To the Graduate Council:

I am submitting herewith a thesis written by Michael Patrick Hamilton entitled "The Development of an Instrument to Measure Practitioner Knowledge of Service-Learning." I have examined the final paper copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural and Extension Education.

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THE DEVELOPMENT OF AN INSTRUMENT TO MEASURE PRACTITIONER KNOWLEDGE OF SERVICE-LEARNING

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Michael Patrick Hamilton
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DEDICATION

This thesis is dedicated to my parents, Michael Clyde and Julia Kaye, to my brother Jason Brian, and to my grandmother, Velma B. Woodard, for always believing in me, inspiring me, and encouraging me to reach higher in order to achieve my goals.

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Most of all I would like to thank God, through Whom all things are possible.

ABSTRACT

The purpose of this study was to develop an instrument that would measure practitioner knowledge of service-learning and to make recommendations based on information gathered in order to guide the statewide service-learning initiatives of Tennessee 4-H Youth Development and the Tennessee Department of Education.

This study utilized a purposefully drawn sample. The sample consisted of University of Tennessee Agricultural Extension Service staff who had a 4-H appointment in their job description. The sample also consisted of participants in the Skills for Action service-learning training offered by the Tennessee Commission on National and Community Service and the Tennessee Department of Education. These two groups were utilized to give the instrument credibility with both school-based and community-based practitioners of service-learning.

The instrument was developed based upon the Points of Light Foundation model of service-learning. The instrument contained three sections. Section one gathered information related to the respondents' experience with service-learning. Section two measured knowledge of community needs, learning objectives, youth voice and planning, orientation and training, meaningful action, reflection, evaluation, and celebration and recognition. Section three gathered demographic information. After development of the instrument, a panel of experts examined it in order to establish a high level of content validity.

The survey was conducted by a direct mailing. The survey was mailed to the sample with a cover letter outlining the need for the survey and that the survey was confidential. A self-addressed stamped envelope was included for return of the survey.

The data were analyzed using the SPSS version 12.0 for Windows. Descriptive statistics including frequencies, percentages, means, modes, standard deviations, range, percents, and frequencies were utilized. Chi Squares, T-Tests, correlation coefficients, and coefficients of stability were used to analyze the relationships in the study. The .05 probability level was set *a priori* and was used to determine whether relationships were statistically significant.

The following conclusions were based on the findings of this study:

1. Internal consistency of the survey instrument was well above the .66 level set *a priori* in the pilot and sample studies.
2. Internal consistency coefficients dropped dramatically in the test-retest study; with only five of the eight subscales measuring above the .66 level set *a priori.*
3. Stability of the survey instrument was low.
4. Tennessee Extension 4-H professionals self-report a slightly higher average number of days of service-learning training than do Tennessee K-12 educators.
5. Construct validity of the survey instrument was low.
6. Tennessee K-12 educators scored statistically significantly higher in all subscales of the instrument than did Tennessee Extension 4-H professionals.
7. Non-community-based advisors scored statistically significantly higher in all subscales of the instrument than did community-based advisors.
8. School-based advisors scored statistically significantly higher in the planning and implementation subscale than did non-school-based advisors.

9. Those who did not volunteer with 4-H Youth Development programs scored significantly higher with regards to the celebration and recognition subscale than did those who volunteer with 4-H Youth Development programs.

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CHAPTER I

INTRODUCTION

Overview

Service-learning is a form of experiential learning where students apply knowledge, skills, critical thinking and wise judgment to solve genuine community needs (Toole, 1994). The practice of service-learning is often closely tied to formal or academic learning environments in school-based and community-based settings. Students in these service-learning programs engage the community in identifying needs, establish learning objectives, empower youth throughout the process, learn about the organization and skills required for serving, conduct the service project, reflect on their experiences, evaluate the process, and celebrate their successes. Service-learning programs have grown favorably over the past ten years. The growth of service-learning has involved more than six million students at the secondary level (Billig & Waterman, 2003).

Need for the Study

Given the prevalence of service-learning, it is surprising to see so little research in the field. The vast majority of published service-learning literature includes program evaluations or anecdotal descriptions, not research (Billig & Waterman, 2003). Clearly more rigorous and replicable research is needed in the field of service-learning. The purpose of this study was to develop an instrument that could be used by other practitioners and evaluators to measure practitioner knowledge of service-learning.

Through an exhaustive review of the literature, the researcher found no other instrument that measures the knowledge of practitioners with regard to service-learning. The closest instrument is Shumer's self-assessment. While Shumer's instrument can be used in the improvement of service-learning practice, it is not a practical instrument to measure practitioners' knowledge of service-learning on a large scale or to assist in making of large scale programmatic decisions (Billig & Waterman, 2003).

The development of a valid and reliable instrument that measures knowledge of service-learning will be of great benefit to those in the field of service-learning. Such an instrument would allow practitioners in programs, such as the Tennessee 4-H Youth Development program and the Tennessee Department of Education, to measure the current service-learning knowledge level of staff in order to make programmatic decisions based upon the findings. Program planners would be able to determine future training needs and develop resources based upon the results of such an evaluation. These same program planners would also be able to determine the effectiveness of service-learning trainings through a pre- and post-test use of such an instrument. Clearly such an instrument could be of great benefit to program planners.

Purpose of the Study

The purpose of this study was to develop an instrument that would measure practitioner knowledge of service-learning and to make recommendations based on information gathered in order to guide the statewide service-learning initiatives of Tennessee 4-H Youth Development and the Tennessee Department of Education. This study utilized a purposefully drawn sample. The sample consisted of University of

Tennessee Agricultural Extension Service staff who had a 4-H appointment in their job description. The sample also consisted of participants in the Skills for Action service-learning training offered by the Tennessee Commission on National and Community Service and the Tennessee Department of Education. These two groups were utilized to give the instrument credibility with both school-based and community-based practitioners of service-learning.

Objectives

The objectives of this study were to:

1. develop a reliable and valid instrument to measure knowledge of service-learning;
2. examine the relationship between number of days of service-learning training and score on the measurement instrument;
3. examine the relationship between number of service-learning projects directed or participated in and participant score on the measurement instrument;
4. examine the relationship between selected other demographics and score on the measurement instrument; and
5. make recommendations for future statewide program direction for the Tennessee 4-H program in the area of service-learning.

Definition of Terms

Following is a list of terms used in this study as defined by the Points of Light Foundation (1997).

1. **service-learning** - a form of experiential learning where students apply knowledge, skills, critical thinking and wise judgment to solve genuine community needs.
2. **community needs** - issues that are identified in conjunction with members of the community and seen as genuine needs in the community
3. **learning objectives** - a series of items that the facilitator wishes the participants to understand and/or be able to do after the completion of the project.
4. **orientation** - the process of providing information about the workings of an agency and/or volunteer assignment.
5. **training** - more in-depth orientation that requires the development of skills.
6. **action** - the outcome that occurs when young people and adults work together to set goals, plan and address some of the inherent barriers young people face in community service-learning.
7. **reflection** - the conscious act of re-examining a service-learning project.
8. **evaluation** - a form of reflection at the end of the program level that allows one to analyze his/her service efforts, document the results of those efforts, and engage in continuous improvement.
9. **celebration and recognition** – the act of recognizing volunteers' efforts at the conclusion of a service-learning project.

CHAPTER II

RATIONALE FOR THE STUDY THROUGH A REVIEW OF THE LITERATURE

Introduction

Service-learning is a field of study that is in its infancy. However, the methodology of service-learning has theoretical roots dating back to the work of several educational theorists, including John Dewey. The purpose of this chapter is to provide a rationale for this study through an exhaustive review of the literature. This review of the literature will include a brief history of service-learning, issues related to defining the term, theoretical roots of service-learning, the prevalence of service-learning, and a review of research regarding student outcomes of service-learning programs. Several models of service-learning will be introduced as well as an examination of a self-assessment instrument.

History of Service-Learning

John Dewey stated that for education "to accomplish its ends both for the individual and for the society it must be based upon experience – which is always the actual life-experience of some individual" (1938, p. 89). To date, many researchers refer back to the work of Dewey in order to defend and lobby for experiential education. Although the term "service-learning" only emerged in the literature in the 1960's, the concept of service-learning has been in existence for many years.

The United States has a record of citizens organizing efforts to serve public welfare. Although not specifically titled "service-learning," the passage of the Morrill and Homestead Acts in 1862 had a large impact upon the development of service-learning. The focus of these pieces of legislation was on rural development and education. The Morrill Act also charged the land-grant institutions with their three-fold mission of service, education, and research (Stanton, Giles, & Cruz, 1999). Undoubtedly, authors of this legislation realized the importance of education that related to real-life experiences and service to the community.

In 1964, the term "service-learning" originated in Oak Ridge, TN. Oak Ridge Associated Universities developed "service-learning as a strategy for change in Southern higher education" (Kendall & Associates, 1990, p. 594). The Oak Ridge Associated Universities defined this service-learning perspective as the "combination of the performance of a useful service for society and the disciplined interpretation of that experience for an increase in knowledge and in understanding oneself" (Kendall, 1990, p. 595).

In his renowned nineteenth century study of American culture, de Tocqueville distinguished Americans' habit of forming voluntary associations to progress their own and the community's interests. de Tocqueville (1961) urged that such associations were vital to the vigor of the American society, observing that their actions served to form the participants' identification of the coincidence of personal and public interest, which he called the principle of interest rightly understood.

Many of the voluntary associations performed what practitioners today might identify as community service. The twentieth century saw an influx of efforts to draw

large numbers of youth into public service. An early example of this includes the California Conservation Corps, a 1930's New Deal initiative, designed to advance both the quality of the environment and the quality of the three million men who worked toward the improvements (Janowitz, 1983). In later decades, the Peace Corps and Volunteers in Service to America (VISTA) programs likewise sought to help volunteers who were eager to work for the benefit of others in communities across the country and around the world. Religious institutions and innumerable other youth serving and community organizations, such as 4-H, also sponsored and directed activities that were rewarding to the youth performing them and beneficial to the larger community (Furco & Billig, 2002).

In 1989, the Charlottesville Summit of the President and the Governors led to a set of national education goals, including a goal related to student success and citizenship. The goal stated, "all students will be involved in activities that promote and demonstrate good citizenship, community service, and personal responsibility" (U.S. Department of Education, 1990, p. 1).

Other federal support for national service initiatives has been reflected in policy and has had a large impact on the development of service-learning, including the *National and Community Service Act of 1990*, the *National and Community Service Trust Act of 1993*, and the *Learn and Serve America* program (Furco & Billig, 2002). In the past few years, the financial support for and number of publications related to service-learning has continued to flourish (Eyler & Giles, 1999).

Defining Service-Learning

While there has been research conducted on service-learning, there is still a wealth of misinterpretation about it (Billig & Waterman, 2003). The issue of definition is complex, and widespread acceptance of and the philosophical basis about service-learning has weighed down the field for several years. Even though most service-learning researchers and practitioners would concur that service-learning equally involves service to the community and learning that is tied to educational programming, the definitions of each of these components vary. Most would agree that the process of service-learning involves planning, action, reflection, and celebration; however, the emphasis placed on each of these mechanisms varies. The context in which service-learning occurs also varies. Some may argue that service-learning involves health, the elderly, youth, neighborhood agencies, or other recipients of service. The group(s) providing the service, the individuals facilitating intellectual capacity and/or skills application, and the frequency and duration of the service-learning activities also differ (Billig & Waterman, 2003).

There is general agreement that service-learning is a type of experiential education, with community service as the focus. There is also agreement that what distinguishes service-learning from other experiential education efforts, such as internships, is its focus on community efforts. These efforts are thought to make a difference for individuals in the community and for students' dedication to the welfare of civilization (Billig & Waterman, 2003).

Although there have been many attempts to define service-learning in a set of specific terms, there is not a universally accepted definition. There have been over 200

varying definitions of service-learning over the last ten years alone. These definitions cast service-learning as an experience, a program, a pedagogy, and a philosophy (Billig & Waterman, 2003). In its earliest manifestation, service-learning was described as a community-based internship experience in which students explored careers in nonprofit agencies (Hamilton, 1989). Conrad and Hedin (1989), described service-learning as a community service program that includes a reflection component that is formalized. More recent descriptions have focused on defining service-learning as a pedagogy. Jacoby and Associates (1996) wrote, "As a pedagogy, service-learning is education that is grounded in experience as a basis for learning and on the centrality and intentionality of reflection designed to enable learning to occur" (p.9). Other authors, including Bringle & Hatcher (1996), described service-learning as a teaching methodology that uses community service to educate students about the educational curriculum. Toole & Toole (1994) defined service-learning as a form of experiential learning where students apply knowledge, skills, critical thinking and wise judgment to address genuine community needs.

Theoretical Roots of Service-Learning

Service-learning, a relatively new social and educational phenomenon, suffers from the lack of a well articulated conceptual framework. The literature criticizes service-learning as fluff, and lacking research in the field. This criticism can be countered by exploring the theoretical roots of service-learning as a basis for developing and refining a research agenda. These theoretical roots include an experiential education model, theory of reflective thought and action, and transformative learning theory. Giles

& Eyler (1994) argue, "if we are to know about the social phenomenon of service-learning, we need a systematic way of generating and organizing our knowledge" (p. 78). The relationship between theory and research and the need for theoretically derived research hypotheses is crucial. Robert Merton (1994) wrote, "By providing a rationale, the theory introduces a *ground for prediction* which is more secure than mere empirical extrapolation from previously observed trends" (p. 94).

As a form of experiential education, service-learning is entrenched in well-established educational and cognitive theories of constructivism, pragmatism, progressivism, and experiential education. These theoretical foundations envelop a wide range of cognitive and affective outcomes for students. The educational domains of experiential learning programs include students' "intellectual, social, personal, civic, moral, and vocational development" (as cited in Furco & Billig, 2002, p. 27).

Experiential Education

There is no evidence that the idea of service-learning was a component of Dewey's philosophy of education (Giles & Eyler, 1994). John Dewey (1938) stated that "all genuine education comes about through experience" (p. 13). Dewey was, however, careful to emphasize that not all experiences lead to the growth of wide and profound experiences (Merriam & Caffarella, 1999). For learning to happen through experience, Dewey believed that the experience should possess the two main elements of continuity and interaction: "The principle of the continuity of experience means that every experience both takes something from those which have gone before and modifies in some way the quality of those which come after" (Dewey, 1938, p. 27). Learners must be

able to make the connection between what they have learned from current experiences and be able to see the implications for future utilization (Merriam & Caffarella, 1999). The second principle posited by Dewey is that "an experience is always what it is because of a transaction taking place between an individual and what, at the time, constitutes his environment" (Dewey, 1938, p. 41). Dewey's ideas, when translated in the practice of education, express how relevant the situation becomes in promoting the learning. "Developing a welcoming and comfortable atmosphere, providing the right materials, and linking these materials to learners' past and future learning experiences" is crucial in supporting the learners and enabling them to learn from their experiences (Merriam & Caffarella, 1999, p. 224).

