 25 years of age
   - ❑ Between 25-35 years of age
   - ❑ Between 36-45 years of age
   - ❑ Between 46-55 years of age
   - ❑ Over 55 years of age

10. **Race**

    - ❑ African American
    - ❑ Asian American
    - ❑ Hispanic
    - ❑ Latino
    - ❑ White
    - ❑ Other (please specific):_____

Core Competencies of TRIO Professionals

Directions: Each of the tasks listed below represents a competency that may be needed by professional staff in your program. Please respond to each item by circling the appropriate number; respond for yourself (1st column) and for other staff whom you supervise (2nd column). The following Likert scale is a guide for your responses:

1	2	3	4	5	6	7
No Importance	Little Importance	Below Average Importance	Average Importance	Above Average Importance	Very Important	Highest Importance

	Yourself	Other Staff
Administrative Tasks		
1. Interview prospective employees and select or assist in selection of new employees	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Prepare budget for the program	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Make purchasing recommendations or decisions	1 2 3 4 5 6 7	1 2 3 4 5 6 7
4. Ensure that relevant policies are followed (institutional Federal Register, Code of Federal Regulations and Education Department Administrative Regulations)	1 2 3 4 5 6 7	1 2 3 4 5 6 7
5. Supervise employees	1 2 3 4 5 6 7	1 2 3 4 5 6 7
6. Prepare for and participate in audits of the program	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Admissions Tasks		
1. Interpret transcripts, ACT scores and SAT scores	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Provide information on college entrance exams	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Provide information regarding postsecondary institutions and assist students with applications	1 2 3 4 5 6 7	1 2 3 4 5 6 7
4. Serve as liaison with teachers and administrators on behalf of students	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Advising Tasks		
1. Perform career advising	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Perform academic advising	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Refer students for special services, including services for disabled students and social services	1 2 3 4 5 6 7	1 2 3 4 5 6 7
4. Work from a strengths perspective to help students set personal goals	1 2 3 4 5 6 7	1 2 3 4 5 6 7
5. Teach problem-solving techniques	1 2 3 4 5 6 7	1 2 3 4 5 6 7
6. Develop an Individual Education Plan for each student	1 2 3 4 5 6 7	1 2 3 4 5 6 7
7. Teach conflict resolution and anger management	1 2 3 4 5 6 7	1 2 3 4 5 6 7
8. Provide information and guidance on healthful lifestyle choices	1 2 3 4 5 6 7	1 2 3 4 5 6 7
9. Advise employees or students regarding barriers to educational goals achievement	1 2 3 4 5 6 7	1 2 3 4 5 6 7
10. Administer and interpret a variety of tests and inventories	1 2 3 4 5 6 7	1 2 3 4 5 6 7

1 No Importance	2 Little Importance	3 Below Average Importance	4 Average Importance	5 Above Average Importance	6 Very Important	7 Highest Importance

Curriculum Planning Tasks	Yourself	Other Staff
1. Plan curricula according to appropriate scope and sequence	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Develop curricula for basic academic skills in math and English	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Develop curricula for academic enrichment in math, English, science or a foreign language	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Extra-Curricular Tasks		
1. Plan and arrange for field trips to cultural events, colleges or as extensions of classroom learning	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Supervise students on field trips	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Supervise students in a residential setting	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Financial Aid Tasks		
1. Provide financial aid information regarding Pell Grants, work-study, scholarships and loans	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Assist students with financial aid applications	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Serve as liaison with financial aid personnel on behalf of students	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Follow Up and Evaluation Tasks		
1. Evaluate program outcomes and prepare reports for multiple audiences	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Follow up on students' participation and progress	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Evaluate employee performance	1 2 3 4 5 6 7	1 2 3 4 5 6 7
4. Design and implement an effective follow-up system	1 2 3 4 5 6 7	1 2 3 4 5 6 7
5. Administer and interpret appropriate instruments for assessing students' English and math skills and make appropriate recommendations for remediation	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Grant Writing Tasks		
1. Identify appropriate requests for proposals	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Conduct research in preparation for writing grant proposals	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Prepare grant proposals	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Information Tasks		
1. Understand ethical issues related to provision of services	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Understand cultural and ethnic diversity issues relevant to service provision	1 2 3 4 5 6 7	1 2 3 4 5 6 7

1 No Importance	2 Little Importance	3 Below Average Importance	4 Average Importance	5 Above Average Importance	6 Very Important	7 Highest Importance

	Yourself	Other Staff
Interpersonal Tasks		
1. Use appropriate humor for effective communication with staff and students	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Interact effectively with colleagues, students' parents, guardians or other stakeholders	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Provide a supportive classroom environment or office environment	1 2 3 4 5 6 7	1 2 3 4 5 6 7
4. Develop students' self-efficacy in the learning environment	1 2 3 4 5 6 7	1 2 3 4 5 6 7
5. Facilitate group learning activities	1 2 3 4 5 6 7	1 2 3 4 5 6 7
6. Present an approachable, non-judgmental demeanor	1 2 3 4 5 6 7	1 2 3 4 5 6 7
7. Practice active listening skills	1 2 3 4 5 6 7	1 2 3 4 5 6 7
8. Demonstrate sensitivity and respect for cultural and ethnic diversity	1 2 3 4 5 6 7	1 2 3 4 5 6 7
9. Exhibit intuition by anticipating others' reactions and responding appropriately	1 2 3 4 5 6 7	1 2 3 4 5 6 7
10. Enhance group dynamics through effective methods of influence	1 2 3 4 5 6 7	1 2 3 4 5 6 7
11. Demonstrate understanding and respect for others' values	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Leadership Tasks		
1. Promote a team spirit among students or staff	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Provide constructive feedback to students and others	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Employ persuasion skills to assist staff or students in reaching challenging goals	1 2 3 4 5 6 7	1 2 3 4 5 6 7
4. Encourage others to pursue opportunities for professional growth	1 2 3 4 5 6 7	1 2 3 4 5 6 7
5. Use creativity in encouraging and rewarding high-level performance	1 2 3 4 5 6 7	1 2 3 4 5 6 7
6. Inspire a high level of dedication	1 2 3 4 5 6 7	1 2 3 4 5 6 7
7. Recommend creative solutions to critical situations	1 2 3 4 5 6 7	1 2 3 4 5 6 7
8 Establish appropriate procedures for participative decision-making	1 2 3 4 5 6 7	1 2 3 4 5 6 7
9. Instill strong values and ethics in the project	1 2 3 4 5 6 7	1 2 3 4 5 6 7
10. Create a compelling, inspirating vision of the future	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Motivation Tasks		
1. Provide extrinsic learning motivators where appropriate	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Provide opportunities for intrinsic motivation to learn	1 2 3 4 5 6 7	2 3 4 5 6 7

1 No Importance	2 Little Importance	3 Below Average Importance	4 Average Importance	5 Above Average Importance	6 Very Important	7 Highest Importance

	Yourself	Other Staff
Planning Tasks		
1. Exercise initiative in planning and executing long-term projects	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Plan in-service sessions to keep staff informed of legislative actions and diversity issues relevant to your program	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Adapt plans to address unanticipated situations	1 2 3 4 5 6 7	1 2 3 4 5 6 7
4. Recognize connections and patterns and their importance for your program	1 2 3 4 5 6 7	1 2 3 4 5 6 7
5. Develop and document a comprehensive, integrated project plan	1 2 3 4 5 6 7	1 2 3 4 5 6 7
6. Define team roles for meeting project needs	1 2 3 4 5 6 7	1 2 3 4 5 6 7
7. Foster effective team communication structure	1 2 3 4 5 6 7	1 2 3 4 5 6 7
8. Provide timely information relative to program dates and legislative changes	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Professional Development Tasks		
1. Present professional development sessions as state, regional, or national conferences	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Identify personal needs for professional development and resources to meet them	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Provide initial in-service training for new employees	1 2 3 4 5 6 7	1 2 3 4 5 6 7
4. Identify on-going professional development opportunities for other staff	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Public Relations Tasks		
1. Develop public relations strategies and materials (banners, brochures, newsletters, flyers, videos, or public service announcements	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Participate in public relations efforts	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Plan and conduct project partnership activities	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Recruitment Tasks		
1. Recruit students	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Prepare recruitment materials	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Evaluate students' eligibility for program services	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Teaching Tasks		
1. Tutor students in basic academic skills	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Teach study skills	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Use a variety of teaching strategies to accommodate learning styles	1 2 3 4 5 6 7	1 2 3 4 5 6 7
4. Prepare students for college entrance exams	1 2 3 4 5 6 7	1 2 3 4 5 6 7

1 No Importance	2 Little Importance	3 Below Average Importance	4 Average Importance	5 Above Average Importance	6 Very Important	7 Highest Importance