Dewey set forth four criteria that must be present in order for experiences to be truly educative. These four criteria, argued Dewey, should be used in the form of projects as a means of producing learning from experience:

1. must generate interest;
2. must be worthwhile intrinsically;
3. must present problems that awaken a new curiosity and create a demand for information; and
4. must cover a considerable time span and be capable of fostering development over time (Dewey, 1933, p. 217).

Giles & Eyler (1994) argue "application of these criteria involves linking the principles of continuity and interaction, the process of problematization and inquiry, and the phases of reflective thought. These criteria are probably the clearest examples of how to apply Dewey's theory to service-learning" (p. 80).

Reflective Thought and Action

According to Kolb (1984), "learning is the process whereby knowledge is created through the transformation of experience" (p. 38). In his model of reflective thought and action, a student has a concrete experience through the transformation of experience, reflects, begins to form abstract conceptualizations about the experience, and then actively experiments to incorporate the new concepts. Merriam and Caffarella (1999) summarized these as:

> (1) an openness and willingness to involve oneself in new experiences (concrete experience); (2) observational and reflective skills so these new experiences can be viewed from a variety of perspectives (reflective observation); (3) analytical abilities so integrative ideas and concepts can be created from their observations (abstract conceptualization); and (4) decision-making and problem-solving skills so these new ideas and concepts can be used in actual practice (active experimentation) (p. 224).

Kolb saw these abilities in a cycle (see Figure 1), beginning with concrete experience and moving through reflective observation and abstract conceptualization, and ending with active experimentation. The final action taken begins a whole new cycle as concrete experience. "Thus, in the process of learning, one moves in varying degrees from actor to observer, and from specific involvement to general analytical detachment" (Kolb, 1984, p. 31).

Transformative Learning Theory

Mezirow drew upon the work of John Dewey who, in the first half of the century, identified reflective thinking as a goal of education. Mezirow gave even more credit to

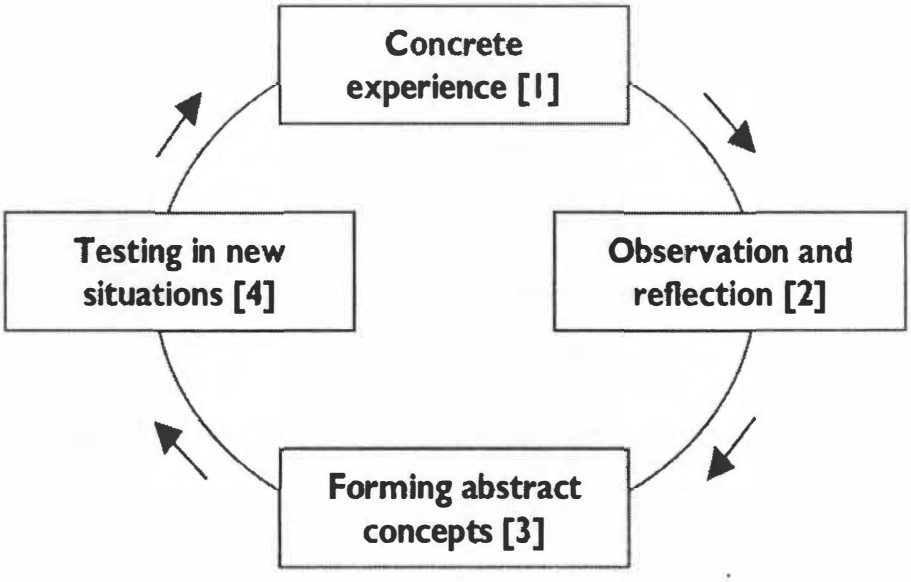

Figure 1: Kolb's Model of Reflective Thought and Action

Jurgen Habermas, whose theory of communicative action "provides the social theoretical context for transformation theory of learning and his writings are very helpful in understanding transformation theory" (Martin, 1997, p. 5).

Mezirow (1978) initially described a process of *perspective transformation* that included ten phases, based on a study of eighty-three women returning to college in twelve unique re-entry programs. The results of Mezirow's (1978) research led to the "outline of a theory of adult development and a derivative concept of adult education…" (p. 153). Transformative learning theory is based on constructivist assumptions. Mezirow (1978) described the constructivist assumptions that underlie his theory as including "a conviction that meaning exists within ourselves rather than in external forms such as books and that personal meanings that we attribute to our experience are acquired

and validated through human interaction and communication" (1991, p. xiv). Adults bring meaning to our experiences and the things we stumble upon in our own way; what we make of the world is a creation of our perceptions of our experiences. Transformative learning, then, is "a process of examining, questioning, validating and revising these perceptions. If we were to claim the existence of absolute truths or universal constructs that are independent of our knowledge of them, the goal of learning would be to discover right answers rather than to reflect on our perspectives of the world" (Cranton, 1994, p. 26).

Mezirow defines perspective transformation as:

> the process of becoming critically aware of how and why our assumptions have come to constrain the way we perceive, understand and feel about our world; changing these structures of habitual expectation to make possible a more inclusive, discriminating and integrating perspective; and finally, making choices or otherwise acting upon these new understandings" (Imel, 1998, p. 1).

With this definition given, Mezirow describes adults as having *meaning perspectives,* or "sets of habitual expectation" (1991, p. 4). Adults are expected to see things in a certain light due to their life experiences. Adults draw from a frame of reference that is used for interpreting what happens to us, through reading, through visual recognition and through verbal communication. "This frame of reference comes from the way we grew up, the culture in which we live and what we have previously learned" (Cranton, 1994, p. 26).

Learning is a process "of constructing and appropriating a new or revised interpretation of the meaning of an experience as a guide to awareness, feeling and action" (Mezirow, 1991, p. 35); however, Mezirow did not believe that all learning is transformative. "Significant transformational learning involves three phases: critical

reflection on one's own assumptions, discourse to validate the critically reflective insight and action" (Mezirow, 1997; Merriam & Caffarella, 1999, p. 321). "Mezirow states that this process is most often set into motion by a *disorienting dilemma*, that is, a particular life event or life experience such as death of a loved one, a job change, or an illness that a person experiences as a crisis" (Merriam & Caffarella, 1999, p. 321).

Prevalence of Service-Learning

Although there has been little research conducted in the arena of service-learning, the methodology has a strong presence in the field of education. Data from the National Center for Education Statistics indicate, "service-learning has been estimated as being performed in nearly one-third of all public K-12 schools and one-half of all high schools" (as cited in Billig & Waterman, 2003, p. viii). In 1998, Genzer estimated that service-learning is being conducted in 88% of all private schools. Furthermore, Genzer (1998) and Skinner and Chapman (1999) stated, 68% of all public schools and 88% of all private schools in the U.S. reported participation by at least some of their students in community service or service-learning. The statistics demonstrate that service-learning truly has become prevalent among K-12 school settings.

Eyler and Giles (1999) argue that higher education is equally demonstrating support for service-learning as a methodology. Stanton, Giles, and Cruz urge that service-learning, as pedagogy, is being advocated by "students, faculty, presidents of colleges and universities, and even by Congress and the President of the United States" (1999, p. 5).

Service-Learning and Tennessee 4-H Youth Development

Since October of 2000, the Tennessee 4-H Youth Development program has been heavily involved in service-learning. At that time, the 4-H Seeds of Service (S.O.S.) program was created through a grant from the Tennessee Commission on National and Community Service in partnership with Learn & Serve America, a branch of the Corporation for National and Community Service. Through the work of the S.O.S. program, over 5,000 service-learning projects have been conducted. These projects have involved over 180,000 4-H'ers and over 14,000 adults. Over 580,000 hours of service-learning activities have benefited more than 900,000 people. The S.O.S. program has also utilized a significant amount of grant funds to train 4-H Extension personnel across the state (Mantooth & Hamilton, 2004).

The Impact of Service-Learning on Students

There is a plethora of testimonial information articulating the worth of service-learning programs. Billig and Waterman (2003) urged that these findings have been endorsed by "students participating in service projects, by teachers conducting the programs, by administrators overseeing the programs, and by community representatives and those who have benefited from the student's efforts" (p. 73). There are also many quantitative studies that document the benefits of service experiences across a wide variety of domains, including "academic performance, problem solving, skill development, citizenship, self-esteem, social attitudes, and personality functioning" (Billig & Waterman, 2003, p. 74).

Studies on service-learning and/or community service indicate that involvement in service activities contributes to youth having many positive attitudes and behaviors. However, the effects are diffident at best, and many of the research designs have not been very thorough. In 1996, Moore and Allen "concluded that there was little or no evidence of the impact of service-learning on social competence, career exploration, problem-solving abilities, attitudes toward school, or belief in the individual's responsibility to help those in need" (Scales & Leffert, 1999, p. 66). In 1997, Scales and Blyth found a much different conclusion, arguing that adolescents' feeling of personal and social responsibility is commonly observed in studies of service-learning (Scales & Leffert, 1999). A study of over 1,000 6th-8th graders found that service-learning students' "concern for others' welfare was maintained over the school year, while control students' concern for others decreased, such that service-learning students had significantly higher concern for the welfare of others by the end of the school year, compared to controls" (Scales & Leffert, 1999, p. 66).

Scales and Leffert (1999) urge that community service, volunteering, and service-learning have been associated, either directly or indirectly, with:

> Decreased school failure, suspension, dropout; increased reading grades,; increased performance; increased grades,increased school attendance; increased commitment to class work; increased working for good grades; decreased behavior problems at school; reduced teenage pregnancy; high levels of parents talking with young adolescents about school; increased sense of developmental opportunities at school; increased self-concept, self esteem, self-efficacy; decreased alienation; increased sense of competence, efficacy; reduced violent delinquency; less depression for males; increased prosocial reasoning, moral reasoning; increased self-disclosure; more positive attitudes toward adults; better development of mature relationships; increased social competence outside of school; increased empathy; increased problem-solving skills; increased community involvement as adult; increased political participation and interest;

> increased positive attitudes toward community involvement, positive civic attitudes, belief that one can make a difference in community, leadership positions in community organizations; increased personal and social responsibility; increased perceived duty to help others; increased efficacy in helping others; increased altruism; increased concern for others' welfare; increased awareness of social problems (p. 56).

Additionally, there is a wealth of data that endorses the value of service-learning programs. These endorsements have been provided by students who participate in the service-learning projects, by educators conducting the programs, by administrators who oversee service-learning programs, and by members of the community who benefit from the service-learning methodology. Based on the research service-learning has a strong impact on student understanding, and has far reaching outcomes as varying as the students who participate in the programs.

Models of Service-Learning

Although there is some agreement as to the basic components of service-learning, there are numerous research based models that are present in the literature. It is not the scope of this section to provide an exhaustive review of the literature in this area. Rather, this section attempts to showcase a few of the more prevalent models as found in the literature.

National Dropout Prevention Center Model

The National Dropout Prevention Center defines service-learning in accordance with the National and Community Service Act of 1990. For their model, service-learning combines community service with learning activities. It allows:

> students [to] learn and develop through active participation in thoughtfully organized service experiences that meet actual community needs and that are coordinated in collaboration with the school and community. [Service-learning] is integrated into the student's academic curriculum or provides structured time for a student to think, talk, or write about what the student did and saw during the actual service activity. [It] provides students with opportunities to use newly acquired skills and knowledge in real-life situations in their own communities. [It also] enhances what is taught in school by extending student learning beyond the classroom and into the community and helps to foster the development of a sense of caring for others (National and Community Service Act of 1990).

The National Dropout Prevention center stresses two points in this definition. First, those students must be engaged in significantly, well-planned and genuine service. Second, they must reflect on their experiences of serving others to ensure a complete learning experience. These requirements are vital in this model to producing a successful service-learning program (Duckenfield & Swanson, 1992).

Three essential elements of service-learning are emphasized in the National Dropout Prevention Center model at all levels of service-learning implementation. "The curriculum content of a service learning program must consist of preparation for service, the service activity itself, and reflection on the service experience" (Duckenfield & Swanson, 1992, p. 13). Before the service experience, students participating in the project must comprehend what is expected of them as well as what they can expect from the service-learning project (Duckenfield & Swanson, 1992). Preparation consists of the learning actions that take place before a student's volunteer experience. Positive outcomes of service-learning are not automatic. Students also need assistance and support before they are sent out into the population to serve.

Action is the genuine service of helping others that is performed by the student participating in the service-learning activity. The service itself must be appealing,

demanding, and significant. There must be a genuine need in the community for the service, and the students must perform a noteworthy role in design of the service-learning experience (Duckenfield & Swanson, 1992).

Reflection is the element that enables students to critically ponder their service-learning experiences. When students reflect on their experiences they think about them, write about them, share them with others, and learn from them. Reflection provides a structured occasion for students to discover from their experiences. It is a skill involving examination and inquiring and followed by placing new ideas together to add new significance to the service-learning experience (Duckenfield & Swanson, 1992).

National 4-H Council

Since the beginning of the 4-H program in 1902, community service has been an integral component of the national youth development organization. The 4-H program also emphasizes the idea of experiential learning, or learning by doing. When these two activities are tied together, youth have the opportunity to learn through hands-on activities while assisting their communities (Smith, 1997). The 4-H program defines community service-learning as "a form of experiential learning in which youth apply the subject matter they are learning along with critical thinking skills to address genuine community needs" (Smith, 1997, p. 3).

The experiential learning cycle that is generally used in 4-H programming consists of five steps (Smith, 1997, p. 4):

1. EXPERIENCE the activity: perform, do it.
2. SHARE the results, reactions, observations publicly.

3. PROCESS by discussing, looking at the experience; analyze, reflect.
4. GENERALIZE to connect the experience to real-world examples.
5. APPLY what was learned to a similar or different situation; practice.

The service-learning cycle that is utilized by 4-H includes all of the steps of the experiential learning cycle. In the service-learning cycle, however, there are three experience steps. The service-learning cycle, as shown in Figure 2, includes Needs Assessment, Plan and Prepare, Experience Meaningful Service, Analyze and Generalize, and New Application.

It is important to recognize that in the above model of service-learning, reflection occurs throughout the process. As participants enter into the fifth and final stage of the service-learning cycle they are able to begin another service-learning project that is more challenging. The learning that has occurred in the first cycle of service-learning enables the youth to participate in service-learning projects that involve an increased knowledge of skills or reflective thought, and then produce even more learning (Smith, 1997).

Points of Light Foundation

Through its Communities as Places of Learning Initiative, the Points of Light Foundation sought to bridge the gap between classroom and community learning by working with communities to create service-learning opportunities for their youth. Research indicates that the benefits of actively involving young people in the community and connecting these experiences with the classroom relates positively to their social, personal and intellectual development (Points of Light Foundation, 1997).

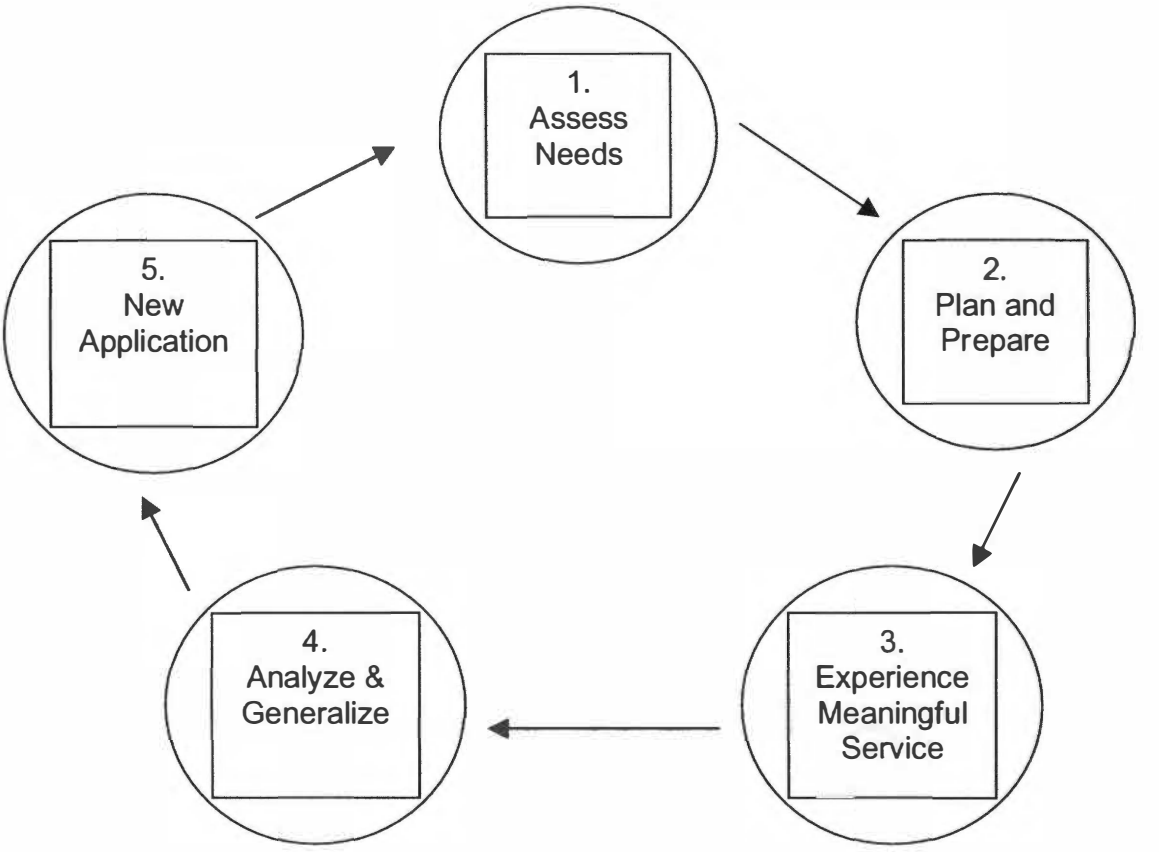

Figure 2: Service-Learning Cycle

In an effort to assist communities to develop these opportunities, the Points of Light Foundation, with major support from the William and Flora Hewlett Foundation and the Luke B. Hancock Foundation, developed models of "places of learning" in four California communities: San Diego, San Francisco, Santa Cruz and Santa Rosa. In each community, volunteer centers assisted schools and agencies to develop opportunities where young people could serve and learn. In addition, the Foundation sought to demonstrate the potential contribution of youth service to educational improvement efforts in these four California communities (Points of Light Foundation, 1997).

The Foundation also worked with the National Youth Leadership Council, a national advisory committee of volunteer and nonprofit organizations, and the four California sites to develop tools to assist agencies and schools to create service opportunities for youth. The developments of these resource and training materials helped agencies create service-learning opportunities for youth that enhanced and built on classroom education. The result of this project was the development of an eight-step model for effective service-learning programs (Points of Light Foundation, 1997). The researcher was unable to identify literature that placed this model under critical scrutiny. Listed below is a brief explanation of the model that was used in this study (Points of Light Foundation, 1997). Understanding this model provides a conceptual framework for the design of the survey instrument.

Community Needs

Understanding and interpreting community needs is the cornerstone of any successful volunteer or service initiative. Determining true community needs is critical

in ensuring effective and sustained youth involvement in service. Youth should interface with, and learn from the members of the community as they jointly determine the needs of the community. This is to ensure that the community needs are genuine and also assists in the development of a personal connection with the community in which the service-learning project is to take place (Points of Light Foundation, 1997).

Learning Objectives

In order for service to become a true learning experience, youth must understand what they are expected to learn from their service. Identifying learning objectives can assist in setting expectations for what groups or individuals aspire to obtain from the service-learning experience. Learning objectives are a series of items that the facilitator wishes the participants to understand and/or be able to do after the completion of the project (Points of Light Foundation, 1997).

Youth Voice and Planning

Youth voice, the thoughtful and sustained inclusion of young people in decision-making, is a critical component to the success of any community effort, and particularly service-learning. Youth voice improves the personal and academic growth of young people. Leadership and community involvement are shown to build self-esteem, improve public speaking skills, develop critical thinking, promote a sense of ownership, foster effective relationships with adults, and create a sense of personal safety (Points of Light Foundation, 1997).

Orientation and Training

Orientation is the process of providing information about the workings of an agency and/or a volunteer assignment. Orientation includes background information about the project or organization, expectations of the volunteer, and any rules or regulations that pertain to the volunteer assignment. Training is more in-depth and requires the development of skills. Volunteering is a way for youth to experience the unfamiliar and test new areas of skill and knowledge. The orientation and training phase ensures that young people feel comfortable in their service placement, clarifies expectations, reduces liability, and creates a better learning environment (Points of Light Foundation, 1997).

Action

Meaningful action occurs when young people and adults work together to set goals, plan and address some of the inherent barriers young people face in community service-learning. Project planning is at the core of meaningful action. A key reason youth cite for not volunteering is the feeling of not being utilized effectively or being actively engaged. Planning for a service-learning project includes designing goals, envisioning resources, anticipating barriers, mapping out logistics, and assigning proper roles. If proper time is spent in the planning phase, then meaningful action is ensured (Points of Light Foundation, 1997).

Reflection

Reflection is the conscious act of re-examining a service-learning project. It is a process through which young people examine what they have done, search for meaning and extract lessons about their volunteer and leadership experiences. Reflection allows youth the opportunity to examine whether community needs have been met through their service-learning work. Reflection serves as a method of revisiting and reviewing learning objectives (Points of Light Foundation, 1997).

Evaluation

Evaluation is a form of reflection at the program level that allows one to analyze his/her service efforts, document the results of those efforts, and engage in continuous improvement. Through evaluation one can revisit learning objectives, review the effectiveness of youth voice, reorganize the orientation, pinpoint supervision issues, and ensure that student reflections are adequate. Evaluation is a final safety check that allows the practitioner to make initiative-wide changes that improve the effectiveness, scope and success of service-learning (Points of Light Foundation, 1997).

Celebration and Recognition

It is crucial that the efforts of the volunteers be recognized at the conclusion of a service-learning project. For young people, this step reinforces their value to the community and brings a sense of closure and purpose to the service-learning project. Youth cite the reason that they remain involved in the community and volunteerism is the recognition received by their peers and community members that their contributions

made a difference. Thus, celebration and recognition of youth will lead to increased learning, increased community awareness, and an increased rate of retention (Points of Light Foundation, 1997).

Shumer's Self Assessment for Service-Learning

Over a three-year period, Robert Shumer field-tested an instrument and process to learn how to improve the practice of service-learning. Prior to this work, no one had attempted to develop a system for having practitioners measure quality of practice by field testing an instrument over a number of years to determine the form and content of the document or process. This self-assessment was based upon a set of guiding principles of good practice known as the Alliance for Service-Learning and Education Reform (ASLER) Standards. These guides to practice were developed by experts and practitioners who produced standards through meetings and discussions (Billig & Waterman, 2003). These standards are shown in Figure 3.

Shumer's self-assessment was the preferred process for many years because of the belief that engaging practitioners in the evaluation process could potentially lead to constant and appropriate change in a timely and effective manner. These efforts could allow for a transfer of power from outside sources to internal sources and include intimately connected personnel who could take the information and immediately put the recommendations to use. One of the primary goals of the self-assessment was to empower individuals to study their own programs to make changes for improvement (Billig & Waterman, 2003).

1. Effective service-learning efforts strengthen service and academic learning.
2. Model service-learning provides concrete opportunities for youth to learn new skills, to think critically, and to test new roles in an environment, which encourages risk-taking and rewards competence.
3. Preparation and reflection are essential elements in service-learning.
4. Students' efforts are recognized by their peers and the community they serve.
5. Youth are involved in the planning.
6. The service students perform makes a meaningful contribution to the community.
7. Effective service-learning integrates systematic formative and summative evaluation.
8. Service-learning connects school and its community in new and positive ways.
9. Service-learning is understood and supported as an integral element in the life of a school and its community.
10. Skilled adult guidance and supervision is essential to the success of service-learning.
11. Pre-service and staff development, which includes the philosophy and methodology of service-learning best ensure that program quality and continuity are maintained.

Figure 3: The ASLER Standards for Service-Learning

Shumer found that the development of a self-assessment instrument was only part of producing a self-assessment system. Almost unanimously, the participants thought that the instrument had value "because it stimulated thought about the issues involved in developing a service-learning initiative" (Billig & Waterman, p. 153, 2003). Participants thought that the instrument had the most impact when it was combined with thoughtful discussion among peers and experts in the field of service-learning. It became apparent that through these conversations the instrument took on a significant role in assisting practitioners to understand the complexity and context of implementing good service-learning (Billig & Waterman, 2003).

Summary

Service-learning is a form of experiential learning where students apply knowledge, skills, critical thinking and wise judgment to solve genuine community needs (Toole & Toole, 1994). Service-learning has its roots in the works of several educational theorists. Perhaps the most noted of these theorists is John Dewey. Dewey's experiential learning theories provide a theoretical framework for the service-learning methodology. David Kolb (1984) and Jack Mezirow's (1978) work should also be credited for broadening the theoretical framework.

There are several models of service-learning in the field. Understanding of the model developed by the Points of Light Foundation provides a conceptual framework for the design of the survey instrument used in this study. The Points of Light Foundation model is composed of community needs, learning objectives, youth voice and planning, orientation and training, action, reflection, evaluation, and celebration and recognition.

CHAPTER III

PROCEDURES & METHODOLOGY

Introduction

This study is one in a growing body of research that points to elements of service-learning programs and activities that make them most effective in shaping young people's lives. For the purpose of this study service-learning was defined as a form of experiential education where students apply knowledge, skills, critical thinking and wise judgment to address genuine community needs (Toole & Toole, 1994). This study was an *ex post facto*, descriptive study utilizing mailed questionnaires; thus, no experimental design was present. The Institutional Review Board of the University of Tennessee approved this study February 4, 2004.

The Sample

The sample utilized in this study included employees of the University of Tennessee Agricultural Extension Service. Specifically, these employees were Extension personnel with 4-H assignments as a part of their positions. The Dean of the Agricultural Extension Service identified these employees through the use of personnel records. The sample also included a random sample of school-based educators who have participated in the Lions Quest Skills for Action service-learning training offered by the Tennessee Commission on National and Community Service and the Tennessee Department of Education. This is one of many trainings that certify high school teachers to teach freestanding service-learning courses in Tennessee. Thus, the majority of training

participants are Tennessee high school educators. The Tennessee Commission on National and Community Service supplied the complete list of training participants from which the sample was drawn.

All members of the population were assigned a number. Through a random numbers generator computer program, 200 were randomly selected for participation in the study. Two hundred participants were selected because that is the approximate number needed for a 95% confidence interval according to Warmbrod (1965).

Design of the Study

The pilot survey was conducted by a direct mailing. The pilot survey (Appendix A) was mailed to the pilot sample with a cover letter (Appendix B) outlining the need for the survey and that the survey was confidential. The point that the survey was voluntary was also stressed. A self-addressed stamped envelope was included for return of the survey. The initial mailing of the pilot test occurred on March 12, 2004, followed by a second letter and survey to non-respondents (Appendix C) two weeks later. The response rate for the pilot study was 67.5%.

The sample study was conducted by direct mailing. The revised, sample study survey (Appendix D) was mailed to the entire sample with a cover letter (Appendix E) outlining the need for the survey and that the survey was confidential. A self-addressed stamped envelope was included for return of the survey. The initial mailing of the actual study occurred on April 19, 2004, followed by a second letter and survey to non-respondents (Appendix F) two weeks later. The response rate for the sample study was 62.5%.

A test-retest study was conducted by direct mailing. The same survey utilized in the actual study (Appendix D) was mailed to the test-retest sample with a cover letter (Appendix G) outlining the need for them to complete the survey once again and that the survey was confidential. A self-addressed stamped envelope was included for return of the survey. The initial mailing of the test-retest study occurred on May 18, 2004. The response rate for the test-retest study was 65%.

Instrumentation

The instrument was developed based upon the Points of Light Foundation model of service-learning. The instrument contained three sections. Section one gathered information related to the respondents' experience with service-learning. Section two measured knowledge of community needs, learning objectives, youth voice and planning, orientation and training, meaningful action, reflection, evaluation, and celebration and recognition. Section three gathered demographic information.

Since the primary purpose of this study was to develop a valid and reliable instrument, Chapter IV will provide the reader with further details regarding the development and testing of the instrument.

Statistical Analysis

The data were analyzed using the SPSS version 12.0 for Windows. Descriptive statistics including frequencies, percentages, means, modes, standard deviations, range, percents, and frequencies were utilized. Chi Squares, T-Tests, correlation coefficients, and coefficients of stability were used to analyze the relationships in the study. The .05

probability level was set *a priori* and was used to determine whether relationships were statistically significant.

The analysis for objective one required the use of range, mean, standard deviation, percentage, Chi Square tests, T-Tests, and coefficients of stability. The analysis for objective two and three required the use of correlation coefficients. The analysis for objective four required the use of T-Tests, correlation coefficients, mean, and standard deviation.

CHAPTER IV

FINDINGS

Introduction

This chapter is organized around the five objectives of the study. Due to the specific purpose of instrument development for this study, a complete and detailed discussion of findings related to both the pilot and sample studies will be reported for each objective. These findings are being reported in this manner to allow researchers to examine the stability of the instrument with two separate groups of respondents.

Instrument Development

The type of research represented in this study is descriptive correlational. An instrument to measure practitioner knowledge of service-learning was developed by the researcher, based upon the Points of Light Foundation eight-step model for effective service-learning programs, highlighted in Chapter II. Likert-type scale questions were developed in each of the eight subscales of the model in an attempt to measure practitioner knowledge in each of the eight subscales.