	Yourself	Other Staff
5. Identify students with learning disabilities	1 2 3 4 5 6 7	1 2 3 4 5 6 7
6. Apply knowledge of pedagogy or andragogy	1 2 3 4 5 6 7	1 2 3 4 5 6 7
7. Apply proactive classroom management strategies	1 2 3 4 5 6 7	1 2 3 4 5 6 7
8. Apply sound, reasonable and legally accepted disciplinary practices	1 2 3 4 5 6 7	1 2 3 4 5 6 7
9. Develop instructional materials	1 2 3 4 5 6 7	1 2 3 4 5 6 7
10. Develop students' abilities to analyze, synthesize and evaluate	1 2 3 4 5 6 7	1 2 3 4 5 6 7
11. Develop students' abilities to critique their own work	1 2 3 4 5 6 7	1 2 3 4 5 6 7
12. Provide integration of prior learning to achieve instructional continuity	1 2 3 4 5 6 7	1 2 3 4 5 6 7
13. Provide activities for the cognitive, affective and kinesthetic domains	1 2 3 4 5 6 7	1 2 3 4 5 6 7
14. Devise and use elements of instructional design (introduction, development, practice, review and summation	1 2 3 4 5 6 7	1 2 3 4 5 6 7
15. Practice mastery teaching of basic skills	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Technology Tasks		
1. Teach basic computer skills to students	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2. Develop and maintain a student database	1 2 3 4 5 6 7	1 2 3 4 5 6 7
3. Prepare word documents	1 2 3 4 5 6 7	1 2 3 4 5 6 7
4. Develop presentation materials using appropriate software	1 2 3 4 5 6 7	1 2 3 4 5 6 7
5. Teach students to conduct research using the Internet	1 2 3 4 5 6 7	1 2 3 4 5 6 7

Please add any comments or recommendations you wish to make.

APPENDIX G

Tukey's Honestly Significant Differences by Region

Dependent Variable	Region	Region	Mean Difference	Standard Error	Significance
Administration 3 I make purchasing recommendations or decisions.	Southeast	Midwest	.60*	.207	.034
		West	.77*	.222	.006
Admissions 4 I serve as a liaison on behalf of students.	Southeast	Northeast & Mid-Atlantic	1.21*	.327	.003
Advising 1 I perform career advising.	Southeast	Northeast & Mid-Atlantic	.93*	.323	.035
		Midwest	.91*	.326	.046
		West	1.02*	.349	.032
Advising 3 I refer students for special services.	Southeast	Northeast & Mid-Atlantic	.94*	.306	.020
		West	.93*	.331	.043
Advising 4 I help students set personal goals that focus on strengths.	Southeast	Northeast & Mid-Atlantic	1.14*	.293	.001
Advising 5 I teach problem solving.	Southeast	Northeast & Mid-Atlantic	.99*	.296	.008
Advising 6 I develop an Individual Education Plan with each student.	Southeast	West	1.16*	.381	.021
Advising 7 I teach conflict management	Southeast	Northeast & Mid-Atlantic	1.13*	.299	.002
		Midwest	.91*	.302	.025
		West	1.10*	.323	.007
Advising 8 I provide guidance on healthful lifestyle choices.	Southeast	Northeast & Mid-Atlantic	1.32*	.318	<.001
		West	1.08*	.344	.016

Dependent Variable	Region	Region	Mean Difference	Standard Error	Significance
Advising 10 I administer and interpret tests.	Southeast	Northeast & Mid-Atlantic	1.12*	.337	.010
		West	1.27*	.364	.006
Curricula 3 I develop curricula for academic enrichment.	Southeast	Midwest	1.49*	.412	.042
	Southwest	Midwest	1.16*	.462	.013
Extra-Curricula 1 I plan and arrange field trips.	Southeast	Midwest	.94*	.309	.023
Financial Aid 1 I provide financial aid information	Southeast	Northeast & Mid-Atlantic	1.97*	.538	.003
		Midwest	2.27*	.542	<.001
Financial Aid 2 I assist students with financial aid applications	Southeast	Northeast & Mid-Atlantic	1.15*	.341	.008
		West	1.15*	.369	.018
Follow-Up and Evaluation 4 I design and implement an effective follow-up system.	Southeast	Midwest	.90*	.196	<.001
Information 1 I understand ethical issues related to services	Northeast & Mid-Atlantic	West	.59*	.187	.017
	Southeast	West	.76	.195	.001
	Southwest	West	.79*	.216	.003
Interpersonal 2 I interact effectively with others.	Southeast	Midwest	.40*	.136	.031
Interpersonal 4 I develop students' self-efficacy.	Southeast	Midwest	.40*	.261	.017
Leadership 2 I provide constructive feedback.	Southeast	Midwest	.59*	.185	.014