Panel of Experts

After development of the instrument, a panel of experts examined it in order to establish a high level of content validity. This panel of experts included service-learning professionals and researchers who were internationally known for their reputation in

service-learning, including representatives from the Kellogg Foundation, the Points of Light Foundation, private service-learning evaluation and consulting firms, the Tennessee Commission on National and Community Service, and Tennessee 4-H Youth Development staff. Recommendations of the panel of experts included modification to several questions throughout the entire instrument. The panel also recommended that the questions not be separated into subscales, but rather the items be mixed such that the respondents could not easily identify subscales. All recommended changes from the panel of experts were implemented into the survey as shown in Appendix A. Tables 1 through 8 show the eight subscales with questions developed to measure each subscale.

TABLE 1: Community Needs Subscale and Corresponding Questions

Community Needs	
1	I would make sure youth consult with the community about its needs before beginning any service-learning project.
2	Determining true community needs is critical in ensuring effective and sustained youth involvement in service-learning.
3	Genuine community needs may differ from needs perceived by youths.
4	I would not involve community members in the needs assessment phase of my service-learning project.
5	I would make sure that youth interface with members of the community during the needs assessment phase of service-learning.
6	I feel confident I know how to get youth and community members together to assess community needs.
7	True community needs cannot be assessed prior to implementing a service-learning project.
8	By involving community members in needs assessment, a personal connection with the community can be developed.
9	Youth can learn from members of the community as they jointly identify genuine community needs.

TABLE 2: Learning Objectives Subscale and Corresponding Questions

	Learning Objectives
1	I would make sure that youth understand the learning objectives for each service-learning project before implementation.
2	Identifying learning objectives prior to the service-learning project is important.
3	Identifying learning objectives can assist in setting expectations for a group or individual.
4	Learning objectives help clarify what youth aspire to obtain from the experience.
5	Learning objectives can only be identified by an adult.
6	Learning objectives identify what the youth should understand and/or be able to do after the completion of the project.
7	Learning objectives are not an integral part of the service-learning process.
8	I would make sure that youth assist in the development of learning objectives.
9	Service-learning projects do not require the identification of learning objectives.

TABLE 3: Youth Voice Subscale and Corresponding Questions

	Youth Voice
1	Allowing youth to provide their own thought is an important component of service-learning.
2	I am afraid of youth-led and youth-directed service-learning projects.
3	Allowing youth to provide input and leadership improves their personal and academic growth.
4	In service-learning projects I would include youth in the decision making process.
5	Youth lack the skills necessary to implement a service-learning project.
6	Youth are assets in the service-learning process.
7	There is nothing wrong with selecting the service-learning project without consulting the youth participants.
8	Youth can come up with project ideas that I never would have thought of.
9	Youth bring fresh ideas for problem solving.
10	Service-Learning allows youth to be viewed as resources rather than recipients of service projects.
11	Youth are enthusiastic participants in service-learning projects.
12	I would nurture youth as the actors and leaders throughout the service-learning process.
13	Young people play an important role in all stages of service-learning.
14	I would not consult youth when planning a service-learning project.
15	Actively and effectively involving youth is not an important component of service-learning.

TABLE 4: Orientation & Training Subscale and Corresponding Questions

	Orientation & Training
1	Orientation is the process of providing information about the workings of an agency and/or a volunteer assignment.
2	Orientation does not include background information about the project or organization.
3	I would communicate any rules or regulations to youth as part of the orientation process.
4	Training differs from orientation in that it is more in-depth and requires the development of skills.
5	Volunteering is a way for youth to experience the unfamiliar and test new areas of skill and knowledge.
6	Orientation and training will not develop a better learning environment.
7	Orientation and training ensures that young people feel comfortable in their service placement.
8	Quality orientation and training reduces liability.
9	Orientation and training are not important in the service-learning field. What is important is the action.
10	It is important to conduct orientation and training before every service-learning project.
11	I would not address student expectations during orientation and training.

TABLE 5: Planning & Implementation Subscale and Corresponding Questions

	Planning & Implemention
1	Project planning is at the core of meaningful action.
2	Planning and preparation are not critical elements of the learning process.
3	Meaningful action occurs when young people and adults work together to set goals, plan, and address some of the inherent barriers youth face in service-learning.
4	Planning for a service-learning project includes designing goals, envisioning resources, anticipating barriers, mapping out logistics, and assigning proper roles.
5	If proper time is spent in the planning phase, meaningful action is more likely to occur.
6	The service youth provide does not have to make a meaningful contribution to the community, as long as they feel good about it.

TABLE 6: Reflection Subscale and Corresponding Questions

	Reflection
1	Reflection is the conscious act of re-examining a service-learning project.
2	During reflection, youth should examine what they have done, search for meaning and extract lessons about their volunteer and leadership experiences.
3	Reflection allows youth an opportunity to examine whether community needs have been met through their service-learning work.
4	Reflection serves as a method of revisiting and reviewing learning objectives.
5	If reflection is absent, service-learning does not occur.
6	Reflection is the least important component of service-learning.
7	Reflection activities can take place in any curricular area.
8	Reflection should provide a 'reality check' that guards against reinforcing inaccurate perceptions/biases.
9	Reflection integrates service and the related learning into one's life.
10	Reflection is an essential element of service-learning.
11	I would use reflection in every service-learning project.

TABLE 7: Evaluation Subscale and Corresponding Questions

	Evaluation
1	Evaluation allows one to analyze his/her service efforts.
2	Evaluation allows for continuous improvement.
3	Learning objectives can be revisited and measured through evaluation.
4	Evaluation is not an important component of the service-learning process.
5	Evaluation can serve as a final safety check.
6	I would include beneficiaries of the service-learning project in the evaluation process.
7	Evaluation allows the project leader to make changes that improve the effectiveness, scope, and success of service-learning.
8	I would utilize only formal evaluation in service-learning.
9	Only those providing service should participate in the evaluation component.
10	Evaluation is only important if it is a requirement of funding received for the service-learning project.
11	Non-formal evaluation is equally important to formal evaluation of a service-learning project.

TABLE 8: Celebration & Recognition Subscale and Corresponding Questions

	Celebration & Recognition
1	I would not recognize the efforts of volunteers at the end of a service-learning project.
2	For youth, celebration and recognition reinforces their value to the community.
3	Celebration and recognition brings a sense of closure and purpose to the service-learning project.
4	Celebration and recognition do not lead to increased learning.
5	Celebration and recognition of youth lead to an increased rate of volunteer retention.
6	Celebration and recognition are not important components of the service-learning process.
7	Recognition received from peers and members of the community is important.

Pilot Study

Objective 1

After examination and modification to the instrument based upon the panel study, the researcher examined the reliability of the instrument through a pilot study. This pilot study was conducted with a random sample of 20 Extension staff members and 20 participants of the Lions Quest Skills for Action training, for a total random sample size of 40. Approximately 67% (n=27) of the random sample responded. Participants in the pilot study were selected after the study sample was selected to eliminate the possibility of members of the pilot group being reselected for participation in the actual study.

In an attempt to eliminate non-response error, early respondents were compared to late respondents. Miller and Smith (1983) indicate that late respondents are often similar to non-respondents. Late respondents were compared to early respondents, in an attempt to justify generalizing from the respondents to the sample, through T-Tests and Chi Square statistical analysis. Early respondents represented 66.7% (n=18) while 33.3% (n=9) were classified as late respondents. Statistical analysis failed to produce any

statistically significant difference between early and late respondents on all key variables. Therefore, non-response was considered to be random.

The researcher then sought to examine the internal consistency of the instrument. Internal consistency coefficients were calculated using Cronbach's Alpha. Initial internal consistency coefficients ranged from 0.76 to 0.87, well above the 0.66 level set *a priori*. Questions were omitted from each subsection in order to develop the most internally consistent instrument. Table 9 summarizes the internal consistency coefficients and the number of questions that were omitted for each of the eight subscales.

Objective 2

The researcher then examined the relationship between the numbers of days of service-learning training and the score on the instrument. The average number of days of service-learning training reported by respondents (n=25) was 4.04 days with a standard deviation of 4.550. Correlation coefficients were examined. Table 10 shows Davis'

TABLE 9: Pilot Study Internal Consistency Results

Instrument Subscale	Initial Internal Consistency Coefficient	Number of Questions Dropped	Final Internal Consistency Coefficient
Community Needs	0.76	1	0.76
Learning Objectives	0.81	1	0.84
Youth Voice	0.80	2	0.81
Orientation & Training	0.82	7	0.89
Planning & Implementation	0.77	3	0.89
Reflection	0.80	3	0.87
Evaluation	0.76	5	0.93
Celebration & Reflection	0.87	2	0.92

TABLE 10: Davis Convention for Describing the Magnitude of Correlations

r	Adjectives
1.0	Perfect
.70 to .99	Very High
.50 to .69	Substantial
.30 to .49	Moderate
.10 to .29	Low
.01 to .09	Negligible

convention for interpreting coefficients (Davis, 1971). Table 11 details the correlation between the score on each of the eight subscales on the survey and the number of days of reported service-learning training. According to Davis (1971), a moderate correlation existed between days of service-learning training and all subscales, excluding the orientation and training subscale. A low correlation was present between days of service-learning training and the orientation and training subscale of the instrument. A positive correlation was noticed between these two variables, indicating that as training increased, a low to moderate increase in score on the instrument was observed.

Objective 3

The relationship between the numbers of service-learning projects directed or participated in and the score on the survey was also examined. Of those responding (n=24) the

TABLE 11: Pilot Study Correlation Between Scales and Days of Service-Learning Training

Subscale	Service Learning Training Days Pearson Correlation
Community Need (n=23)	.468
Learning Objectives (n=24)	.309
Youth Voice (n=24)	.388
Orientation & Training (n=25)	.244
Planning & Implementation (n=25)	.337
Reflection (n=24)	.345
Evaluation (n=24)	.345
Celebration & Recognition (n=24)	.316

average number of projects reported was 24, with a standard deviation of 27.827. Correlation coefficients were examined. Table 12 details the correlation between the score on each of the eight subscales on the survey and the number of service-learning projects directed or participated in. Note that according to Davis (1971), a negligible negative correlation existed between number of service-learning projects directed or participated in and score of the learning objectives, orientation and training, planning and implementation, and celebration and recognition subscales of the instrument. A negligible positive correlation existed between number of service-learning projects directed or participated in and score of the youth voice subscale. A low positive correlation existed between the community need subscale and a low negative correlation

TABLE 12: Pilot Study Correlation Between Scales and Number of Service-Learning Projects Directed or Participated In

Subscale	Number of Service Learning Projects Pearson Correlation
Community Need (n=22)	.159
Learning Objectives (n=23)	-.088
Youth Voice (n=23)	.033
Orientation & Training (n=24)	-.071
Planning & Implementation (n=24)	-.098
Reflection (n=23)	-.359
Evaluation (n=23)	-.257
Celebration & Recognition (n=23)	-.088

between the evaluation subscale and number of service-learning projects directed or participated in. A moderate negative correlation existed between the reflection subscale and the number of service-learning projects directed or participated in.

Upon closer examination of the data and responses of participants, the researcher chose to make minor modifications to the instrument in order to clarify the information being requested for questions from section three of the instrument. Respondents seemed to report inconsistently with regards to the their volunteer efforts in the community. Minor modification was made to Section 3 of the survey instrument. The final instrument can be seen in Appendix D.

Objective 4

The researcher also examined differences on subscales among known demographic variables. Of those responding, 37% were K-12 educators, 63% were Extension staff, 77.8% were female, and 22.2% were male. The age of respondents ranged from 25 to age 58. Years of employment of the respondents ranged from 1 year to 30 years. Of those responding 22.2% served as a community-based advisor to groups such as Boy Scouts. Approximately 40% were serving in the role of advisor to a school-based group, such as FFA. Respondents were asked about their volunteer work with 4-H Youth Development programs. Only 25.9% volunteered with 4-H programs while 44.4% reported volunteering in the community. Approximately 74% of respondents indicated volunteering between 1 and 10 hours per week in their community.

Tables 13 through 20 summarize the results among known demographic variables and score in each subscale of the instrument. Note that the only statistically significant differences were observed with regards to occupation and the learning objectives subscale ($t = 2.06$, $df = 24$, $p = .050$), the reflection subscale ($t = 2.999$, $df = 24$, $p = <.01$), and the celebration and recognition subscale ($t = 2.302$, $df = 22.32$, $p = .031$). In all three instances, K-12 educators scored statistically significantly higher than Extension professionals in the respective subscales. No other statistically significant differences were observed with regards to demographic variables and score in each subscale of the instrument.

Table 21 summarizes pilot study correlations among subscale scores and interval scaled demographic variables. While both negative and positive correlations existed among subscale scores and average volunteer hours, age, and years employed, it should

TABLE 13: Pilot Study Comparison of Community Needs Subscale Scores Among Nominally Scaled Demographic Variable Groups

Demographic Variable	n	$\bar{x}$ *	s.d.
Occupation			
K-12 Educator	9	34.67	3.64
Extension Educator	16	33.88	3.84
t = .503	df = 23	p = .620	
Gender			
Female	20	34.70	3.73
Male	5	32.00	3.08
t = 1.49	df = 23	p = .150	
4-H Volunteer			
Yes	7	35.00	1.21
No	18	33.83	3.93
t = .697	df = 23	p = .493	
School-Based Advisor			
Yes	11	34.45	3.80
No	14	33.93	3.77
t = .345	df = 23	p = .733	
Community-Based Advisor			
Yes	6	34.00	3.46
No	19	34.21	3.88
t = -.118	df = 23	p = .907	

* Scale scores could have ranged from 8 to 40. The overall mean for the sample was 34.16 with a standard deviation of 3.72.

TABLE 14: Pilot Study Comparison of Learning Objectives Subscale Scores Among Nominally Scaled Demographic Variable Groups

Demographic Variable	n	$\bar{x}$ *	s.d.
Occupation			
K-12 Educator	9	36.78	3.38
Extension Educator	17	33.59	3.92
t = 2.06	df = 24	p = .050	
Gender			
Female	20	35.2	4.15
Male	6	33.0	3.09
t = 1.20	df = 24	p = .244	
4-H Volunteer			
Yes	7	35.00	4.76
No	19	34.58	3.81
t = .234	df = 24	p = .817	
School-Based Advisor			
Yes	11	35.09	3.67
No	15	34.40	4.31
t = .429	df = 24	p = .672	
Community-Based Advisor			
Yes	6	35.00	4.52
No	20	34.60	3.94
t = .211	df = 24	p = .834	

* Scale scores could have ranged from 8 to 40. The overall mean for the sample was 34.69 with a standard deviation of 3.99.

TABLE 15: Pilot Study Comparison of Youth Voice Subscale Scores Among Nominally Scaled Demographic Variable Groups

Demographic Variable	n	$\bar{x}$ *	s.d.
Occupation			
K-12 Educator	9	55.11	4.65
Extension Educator	17	54.53	4.40
t = .315	df = 24	p = .756	
Gender			
Female	20	55.20	4.61
Male	6	53.17	3.54
t = .991	df = 24	p = .330	
4-H Volunteer			
Yes	7	55.29	3.20
No	19	54.53	4.83
t = .383	df = 24	p = .705	
School-Based Advisor			
Yes	11	54.64	4.76
No	15	54.80	4.30
t = -.092	df = 24	p = .928	
Community-Based Advisor			
Yes	6	55.17	5.88
No	20	54.60	4.04
t = .271	df = 24	p = .789	

* Scale scores could have ranged from 12 to 60. The overall mean for the sample was 54.73 with a standard deviation of 4.41.

TABLE 16: Pilot Study Comparison of Orientation & Training Subscale Scores Among Nominally Scaled Demographic Variable Groups

Demographic Variable	n	$\bar{x}$*	s.d.
Occupation			
K-12 Educator	10	19.10	1.45
Extension Educator	17	17.88	2.32
t = 1.49	df = 25	p = .148	
Gender			
Female	21	18.52	2.23
Male	6	17.67	1.51
t = .880	df = 25	p = .387	
4-H Volunteer			
Yes	7	17.86	3.13
No	20	18.50	1.67
t = -.518	df = 7.23	p = .620	
School-Based Advisor			
Yes	11	18.18	1.99
No	16	18.44	2.22
t = -3.06	df = 25	p = .762	
Community-Based Advisor			
Yes	6	18.33	1.86
No	21	18.33	2.20
t = <.01	df = 25	p = 1.00	

* Scale scores could have ranged from 4 to 20. The overall mean for the sample was 18.33 with a standard deviation of 2.09.

TABLE 17: Pilot Study Comparison of Planning & Implementation Subscale Scores Among Nominally Scaled Demographic Variable Groups

Demographic Variable	n	$\bar{x}$ *	s.d.
Occupation			
K-12 Educator	10	18.70	2.11
Extension Educator	17	17.88	2.15
t = .961	df = 25	p = .346	
Gender			
Female	21	18.20	2.30
Male	6	18.50	1.52
t = -.404	df = 25	p = .690	
4-H Volunteer			
Yes	7	18.00	2.77
No	20	18.25	1.94
t = -.262	df = 25	p = .795	
School-Based Advisor			
Yes	11	18.09	2.17
No	16	18.25	2.18
t = -.187	df = 25	p = .853	
Community-Based Advisor			
Yes	6	18.17	2.23
No	21	18.19	2.16
t = -.024	df = 25	p = .981	

* Scale scores could have ranged from 4 to 20. The overall mean for the sample was 18.19 with a standard deviation of 2.13.

TABLE 18: Pilot Study Comparison of Reflection Subscale Scores Among Nominally Scaled Demographic Variable Groups

Demographic Variable	n	$\bar{x}$ *	s.d.
Occupation			
K-12 Educator	9	38.00	2.78
Extension Educator	17	33.47	4.03
t = 2.999	df = 24	p = <.01	
Gender			
Female	20	35.65	3.76
Male	6	33.00	5.33
t = 1.376	df = 24	p = .181	
4-H Volunteer			
Yes	7	34.14	3.53
No	19	35.00	4.52
t = .075	df = 24	p = .941	
School-Based Advisor			
Yes	11	36.18	3.52
No	15	34.20	4.59
t = 1.196	df = 24	p = .243	
Community-Based Advisor			
Yes	6	35.33	4.47
No	20	34.95	4.25
t = .192	df = 24	p = .849	

* Scale scores could have ranged from 8 to 40. The overall mean for the sample was 35.04 with a standard deviation of 4.21.

TABLE 19: Pilot Study Comparison of Evaluation Subscale Scores Among Nominally Scaled Demographic Variable Groups

Demographic Variable	n	$\bar{x}$ *	s.d.
Occupation			
K-12 Educator	9	28.44	2.19
Extension Educator	17	26.47	2.81
t = 1.829	df = 24	p = .080	
Gender			
Female	20	27.30	2.87
Male	6	26.67	2.42
t = .489	df = 24	p = .629	
4-H Volunteer			
Yes	7	27.29	3.15
No	19	27.11	2.66
t = .146	df = 24	p = .885	
School-Based Advisor			
Yes	11	27.00	2.93
No	15	27.27	2.69
t = -.241	df = 24	p = .812	
Community-Based Advisor			
Yes	6	27.17	3.25
No	20	27.15	2.66
t = .013	df = 24	p = .990	

* Scale scores could have ranged from 6 to 30. The overall mean for the sample was 27.15 with a standard deviation of 2.74.

TABLE 20: Pilot Study Comparison of Celebration & Recognition Subscale Scores Among Nominally Scaled Demographic Variable Groups

Demographic Variable	n	$\bar{x}$*	s.d.
Occupation			
K-12 Educator	10	24.00	1.56
Extension Educator	16	21.69	3.50
t = 2.302	df = 22.32	p = .031	
Gender			
Female	20	22.85	3.23
Male	6	21.67	2.58
t = .818	df = 24	p = .421	
4-H Volunteer			
Yes	6	22.00	5.02
No	20	22.75	2.40
t = -.514	df = 24	p = .612	
School-Based Advisor			
Yes	11	23.00	2.57
No	15	22.27	3.47
t = .590	df = 24	p = .560	
Community-Based Advisor			
Yes	6	22.50	3.02
No	20	22.60	3.19
t = -.068	df = 24	p = .946	

* Scale scores could have ranged from 5 to 25. The overall mean for the sample was 22.58 with a standard deviation of 3.09.

TABLE 21: Pilot Study Correlations Among Subscale Scores and Interval Scaled Demographic Variables

Subscale	Avg. Volunteer Hours	Age	Years Employed
Community Needs	.05	-.31	-.13
Learning Objectives	< .01	-.07	-.07
Youth Voice	.16	-.21	< .01
Orientation & Training	-.16	-.02	-.20
Planning & Implementation	-.01	-.01	-.27
Reflection	-.08	.12	-.03
Evaluation	< .01	.09	-.12
Celebration & Recognition	-.08	-.06	-.23

be noted that all were in the magnitude of negligible and low using Davis' (1971) convention. The only case this was not true was with regards to age and the community needs subscale score, where a negative substantial correlation existed.

Sample Study

Objective 1

To accomplish the discussion related to objective one, the development of a valid and reliable instrument, this section is divided into two sections, internal consistency and reliability. Objectives two, three, and four relate directly to validity.

Internal Consistency

After pilot testing the instrument, the researcher further studied it with a larger sample to establish additional validity and reliability data. This study was conducted with a random sample of 100 Extension staff members and 100 participants of the Lions Quest Skills for Action training, for a total random sample size of 200. Of the random sample, 62.5 percent (n=125) responded. The researcher utilized the revised survey instrument; however, all questions that were omitted through the internal consistency procedures in the pilot study were included in an attempt to study the instrument's reliability and validity over time.

Eighty-six (68.8%) respondents were classified as early while thirty-eight (30.4%) were classified as late respondents. As in the pilot study, early and late respondents were compared in an attempt to eliminate non-response error. Statistical analysis failed to

produce any statistically significant difference between early and late respondents on all key variables. Therefore, non-response was considered to be random.

The researcher then sought to examine the internal consistency of the instrument. Internal consistency coefficients were calculated using Cronbach's Alpha. Initial internal consistency coefficients ranged from 0.72 to 0.83, well above the 0.66 level set *a priori*. Questions were omitted from each subsection in order to develop the most internally consistent instrument possible. Table 22 summarizes the internal consistency coefficients and the number of questions that were omitted for each of the eight subscales in the sample study. Final internal consistency coefficients ranged from 0.76 to 0.85.

Reliability

After the sample study, the researcher further studied the instrument with a purposefully drawn sample to establish reliability data. This test-retest study was conducted with a purposefully drawn sample of 20 Extension staff members. The

TABLE 22: Sample Study Internal Consistency Results

Instrument Subscale	Initial Internal Consistency Coefficient	Number of Questions Dropped	Final Internal Consistency Coefficient
Community Needs	0.72	3	0.78
Learning Objectives	0.83	1	0.85
Youth Voice	0.83	5	0.85
Orientation & Training	0.76	2	0.76
Planning & Implementation	0.75	2	0.79
Reflection	0.77	2	0.79
Evaluation	0.76	0	0.76
Celebration & Reflection	0.78	1	0.82

purposefully drawn sample was selected based upon the participant's response rate in the sample study. Sixty-five percent (n=13) of the purposefully drawn sample responded. The researcher utilized the revised survey instrument; however, all questions that were omitted through the internal consistency procedures in the sample study were included in an attempt to study the instrument's reliability and validity over time.

The researcher sought to further examine the internal consistency of the instrument. Internal consistency coefficients were calculated using Cronbach's Alpha. Internal consistency coefficients ranged from 0.34 to 0.82. The community needs, planning and implementation, evaluation, and celebration and recognition subscales scored above the 0.66 level set *a priori*. Table 23 summarizes the internal consistency coefficients.

TABLE 23: Test-Retest Study Internal Consistency Results

Instrument Subscale	Internal Consistency Coefficient
Community Needs	0.68
Learning Objectives	0.48
Youth Voice	0.34
Orientation & Training	0.45
Planning & Implementation	0.82
Reflection	0.69
Evaluation	0.77
Celebration & Reflection	0.70

Coefficients of stability were then calculated with regards to the test-retest study. Table 24 summarizes the coefficients of stability with regards to each subscale with all questions being included, and with regards to each subscale, utilizing the most reliable scales from the sample study. While all of the coefficients of stability were positive, only the reflection subscale measured above the 0.70 level set *a priori*. Data regarding the stability of the instrument appeared to be low.

Objective 2

The researcher also examined the relationship between the numbers of days of service-learning training and the score on the instrument. The average number of days of service-learning training reported by respondents (n=109) was 4.42 days with a standard deviation of 10.348. In the sample surveyed, Extension professionals tended to have a slightly higher average number of days of service-learning training than did K-12 educators, with an average of 3.69 and 3.38 days respectively.

Correlation coefficients were calculated between the score on each of the eight subscales on the survey and the number of days of reported service-learning training, as reported in Table 25. According to Davis' convention, a negligible positive correlation exists between days of service-learning training and all subscales, excluding the evaluation subscale. A low positive correlation is present between days of service-learning training and scores on the evaluation subscale of the instrument.

TABLE 24: Coefficients of Stability on Each Subscale and the Total Instrument Score

Instrument Subscale	Coefficient of Stability	
	Entire Instrument	Most Reliable Instrument
Community Needs	0.68	0.33
Learning Objectives	0.58	0.54
Youth Voice	0.17	0.46
Orientation & Training	0.23	0.42
Planning & Implementation	0.48	0.58
Reflection	0.75	0.71
Evaluation	0.46	0.46
Celebration & Reflection	0.60	0.53
Total Instrument Score	0.38	0.57

TABLE 25: Sample Study Correlation Between Most Reliable Scales and Days of Service-Learning Training

	Service Learning Training Days Pearson Correlation
Community Need (n=106)	.054
Learning Objectives (n=106)	.096
Youth Voice (n=104)	.087
Orientation & Training (n=106)	.094
Planning & Implementation (n=107)	.094
Reflection (n=104)	.087
Evaluation (n=105)	.105
Celebration & Recognition (n=105)	.084

Objective 3

The relationship between the numbers of service-learning projects directed or participated in and the score on the survey was also examined. Of those responding (n=110) the average number of projects reported was 12.07, with a standard deviation of 37.661. Correlation coefficients were calculated between the numbers of service-learning projects directed or participated in and scores on the subscales. Table 26 reports the correlation between the score on each of the eight subscales on the survey and the number of service-learning projects directed or participated in. Note that according to Davis' convention, a positive negligible correlation existed between number of service-learning projects directed or participated in and score of the planning and implementation, reflection, and evaluation subscales of the instrument. A low positive correlation existed between all other subscales and number of service-learning projects directed or participated in.

Objective 4

The researcher also examined differences on subscales among known demographic variables. Of those responding, 33.6% were K-12 educators, 60% were Extension staff, 5.6% classified their occupation as other, 63.2% were female, and 36% were male. The age of respondents ranged from 22 to age 65. Years of employment of the respondents ranged from 1 year to 38 years. Of those responding 58.4% served as a community-based advisor to groups such as Boy Scouts, and 35.2% were serving in the role of advisor to a school-based group, such as FFA. Respondents were asked about their volunteer work with 4-H Youth Development programs. Only 32.8% volunteered with 4-H programs while 80% reported volunteering in the community. Eighty percent

TABLE 26: Sample Study Correlation Between Scales and Number of Service-Learning Projects Directed or Participated In

	Number of Service Learning Projects Pearson Correlation
Community Need (n=106)	.110
Learning Objectives (n=106)	.119
Youth Voice (n=104)	.127
Orientation & Training (n=106)	.110
Planning & Implementation (n=107)	.090
Reflection (n=104)	.041
Evaluation (n=105)	.043
Celebration & Recognition (n=105)	.140

of respondents indicated volunteering between 1 and 20 hours per week in their community.

Tables 27 through 34 summarize the results among known demographic variables and score in each subscale of the instrument. Note that statistically significant differences were observed with regards to occupation and all subscales: the community needs subscale ($t = 3.94$, $df= 102.94$, $p= <.01$), the learning objectives subscale ($t=3.43$, $df=110$, $p=<.01$), the youth voice subscale ($t=3.076$, $df=104.85$, $p=<.01$), the orientation and training subscale ($t=3.303$, $df=111$, $p=<.01$), the planning and implementation subscale ($t=3.029$, $df=111$, $p=<.01$), the reflection subscale ($t=4.660$, $df=108$, $p=<.01$), the evaluation subscale ($t=3.821$, $df=109$, $p=<.01$), and the celebration and recognition

TABLE 27: Sample Study Comparison of Community Needs Subscale Scores Among Nominally Scaled Demographic Variable Groups

Demographic Variable	n	$\bar{x}$ *	s.d.
Occupation			
K-12 Educator	40	27.40	2.37
Extension Educator	72	25.26	3.31
t = 3.94	df = 102.94	p = <.01	
Gender			
Female	76	26.42	3.24
Male	43	25.60	3.00
t = 1.36	df = 117	p = .178	
4-H Volunteer			
Yes	41	25.37	3.28
No	75	26.45	3.07
t = -1.780	df = 114	p = .078	
School-Based Advisor			
Yes	41	26.54	3.22
No	79	25.87	3.14
t = 1.09	df = 118	p = .278	
Community-Based Advisor			
Yes	70	25.10	3.30
No	50	27.50	2.37
t = -.4641	df = 117.99	p = <.01	

* Scale scores could have ranged from 6 to 30. The overall mean for the sample was 26.10 with a standard deviation of 3.17.