Dependent Variable	Region	Region	Mean Difference	Standard Error	Significance
Motivation 1 I provide extrinsic learning motivators.	Southeast	Midwest	.77*	.238	.005
		West	.88*	.254	.006
Motivation 2 I provide opportunity for intrinsic motivators.	Southeast	Midwest	.77*	.226	.007
		West	.75*	.242	.019
Planning 1 I exercise initiative in planning and executive long-term projects.	Northeast & Mid-Atlantic	Midwest	.46*	.162	.041
	Southeast	Midwest	.53	.169	.017
Planning 2 I plan inservice sessions on legislative actions and diversity issues.	Southeast	Northeast & Mid-Atlantic	.65*	.233	.043
		Midwest	1.05*	.235	<.001
	Southwest	Midwest	.80*	.204	.024
Planning 4 I recognize connections & patterns & their importance.	Southeast	Midwest	.72*	.211	.007
Planning 7 I foster effective team communication.	Southeast	Midwest	.49*	.153	.014
Planning 8 I give information on program dates & legislative changes.	Southeast	Midwest	.71*	.171	.001
	Southwest	Midwest	.70*	.192	.003
Professional Development 1 I present sessions at conferences.	Southeast	Midwest	1.27*	.326	.001
	Southwest	Midwest	1.18*	.365	.013
Public Relations 2 I participate in public relations	Southeast	Midwest	.69*	.225	.021

Dependent Variable	Region	Region	Mean Difference	Standard Error	Significance
Public Relations 3 I plan & conduct partnership activities.	Southeast	Midwest	.95*	.266	.004
Teaching 2 I teach study skills.	Southeast	West	1.36*	.437	.018
Teaching 3 I use variety of teaching strategies.	Southeast	West	1.27*	.451	.043
Teaching 4 I prepare students for college entrance exams.	Southeast	Northeast & Mid-Atlantic	1.35*	.457	.028
		West	1.46*	.494	.028
Teaching 5 I identify students with learning disabilities.	Southeast	Northeast & Mid-Atlantic	1.32*	.389	.007
Teaching 7 I apply proactive classroom management strategies.	Southeast	Northeast & Mid-Atlantic	1.46*	.396	.003
		Midwest	1.39*	.400	.006
		West	1.53*	.429	.004
Teaching 8 I use sound disciplinary practices.	Southeast	Midwest	1.39*	.402	.006
Teaching 9 I develop instructional materials.	Southeast	Midwest	1.35*	.392	.002
		West	1.18*	.420	.043
Teaching 10 I develop students' abilities to analyze, synthesize, & evaluate.	Southeast	Northeast & Mid-Atlantic	1.24*	.379	.011
Teaching 12 I provide integration of learning.	Southeast	Northeast & Mid-Atlantic	1.12*	.390	.038

Dependent Variable	Region	Region	Mean Difference	Standard Error	Significance
Teaching 13 I provide activities for cognitive, affective, abd kinesthetic domains.	Southeast	Northeast & Mid-Atlantic	1.44*	.390	.003
		Midwest	1.31*	.394	.009
		West	1.23*	.421	.031
Teaching 14 I devise and use elements of instructional design.	Southeast	Northeast & Mid-Atlantic	1.20*	.390	.021
Teaching 15 I practice mastery teaching of basic skills.	Southeast	Northeast & Mid-Atlantic	1.35*	.406	.009
Technology 4 I prepare word documents	Southwest	Midwest	1.01*	.339	.026
Technology 5 I develop presentation materials using appropriate software	Southeast	Northeast & Mid-Atlantic	1.49*	.374	.001
	Southwest	Northeast & Mid-Atlantic	1.28*	.420	.022

$p \leq .05$

VITA

Dora Heacker Marmon earned a Bachelor of Science degree in elementary education at The University of Tennessee in 1980 and a Master of Science degree in elementary school administration at the University of Iowa in 1987. She has seven years' experience as an elementary school teacher and six years' experience as a school principal in parochial elementary schools in Iowa and Illinois. Her teaching interests include language arts, drama, and music. Currently she is serving as an education specialist in a Veterans Upward Bound program at The University of Tennessee, where she is an advisor and an English instructor. Ms. Marmon is a past president of Nu Chapter, Kappa Delta Pi, an international honorary society. She is co-author of publications in the area of education, including TRIO programs.

8773 5979 23
03/05/03 MAB