TABLE 28: Sample Study Comparison of Learning Objectives Subscale Scores Among Nominally Scaled Demographic Variable Groups

Demographic Variable	n	$\bar{x}$ *	s.d.
Occupation			
K-12 Educator	39	36.54	3.66
Extension Educator	73	33.66	4.52
t = 3.43	df = 110	p = <.01	
Gender			
Female	76	34.88	4.41
Male	43	34.33	4.42
t = .660	df = 117	p = .510	
4-H Volunteer			
Yes	41	34.22	4.38
No	75	34.88	4.46
t = -.767	df = 114	p = .445	
School-Based Advisor			
Yes	40	35.65	4.29
No	80	34.12	4.41
t = 1.801	df = 118	p = .074	
Community-Based Advisor			
Yes	71	33.56	4.53
No	49	36.18	3.78
t = -3.330	df = 118	p = <.01	

* Scale scores could have ranged from 8 to 40. The overall mean for the sample was 34.63 with a standard deviation of 4.41.

TABLE 29: Sample Study Comparison of Youth Voice Subscale Scores Among Nominally Scaled Demographic Variable Groups

Demographic Variable	n	$\bar{x}$ *	s.d.
Occupation			
K-12 Educator	38	42.61	3.17
Extension Educator	72	40.18	5.07
t = 3.076	df = 104.85	p = <.01	
Gender			
Female	76	41.04	4.88
Male	41	41.15	3.97
t = -.120	df = 115	p = .904	
4-H Volunteer			
Yes	39	40.49	5.51
No	75	41.32	4.04
t = -.919	df = 112	p = .360	
School-Based Advisor			
Yes	40	41.78	4.14
No	77	40.71	4.76
t = 1.194	df = 115	p = .235	
Community-Based Advisor			
Yes	68	40.21	5.02
No	49	42.29	3.56
t = -.623	df = 114.981	p = .01	

* Scale scores could have ranged from 9 to 45. The overall mean for the sample was 41.08 with a standard deviation of 4.57.

TABLE 30: Sample Study Comparison of Orientation & Training Subscale Scores Among Nominally Scaled Demographic Variable Groups

Demographic Variable	n	$\bar{x}$ *	s.d.
Occupation			
K-12 Educator	40	41.78	3.30
Extension Educator	73	39.12	4.45
t = 3.303	df = 111	p = <.01	
Gender			
Female	77	40.17	4.59
Male	43	40.12	3.49
t = .065	df = 118	p = .948	
4-H Volunteer			
Yes	41	39.83	4.27
No	76	40.25	4.25
t = -.511	df = 115	p = .611	
School-Based Advisor			
Yes	41	41.00	4.76
No	79	39.71	3.86
t = 1.602	df = 118	p = .112	
Community-Based Advisor			
Yes	71	39.03	4.48
No	49	41.78	3.20
t = -3.692	df = 118	p = <.01	

* Scale scores could have ranged from 9 to 45. The overall mean for the sample was 40.15 with a standard deviation of 4.21.

TABLE 31: Sample Study Comparison of Planning & Implementation Subscale Scores Among Nominally Scaled Demographic Variable Groups

Demographic Variable	n	$\bar{x}$ *	s.d.
Occupation			
K-12 Educator	40	23.55	1.93
Extension Educator	73	22.18	2.48
t = 3.029	df = 111	p = <.01	
Gender			
Female	77	23.00	2.22
Male	43	22.16	2.53
t = 1.883	df = 118	p = .062	
4-H Volunteer			
Yes	41	22.27	2.44
No	76	22.96	2.30
t = -1.520	df = 115	p = .131	
School-Based Advisor			
Yes	41	23.27	2.11
No	80	22.38	2.44
t = 2.088	df = 91.829	p = .040	
Community-Based Advisor			
Yes	71	22.17	2.46
No	50	23.40	2.04
t = -3.002	df = 115.681	p = <.01	

* Scale scores could have ranged from 5 to 25. The overall mean for the sample was 22.68 with a standard deviation of 2.36.

TABLE 32: Sample Study Comparison of Reflection Subscale Scores Among Nominally Scaled Demographic Variable Groups

Demographic Variable	n	$\bar{x}$ *	s.d.
Occupation			
K-12 Educator	39	41.28	3.39
Extension Educator	171	37.45	4.47
t = 4.660	df = 108	p = <.01	
Gender			
Female	74	39.24	4.80
Male	43	38.53	3.95
t = .819	df = 115	p = .415	
4-H Volunteer			
Yes	41	38.10	4.48
No	73	39.49	4.55
t = -1.581	df = 112	p = .941	
School-Based Advisor			
Yes	40	39.90	4.18
No	77	38.51	4.62
t = 1.598	df = 115	p = .113	
Community-Based Advisor			
Yes	69	37.55	4.47
No	48	41.04	3.72
t = -4.444	df = 115	p = <.01	

* Scale scores could have ranged from 9 to 45. The overall mean for the sample was 38.50 with a standard deviation of 4.85.

TABLE 33: Sample Study Comparison of Evaluation Subscale Scores Among Nominally Scaled Demographic Variable Groups

Demographic Variable	n	$\bar{x}$ *	s.d.
Occupation			
K-12 Educator	39	49.59	3.96
Extension Educator	72	46.07	4.96
t = 3.821	df = 109	p = <.01	
Gender			
Female	75	47.59	5.31
Male	43	47.07	4.34
t = .542	df = 116	p = .589	
4-H Volunteer			
Yes	40	47.10	4.89
No	75	47.64	5.11
t = -.548	df = 113	p = .585	
School-Based Advisor			
Yes	40	47.93	5.22
No	78	47.13	4.85
t = .823	df = 116	p = .412	
Community-Based Advisor			
Yes	70	46.07	4.96
No	48	49.33	4.35
t = -3.684	df = 116	p = <.01	

* Scale scores could have ranged from 11 to 55. The overall mean for the sample was 47.40 with a standard deviation of 4.97.

TABLE 34: Sample Study Comparison of Celebration & Recognition Subscale Scores Among Nominally Scaled Demographic Variable Groups

Demographic Variable	n	$\bar{x}$ *	s.d.
Occupation			
K-12 Educator	40	27.85	2.75
Extension Educator	71	25.69	3.53
t = 3.337	df = 109	p = <.01	
Gender			
Female	75	26.91	3.51
Male	43	25.95	3.08
t = 1.483	df = 116	p = .141	
4-H Volunteer			
Yes	40	25.73	3.64
No	75	27.00	3.09
t = -1.977	df = 113	p = .050	
School-Based Advisor			
Yes	40	26.98	3.16
No	79	26.28	3.52
t = 1.056	df = 117	p = .293	
Community-Based Advisor			
Yes	69	25.67	3.52
No	50	27.68	2.88
t = -3.319	df = 117	p = <.01	

* Scale scores could have ranged from 5 to 25. The overall mean for the sample was 22.58 with a standard deviation of 3.09.

subscale (t=3.337, df=109, p=<.01). In all cases K-12 educators scored statistically significantly higher than did Extension professionals.

The same trend was observed with regards to community-based advisors and all subscales: the community needs subscale (t =-.4641, df= 117.99, p= <.01), the learning objectives subscale (t=-3.330, df=118, p=>.01), the youth voice subscale (t=-.623, df=114.981, p=. 01), the orientation and training subscale (t=-3.692, df=118, p=.000), the planning and implementation subscale (t=-3.002, df=115.681, p=<.01), the reflection subscale (t=4.444, df=115, p=<.01), the evaluation subscale (t=-3.684, df=116, p=<.01), and the celebration and recognition subscale (t=-3.319, df=117, p=<.01). In all cases non-community-based advisors scored statistically significantly higher than did community-based advisors.

There was only one other statistically significant difference observed with regards to demographic variables and scores on individual subscales. Those who did not volunteer with 4-H programs scored statistically significantly higher with regards to the celebration and recognition subscale (t=-1.977, df=113, p=.050).

Table 35 summarizes sample study correlations among subscale scores and interval scaled demographic variables. While both negative and positive correlations existed among subscale scores and average volunteer hours, age, and years employed, it should be noted that all were in the magnitude of negligible and low using Davis' (1971) convention.

TABLE 35: Sample Study Correlations Among Subscale Scores and Interval Scaled Demographic Variables

Subscale	Avg. Volunteer Hours	Age	Years Employed
Community Needs	-.018	.105	.024
Learning Objectives	-.010	.193	.066
Youth Voice	.026	.186	.066
Orientation & Training	.010	.151	.088
Planning & Implementation	.021	.190	-0.12
Reflection	-.034	.244	.070
Evaluation	-.060	.148	< -.010
Celebration & Recognition	.053	.228	.052

CHAPTER V

CONCLUSIONS & RECOMMENDATIONS

(An article to be submitted for publication in the Journal of Agricultural Education)

Introduction

John Dewey stated that for education "to accomplish its ends both for the individual and for the society it must be based upon experience – which is always the actual life-experience of some individual" (1938, p. 89). To date, many researchers refer back to the work of Dewey, and others, in order to defend and lobby for experiential education. Although the term "service-learning" only emerged in the literature in the 1960's, the concept of service-learning has been in existence for many years. In addition, Jacoby and Associates wrote, "As a pedagogy, service-learning is education that is grounded in experience as a basis for learning and on the centrality and intentionality of reflection designed to enable learning to occur" (1996, p.9).

As a form of experiential education, service-learning is entrenched in well-established educational and cognitive theories of constructivism, pragmatism, progressivism, and experiential education. These theoretical foundations envelop a wide range of cognitive and affective outcomes for students. The educational domains of experiential learning programs include students' "intellectual, social, personal, civic, moral, and vocational development" (as cited in Furco & Billig, 2002, p. 27).

Service-learning is a form of experiential learning where students apply knowledge, skills, critical thinking and wise judgment to solve genuine community needs

(Toole & Toole, 1994). The practice of service-learning is often closely tied to formal or academic learning environments in school-based and community-based settings. Students in these service-learning programs engage the community in identifying needs, establish learning objectives, empower youth throughout the process, learn about the organization and skills required for serving, conduct the service project, reflect on their experiences, evaluate the process, and celebrate their successes. Service-learning programs have grown greatly over the past ten years, involving more than six million students at the secondary level alone (Billig & Waterman, 2003).

Through its Communities as Places of Learning Initiative, the Points of Light Foundation sought to bridge the gap between classroom and community learning by working with communities to create service-learning opportunities for youth. Research indicates that actively involving young people in the community and connecting these experiences with the classroom relates positively to young people's social, personal and intellectual development (Points of Light Foundation, 1997).

The Foundation assisted the National Youth Leadership Council, a national advisory committee of volunteer and nonprofit organizations, and four California sites to develop tools, to assist agencies and schools to create service opportunities for youth. The developments of these resource and training materials helped agencies create service-learning opportunities for youth that enhanced classroom education. The result of this project was the development of an eight-step model for effective service-learning programs (Points of Light Foundation, 1997). The model included community needs, learning objectives, youth voice and planning, orientation and training, action, reflection,

evaluation, and celebration and recognition. Understanding this model provides a conceptual framework for the design of the survey instrument.

Given the prevalence of service-learning, it is surprising to see so little research in the field. The vast majority of published service-learning literature includes program evaluations or anecdotal descriptions, and researchers have not established an instrument that measures the knowledge of practitioners with regard to service-learning. (Billig & Waterman, 2003). Clearly, more rigorous and replicable research is needed in the field of service-learning.

Purpose

The purpose of this study was to develop a survey instrument to measure practitioner knowledge of service-learning and to make future recommendations based on information gathered in order to guide the statewide service-learning initiatives of Tennessee 4-H Youth Development and the Tennessee Department of Education. The objectives of this study were to:

1. develop a reliable and valid instrument to measure knowledge of service-learning;
2. examine the relationship between number of hours of service-learning training and score on the measurement instrument;
3. examine the relationship between number of service-learning projects directed and score on the measurement instrument;
4. examine the relationship between selected other demographics and score on the measurement instrument; and

5. make recommendations for future statewide program direction for the Tennessee 4-H program in the area of service-learning.

Methodology

Sample

The sample utilized in this study included employees of the University of Tennessee Agricultural Extension Service. Specifically, these employees were Extension personnel with 4-H assignments as a part of their positions. The sample also included a random sample of other educators who have participated in the Lions Quest Skills for Action service-learning training offered by the Tennessee Commission on National and Community Service and the Tennessee Department of Education. This is one of the many trainings that certify high school teachers to teach freestanding service-learning courses in Tennessee.

Through a random numbers generator computer program, 200 were randomly selected for participation in the study. Two hundred participants were selected because that is the approximate number needed for a 95% confidence interval according to Warmbrod (1965). Forty participants were selected to participate in the pilot study after the study sample was selected to eliminate the possibility of members of the pilot group being reselected for participation in the actual study.

A test-retest study was conducted with a purposefully drawn sample of 20 Extension staff members. The purposefully drawn sample was selected based upon the participants's response rate in the sample study.

Instrumentation

An instrument to measure practitioner knowledge of service-learning was developed by the researcher, based upon the Points of Light Foundation eight-step model for effective service-learning programs. Likert-type scale questions were developed in each of the eight subscales of the model in an attempt to measure practitioner knowledge in each of the eight subscales.

After development of the instrument, a panel of experts examined it in order to establish a high level of content validity. This panel of experts included service-learning professionals and researchers who were internationally known for their reputation in service-learning, including representatives from the Kellogg Foundation, the Points of Light Foundation, private service-learning evaluation and consulting firms, the Tennessee Commission on National and Community Service, and Tennessee 4-H Youth Development staff. All recommended changes from the panel of experts were implemented into the survey.

Data Collection

The survey was conducted by a direct mailing. The survey was mailed to the sample with a cover letter outlining the need for the survey and that the survey was confidential. The point that the survey was voluntary was also stressed. A self-addressed stamped envelope was included for return of the survey. The initial mailing of the pilot test occurred on March 12, 2004, followed by a second letter and survey to non-respondents two weeks later. The response rate for the pilot study was 67.5%. The initial mailing of the sample study occurred on April 19, 2004, followed by a second

letter and survey to non-respondents two weeks later. The response rate for the sample study was 62.5%. The mailing of the test-retest study occurred on May 18, 2004. The response rate for the test-retest study was 65%.

Data Analysis

The data were analyzed using the SPSS version 12.0 for Windows. Descriptive statistics including frequencies, percentages, means, modes, standard deviations, range, percents, and frequencies were utilized. Chi Squares, T-Tests, correlation coefficients, and coefficients of stability were used to analyze the relationships in the study.

Findings

The first objective sought to develop a reliable and valid instrument to measure knowledge of service-learning. In an attempt to eliminate non-response error, early respondents were compared to late respondents in both the pilot and sample studies. Miller and Smith (1983) indicated that late respondents are often similar to non-respondents. Through T-Tests and Chi Square statistical analysis, late respondents were compared to early respondents, in an attempt to justify generalizing from the respondents to the sample. Statistical analysis failed to produce any statistically significant difference between early and late respondents on all key variables. Therefore non-response was considered to be random in both the pilot and sample study.

The researcher then sought to examine the internal consistency of the instrument. Internal consistency coefficients were calculated using Cronbach's Alpha. Initial internal

consistency coefficients ranged from 0.76 to 0.87 for the pilot study, from 0.72 to 0.83 for the sample study, both well above the 0.66 level set *a priori*.

Questions were omitted from each subsection in order to develop the most internally consistent instrument. Questions omitted in the pilot study were included in the pilot sample study. Questions omitted in the sample study were included in the test-retest study. Table 36 summarizes the number of questions that were omitted for each of the eight subscales and the final internal consistency coefficients.

Coefficients of stability were then calculated with regards to the test-retest study. Table 37 summarizes the coefficients of stability with regards to each subscale with all

TABLE 36: Internal Consistency Results

Instrument Subscale	Pilot Study		Sample Study		Test-Retest Study
	No. of Questions Omitted	Final Internal Consistency Coeff.	No. of Questions Omitted	Final Internal Consistency Coeff.	Internal Consistency Coefficient
Community Needs	1	0.76	3	0.78	0.68
Learning Objectives	1	0.84	1	0.85	0.48
Youth Voice	2	0.81	5	0.85	0.34
Orientation & Training	7	0.89	2	0.76	0.45
Planning & Implementation	3	0.89	2	0.79	0.82
Reflection	3	0.87	2	0.79	0.69
Evaluation	5	0.93	0	0.76	0.77
Celebration & Reflection	2	0.92	1	0.82	0.70

TABLE 37: Coefficients of Stability on Each Subscale and the Total Instrument Score

Instrument Subscale	Coefficient of Stability	
	Entire Instrument	Most Reliable Instrument
Community Needs	0.68	0.33
Learning Objectives	0.58	0.54
Youth Voice	0.17	0.46
Orientation & Training	0.23	0.42
Planning & Implementation	0.48	0.58
Reflection	0.75	0.71
Evaluation	0.46	0.46
Celebration & Reflection	0.60	0.53
Total Instrument Score	0.38	0.57

questions being included, and with regards to each subscale utilizing the most reliable scales from the sample study. While all of the coefficients of stability were positive, only the reflection subscale measured above the 0.70 level set *a priori*. Data regarding the stability of the instrument appeared to be low.

Objective two sought to examine the relationship between number of hours of service-learning training and score on the measurement instrument. Correlation coefficients were calculated between the score on each of the eight subscales on the survey and the number of days of reported service-learning training, as reported in Table 38. According to Davis' (1971) convention, a negligible positive correlation exists between days of service-learning training and all subscales, excluding the evaluation subscale. A low positive correlation is present between days of service-learning training

TABLE 38: Correlation Between Most Reliable Scales and Days of Service-Learning Training

	Service Learning Training Days Pearson Correlation
Community Need (n=106)	.054
Learning Objectives (n=106)	.096
Youth Voice (n=104)	.087
Orientation & Training (n=106)	.094
Planning & Implementation (n=107)	.094
Reflection (n=104)	.087
Evaluation (n=105)	.105
Celebration & Recognition (n=105)	.084

and scores on the evaluation subscale of the instrument. Slightly higher positive correlations were observed in the pilot study, but still remained in the low to moderate range.

In order to satisfy objective three, the relationship between the numbers of service-learning projects directed or participated in and the score on the survey was examined, as reported in Table 39. Note that according to Davis' (1971) convention, a positive negligible correlation existed between number of service-learning projects directed or participated in and score of the planning and implementation, reflection, and evaluation subscales of the instrument. A low positive correlation existed between all other subscales and number of service-learning projects directed or participated in.

TABLE 39: Correlation Between Most Reliable Scales and Number of Service-Learning Projects Directed or Participated In

	Number of Service Learning Projects Pearson Correlation
Community Need (n=106)	.110
Learning Objectives (n=106)	.119
Youth Voice (n=104)	.127
Orientation & Training (n=106)	.110
Planning & Implementation (n=107)	.090
Reflection (n=104)	.041
Evaluation (n=105)	.043
Celebration & Recognition (n=105)	.140

Results in the pilot study ranged from moderate negative correlations to low positive correlations.

Objective four sought to examine differences on subscales among known demographic variables. In the pilot study the only statistically significant differences were observed with regards to occupation and the learning objectives subscale ($t = 2.06$, $df = 24$, $p = .050$), the reflection subscale ($t = 2.999$, $df = 24$, $p = <.01$), and the celebration and recognition subscale ($t = 2.302$, $df = 22.32$, $p = .031$). In all three instances K-12 educators scored statistically significantly higher than Extension professionals in the respective subscales. No other significant differences were observed

with regards to demographic variables and score in each subscale of the instrument in the pilot study.

Statistically significant differences were observed with regards to occupation and all subscales in the sample study: the community needs subscale (t = 3.94, df= 102.94, p= <.01), the learning objectives subscale (t=3.43, df=110, p=<.01), the youth voice subscale (t=3.076, df=104.85, p=<.01), the orientation and training subscale (t=3.303, df=111, p=<.01), the planning and implementation subscale (t=3.029, df=111, p=<.01), the reflection subscale (t=4.660, df=108, p=<.01), the evaluation subscale (t=3.821, df=109, p=<.01), and the celebration and recognition subscale (t=3.337, df=109, p=<.01). In all cases K-12 educators scored significantly higher than did Extension professionals.

The same trend was observed with regards to community-based advisors and all subscales in the sample study: the community needs subscale (t =-.4641, df= 117.99, p= <.01), the learning objectives subscale (t=-3.330, df=118, p=>.01), the youth voice subscale (t=-.623, df=114.981, p=. 01), the orientation and training subscale (t=-3.692, df=118, p=.000), the planning and implementation subscale (t=-3.002, df=115.681, p=<.01), the reflection subscale (t=4.444, df=115, p=<.01), the evaluation subscale (t=-3.684, df=116, p=<.01), and the celebration and recognition subscale (t=-3.319, df=117, p=<.01). In all cases non-community-based advisors scored significantly higher than did community-based advisors.

There was only one other statistically significant difference observed in the sample study with regards to demographic variables and scores on individual subscales. Those who did not volunteer with 4-H programs scored statistically significantly higher with regards to the celebration and recognition subscale (t=-1.977, df=113, p=.050).

Correlations among subscale scores and interval scaled demographic variables were also examined. While both negative and positive correlations existed among subscale scores and average volunteer hours, age, and years employed, it should be noted that all were in the magnitude of negligible and low using Davis' (1971) convention. Similar results were reported in the pilot study, with the exception of age and the community needs subscale, where a negative substantial correlation existed.

Conclusions

The following conclusions were based on the findings of this study:

1. Internal consistency of the survey instrument was well above the .66 level set *a priori* in the pilot and sample studies.
2. Internal consistency coefficients dropped dramatically in the test-retest study; with only five of the eight subscales measuring above the .66 level set *a priori.*
3. Stability of the survey instrument was low.
4. Tennessee Extension 4-H professionals self-report a slightly higher average number of days of service-learning training than do Tennessee K-12 educators.
5. Construct validity of the survey instrument was low.
6. Tennessee K-12 educators scored statistically significantly higher in all subscales of the instrument than did Tennessee Extension 4-H professionals.
7. Non-community-based advisors scored statistically significantly higher in all subscales of the instrument than did community-based advisors.

8. School-based advisors scored statistically significantly higher in the planning and implementation subscale than did non-school-based advisors.
9. Those who did not volunteer with 4-H Youth Development programs scored statistically significantly higher with regards to the celebration and recognition subscale than did those who volunteer with 4-H Youth Development programs.

Implications & Recommendations

The most reliable survey instrument should be further developed through research in order to fully develop a valid and reliable instrument. While internal consistency of the instrument was high in the pilot and sample studies, data indicated a low level of validity. Further study is recommended in order to achieve the most reliable and valid instrument. This research may include the further development of questions or rewriting questions that did not score above the .66 level set *a priori*. Future research should engage another panel of experts to fully develop content validity of the survey instrument.

Construct validity appears to be low, however one should also consider the implications if the instrument is measuring accurately. If the instrument is truly measuring accurately then there are implications for the type of training that both K-12 educators and Tennessee 4-H Extension professionals receive. Results in this study indicate that if the instrument is measuring accurately, Tennessee 4-H Youth Development professionals are receiving a less effective type of training than Tennessee K-12 educators. It is recommended that future study be developed to examine the type of trainings offered to both groups, as well as the level at which the trainings are being

offered. Research that examines the type of educational background of each group may directly affect the level at which program officials are able to begin service-learning training.

The most reliable survey instrument should be further studied with known samples in order to fully establish reliability and validity data. Prior to further study, a dynamic service-learning training should be identified utilizing the theoretical framework discussed in this study. The researcher recommends that the survey instrument be administered to the sample prior to this high-quality service-learning training. At the conclusion of the high-quality service-learning training, a post-test should be administered to the same sample. By studying data with groups that are known to receive a high-quality service-learning training, researchers will be able to further develop a valid and reliable instrument.

It is recommended that the most reliable instrument developed in this study be further studied over time with known samples. In this study, respondents were able to self-report the number of training days and the number of service-learning projects directed or participated in. In order to fully establish validity and reliability data, it is recommended that training received and the number of projects directed or participated in be documented over time by researchers. This data should be compared to participant score on the survey instrument. This information should be used to further develop the instrument and add to the validity data of the survey instrument.

It is noted in this study that K-12 educators self-report a smaller average number of days of service-learning training than do Tennessee 4-H Youth Development staff. However, K-12 educators score significantly higher than 4-H Youth Development staff in

all subscales of the instrument. School-based advisors also scored significantly higher in all subscales of the instrument than did non-school-based advisors. The Tennessee state 4-H office should give attention to this study with regards to occupation and whether or not participants are school-based advisors and score on the survey instrument. While care should be given to only generalize the results of this study to the population from which the samples were drawn, it seems clear in this study that of those surveyed, a relationship with a school-based program, whether a K-12 educator and/or a school-based advisor, indicated a higher score in all subscales of the instrument. This may have implications for all community-based organizations. In particular, current service-learning training and resources available to 4-H Youth Development professionals in Tennessee should be evaluated and further developed to provide them with the best possible support from the state program level. Future study should also include researching the effects of work environment and score on the most reliable survey instrument.

Internal consistency data dropped dramatically with regards to the test-retest sample. This decrease would be expected to some degree due to the relatively small, purposefully drawn test-retest sample. Thus, it is recommended that internal consistency be further examined with a larger, truly random test-retest sample.

The instrument was also found to be unstable over time with regards to the test-retest sample. The researcher recommends that the test-retest procedure be conducted with a larger, truly random sample, as opposed to the purposefully drawn sample utilized in this study. The relatively small, purposefully drawn sample that was utilized in this study may have been atypical of the sample utilized in the pilot and sample studies. It is

recommended that further research be conducted with regards to stability of the survey instrument over time, utilizing the most reliable instrument developed in this study and a larger test-retest study.

The researcher also recommends that the Points of Light Foundation eight-step model for effective service-learning programs be subjected to critical scrutiny. While the model appears to have a firm base in theoretical framework, the researcher recommends that further investigation be conducted with regards to the eight-step model. This will further add validity and value to the instrument to measure practitioner knowledge of service-learning.

Through the examination of internal consistency coefficients, the researcher was able to eliminate a total of 16 questions in the sample study. Future research should make a conscious effort to keep the instrument to a limited number of questions, while being careful not to jeopardize the reliability or validity of the instrument. The survey utilized in this study examined 92 variables, with 79 of these being the Likert-type questions measuring the eight subscales. A smaller, more user friendly survey will assist in lowering response error, and could increase response rate.

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APPENDICES

APPENDIX A

PILOT STUDY SURVEY INSTRUMENT

ID # _____

SECTION I

Please provide the following background information as it relates to your experiences with service-learning over the last three years.

1. Over the last three years how many days of service-learning training have you participated in? (8 hour days)

2. Over the last three years how many service-learning projects have you directed or participated in?

SECTION II

Following is a series of 79 statements relating to 8 specific components of the service-learning process described by the Points of Light Foundation. Please indicate the degree to which you agree or disagree with the statements by circling one of the numbers following each. Please respond to all statements.

		Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
1	I would make sure youth consult with the community about its needs before beginning any service-learning project.	1	2	3	4	5
2	I would make sure that youth understand the learning objectives for each service-learning project before implementation.	1	2	3	4	5
3	Allowing youth to provide their own thought is an important component of service-learning.	1	2	3	4	5
4	Orientation is the process of providing information about the workings of an agency and/or a volunteer assignment.	1	2	3	4	5
5	Project planning is at the core of meaningful action.	1	2	3	4	5
6	Reflection is the conscious act of re-examining a service-learning project.	1	2	3	4	5
7	Evaluation allows one to analyze his/her service efforts.	1	2	3	4	5
8	I would not recognize the efforts of volunteers at the end of a service-learning project.	1	2	3	4	5

		Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
9	Determining true community needs is critical in ensuring effective and sustained youth involvement in service-learning.	1	2	3	4	5
10	Identifying learning objectives prior to the service-learning project is important.	1	2	3	4	5
11	I am afraid of youth-led and youth-directed service-learning projects.	1	2	3	4	5
12	Orientation does not include background information about the project or organization.	1	2	3	4	5
13	Planning and preparation are not critical elements of the learning process.	1	2	3	4	5
14	During reflection, youth should examine what they have done, search for meaning and extract lessons about their volunteer and leadership experiences.	1	2	3	4	5
15	Evaluation allows for continuous improvement.	1	2	3	4	5
16	For youth, celebration and recognition reinforces their value to the community.	1	2	3	4	5
17	Genuine community needs may differ from needs perceived by youth.	1	2	3	4	5
18	Identifying learning objectives can assist in setting expectations for a group or individual.	1	2	3	4	5
19	Allowing youth to provide input and leadership improves their personal and academic growth.	1	2	3	4	5
20	I would communicate any rules or regulations to youth as part of the orientation process.	1	2	3	4	5
21	Meaningful action occurs when young people and adults work together to set goals, plan, and address some of the inherent barriers youth face in service-learning.	1	2	3	4	5
22	Reflection allows youth an opportunity to examine whether community needs have been met through their service-learning work.	1	2	3	4	5
23	Learning objectives can be revisited and measured through evaluation.	1	2	3	4	5

		Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
24	Celebration and recognition brings a sense of closure and purpose to the service-learning project.	1	2	3	4	5
25	I would not involve community members in the needs assessment phase of my service-learning project.	1	2	3	4	5
26	Learning objectives help clarify what youth aspire to obtain from the experience.	1	2	3	4	5
27	In service-learning projects I would include youth in the decision making process.	1	2	3	4	5
28	Training differs from orientation in that it is more in-depth and requires the development of skills.	1	2	3	4	5
29	Planning for a service-learning project includes designing goals, envisioning resources, anticipating barriers, mapping out logistics, and assigning proper roles.	1	2	3	4	5
30	Reflection serves as a method of revisiting and reviewing learning objectives.	1	2	3	4	5
31	Evaluation is not an important component of the service-learning process.	1	2	3	4	5
32	Celebration and recognition do not lead to increased learning.	1	2	3	4	5
33	I would make sure that youth interface with members of the community during the needs assessment phase of service-learning.	1	2	3	4	5
34	Learning objectives can only be identified by an adult.	1	2	3	4	5
35	Youth lack the skills necessary to implement a service-learning project.	1	2	3	4	5
36	Volunteering is a way for youth to experience the unfamiliar and test new areas of skill and knowledge.	1	2	3	4	5
37	If proper time is spent in the planning phase, meaningful action is more likely to occur.	1	2	3	4	5
38	If reflection is absent, service-learning does not occur.	1	2	3	4	5
39	Evaluation can serve as a final safety check.	1	2	3	4	5

		Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
40	Celebration and recognition of youth lead to an increased rate of volunteer retention.	1	2	3	4	5
41	I feel confident I know how to get youth and community members together to assess community needs.	1	2	3	4	5
42	Learning objectives identify what the youth should understand and/or be able to do after the completion of the project.	1	2	3	4	5
43	Youth are assets in the service-learning process.	1	2	3	4	5
44	Orientation and training will not develop a better learning environment.	1	2	3	4	5
45	I would not consult youth when planning a service-learning project.	1	2	3	4	5
46	The service youth provide does not have to make a meaningful contribution to the community, as long as they feel good about it.	1	2	3	4	5
47	Reflection is the least important component of service-learning.	1	2	3	4	5
48	I would include beneficiaries of the service-learning project in the evaluation process.	1	2	3	4	5
49	Celebration and recognition are not important components of the service-learning process.	1	2	3	4	5
50	True community needs cannot be assessed prior to implementing a service-learning project.	1	2	3	4	5
51	Learning objectives are not an integral part of the service-learning process.	1	2	3	4	5
52	There is nothing wrong with selecting the service-learning project without consulting the youth participants.	1	2	3	4	5
53	Orientation and training ensures that young people feel comfortable in their service placement.	1	2	3	4	5
54	Actively and effectively involving youth is not an important component of service-learning.	1	2	3	4	5
55	Reflection activities can take place in any curricular area.	1	2	3	4	5

		Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
56	Evaluation allows the project leader to make changes that improve the effectiveness, scope, and success of service-learning.	1	2	3	4	5
57	Recognition received from peers and members of the community is important.	1	2	3	4	5
58	By involving community members in needs assessment, a personal connection with the community can be developed.	1	2	3	4	5
59	I would make sure that youth assist in the development of learning objectives.	1	2	3	4	5
60	Youth can come up with project ideas that I never would have thought of.	1	2	3	4	5
61	Quality orientation and training reduces liability.	1	2	3	4	5
62	Reflection should provide a 'reality check' that guards against reinforcing inaccurate perceptions/biases.	1	2	3	4	5
63	I would utilizeonly formal evaluation in service-learning.	1	2	3	4	5
64	Youth can learn from members of the community as they jointly identify genuine community needs.	1	2	3	4	5
65	Service-learning projects do not require the identification of learning objectives.	1	2	3	4	5
66	Youth bring fresh ideas for problem solving.	1	2	3	4	5
67	Orientation and training are not important in the service-learning field. What is important is the action.	1	2	3	4	5
68	Reflection integrates service and the related learning into one's life.	1	2	3	4	5
69	I would nurture youth as the actors and leaders throughout the service-learning process.	1	2	3	4	5
70	Only those providing service should participate in the evaluation component.	1	2	3	4	5
71	Service-Learning allows youth to be viewed as resources rather than recipients of service projects.	1	2	3	4	5
72	It is important to conduct orientation and training before every service-learning project.	1	2	3	4	5

		Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
73	Reflection is an essential element of service-learning.	1	2	3	4	5
74	Evaluation is only important if it is a requirement of funding received for the service-learning project.	1	2	3	4	5
75	Youth are enthusiastic participants in service-learning projects.	1	2	3	4	5
76	I would not address student expectations during orientation and training.	1	2	3	4	5
77	I would use reflection in every service-learning project.	1	2	3	4	5
78	Non-formal evaluation is equally important to formal evaluation of a service-learning project.	1	2	3	4	5
79	Young people play an important role in all stages of service-learning.	1	2	3	4	5

SECTION III

To finish this survey, please provide the following information about yourself. All information is confidential.

Which of the following best describes your occupation?

- ☐ K-12 Educator
- ☐ Extension Professional
- ☐ Other (please specify) _____

What is your gender?

- ☐ Female
- ☐ Male

What is your age? _____

How many years have you been employed in your current job? _____

Please check all that apply to you:

- ☐ I am an advisor to a community-based youth group (Scouts, Boys & Girls Club, etc.)
- ☐ I am an advisor to a school-based youth group (FFA, club sponsor, coach, etc.)
- ☐ I volunteer with 4-H Youth Development programs
- ☐ I volunteer in my community

On average, how many hours per week do you volunteer in your community? _____

APPENDIX B

PILOT STUDY COVER LETTER

AGRICULTURAL EXTENSION SERVICE
THE UNIVERSITY OF TENNESSEE INSTITUTE OF AGRICULTURE

State 4-H Office
205 Morgan Hall
2621 Morgan Circle
Knoxville, TN 37996-4510
Phone: 865-974-7434
Fax: 865-974-1628
www.utextension.utk.edu/4h

«First_Name» «Last_Name»
«Job_Title»
«Address»

Dear «First_Name»:

The Agricultural & Extension Education Program at The University of Tennessee is conducting a study of teachers and Extension professionals in order to develop an instrument that measures knowledge of service-learning based upon a model developed by The Points of Light Foundation. Recommendations based on information gathered from this study will be provided to the Tennessee Department of Education and to the Tennessee 4-H Youth Development program. We hope that you will help us accomplish this goal by participating in this study.

Your answers are confidential. The questionnaire identification number, located in the upper right-hand corner of the questionnaire, is used for mailing purposes only. This is so we can check your name off the mailing list when you return your questionnaire.

Your participation is voluntary. However, we would greatly appreciate your response. Return of the questionnaire constitutes your informed consent to participate and your willingness for us to use the results in a confidential manner.

Enclosed with this letter and questionnaire is a self-addressed stamped envelope for returning the questionnaire. Please return the completed survey by April 1, 2004.

Patrick Hamilton, a graduate student in Agricultural & Extension Education is working on this study. Results of this survey will be made available through The University of Tennessee. If you would like a free summary of the results or if you have questions or need additional information, please contact Patrick at 865-974-2128 or via e-mail at patrick@utk.edu.

Thank you for your assistance!

Sincerely,

M. Patrick Hamilton

Dr. Randol Waters
Professor & Program Leader

A State Partner in the Cooperative Extension System
THE UNIVERSITY OF TENNESSEE, U.S. DEPARTMENT OF AGRICULTURE, AND COUNTY GOVERNMENTS COOPERATING
The Agricultural Extension Service offers its programs to all eligible persons regardless of race, color
national origin, sex or disability and is an Equal Opportunity Employer.

APPENDIX C

PILOT STUDY NON-RESPONE COVER LETTER

AGRICULTURAL EXTENSION SERVICE
THE UNIVERSITY OF TENNESSEE INSTITUTE OF AGRICULTURE

State 4-H Office
205 Morgan Hall
2621 Morgan Circle
Knoxville, TN 37996-4510
Phone: 865-974-7434
Fax: 865-974-1628
www.utextension.utk.edu/4h

«First_Name» «Last_Name»
«Job_Title»
«Address»

Dear «First_Name»:

About two weeks ago we wrote to you seeking information about your knowledge of service-learning. Your input was solicited as part of a research project of the Agricultural and Extension Education Program of the University of Tennessee. As of today we have not received your completed questionnaire. If you have already returned the questionnaire and we simply haven't received it yet, thank you very much for your response and you may disregard this second notice.

If, however, you haven't returned it yet, or you have misplaced the original survey, a second copy is enclosed for your review. We would greatly appreciate you taking 15 to 20 minutes to complete it and return it in the enclosed self-addressed stamped envelope. Since this is a sample study, every response is important in order for us to draw conclusions from our research.

As a reminder, your participation in this study is voluntary, and you can be assured that your responses will be treated confidentially. However, if for some reason, you do not wish to participate in our study, please return your unanswered survey in the envelope. Upon receipt of your survey, we will remove your name from our list and not contact you again.

Thank you again, «First_Name», for your participation. As mentioned in the previous letter, if you have any questions, or would like to receive a summary report of the findings from this study, please contact Patrick at 865-974-2128 or via e-mail at patrick@utk.edu.

Thank you for your participation!

Sincerely,

M. Patrick Hamilton

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APPENDIX D

SAMPLE STUDY SURVEY INSTRUMENT

ID # _____

SECTION I

Please provide the following background information as it relates to your experiences with service-learning over the last three years.

1. Over the last three years how many days of service-learning training have you participated in? (8 hour days)

2. Over the last three years how many service-learning projects have you directed or participated in?

SECTION II

Following is a series of 79 statements relating to 8 specific components of the service-learning process described by the Points of Light Foundation. Please indicate the degree to which you agree or disagree with the statements by circling one of the numbers following each. Please respond to all statements.

		Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
1	I would make sure youth consult with the community about its needs before beginning any service-learning project.	1	2	3	4	5
2	I would make sure that youth understand the learning objectives for each service-learning project before implementation.	1	2	3	4	5
3	Allowing youth to provide their own thought is an important component of service-learning.	1	2	3	4	5
4	Orientation is the process of providing information about the workings of an agency and/or a volunteer assignment.	1	2	3	4	5
5	Project planning is at the core of meaningful action.	1	2	3	4	5
6	Reflection is the conscious act of re-examining a service-learning project.	1	2	3	4	5
7	Evaluation allows one to analyze his/her service efforts.	1	2	3	4	5
8	I would not recognize the efforts of volunteers at the end of a service-learning project.	1	2	3	4	5

		Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
9	Determining true community needs is critical in ensuring effective and sustained youth involvement in service-learning.	1	2	3	4	5
10	Identifying learning objectives prior to the service-learning project is important.	1	2	3	4	5
11	I am afraid of youth-led and youth-directed service-learning projects.	1	2	3	4	5
12	Orientation does not include background information about the project or organization.	1	2	3	4	5
13	Planning and preparation are not critical elements of the learning process.	1	2	3	4	5
14	During reflection, youth should examine what they have done, search for meaning and extract lessons about their volunteer and leadership experiences.	1	2	3	4	5
15	Evaluation allows for continuous improvement.	1	2	3	4	5
16	For youth, celebration and recognition reinforces their value to the community.	1	2	3	4	5
17	Genuine community needs may differ from needs perceived by youth.	1	2	3	4	5
18	Identifying learning objectives can assist in setting expectations for a group or individual.	1	2	3	4	5
19	Allowing youth to provide input and leadership improves their personal and academic growth.	1	2	3	4	5
20	I would communicate any rules or regulations to youth as part of the orientation process.	1	2	3	4	5
21	Meaningful action occurs when young people and adults work together to set goals, plan, and address some of the inherent barriers youth face in service-learning.	1	2	3	4	5
22	Reflection allows youth an opportunity to examine whether community needs have been met through their service-learning work.	1	2	3	4	5
23	Learning objectives can be revisited and measured through evaluation.	1	2	3	4	5

		Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
24	Celebration and recognition brings a sense of closure and purpose to the service-learning project.	1	2	3	4	5
25	I would not involve community members in the needs assessment phase of my service-learning project.	1	2	3	4	5
26	Learning objectives help clarify what youth aspire to obtain from the experience.	1	2	3	4	5
27	In service-learning projects I would include youth in the decision making process.	1	2	3	4	5
28	Training differs from orientation in that it is more in-depth and requires the development of skills.	1	2	3	4	5
29	Planning for a service-learning project includes designing goals, envisioning resources, anticipating barriers, mapping out logistics, and assigning proper roles.	1	2	3	4	5
30	Reflection serves as a method of revisiting and reviewing learning objectives.	1	2	3	4	5
31	Evaluation is not an important component of the service-learning process.	1	2	3	4	5
32	Celebration and recognition do not lead to increased learning.	1	2	3	4	5
33	I would make sure that youth interface with members of the community during the needs assessment phase of service-learning.	1	2	3	4	5
34	Learning objectives can only be identified by an adult.	1	2	3	4	5
35	Youth lack the skills necessary to implement a service-learning project.	1	2	3	4	5
36	Volunteering is a way for youth to experience the unfamiliar and test new areas of skill and knowledge.	1	2	3	4	5
37	If proper time is spent in the planning phase, meaningful action is more likely to occur.	1	2	3	4	5
38	If reflection is absent, service-learning does not occur.	1	2	3	4	5
39	Evaluation can serve as a final safety check.	1	2	3	4	5

		Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
40	Celebration and recognition of youth lead to an increased rate of volunteer retention.	1	2	3	4	5
41	I feel confident I know how to get youth and community members together to assess community needs.	1	2	3	4	5
42	Learning objectives identify what the youth should understand and/or be able to do after the completion of the project.	1	2	3	4	5
43	Youth are assets in the service-learning process.	1	2	3	4	5
44	Orientation and training will not develop a better learning environment.	1	2	3	4	5
45	I would not consult youth when planning a service-learning project.	1	2	3	4	5
46	The service youth provide does not have to make a meaningful contribution to the community, as long as they feel good about it.	1	2	3	4	5
47	Reflection is the least important component of service-learning.	1	2	3	4	5
48	I would include beneficiaries of the service-learning project in the evaluation process.	1	2	3	4	5
49	Celebration and recognition are not important components of the service-learning process.	1	2	3	4	5
50	True community needs cannot be assessed prior to implementing a service-learning project.	1	2	3	4	5
51	Learning objectives are not an integral part of the service-learning process.	1	2	3	4	5
52	There is nothing wrong with selecting the service-learning project without consulting the youth participants.	1	2	3	4	5
53	Orientation and training ensures that young people feel comfortable in their service placement.	1	2	3	4	5
54	Actively and effectively involving youth is not an important component of service-learning.	1	2	3	4	5
55	Reflection activities can take place in any curricular area.	1	2	3	4	5

		Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
56	Evaluation allows the project leader to make changes that improve the effectiveness, scope, and success of service-learning.	1	2	3	4	5
57	Recognition received from peers and members of the community is important.	1	2	3	4	5
58	By involving community members in needs assessment, a personal connection with the community can be developed.	1	2	3	4	5
59	I would make sure that youth assist in the development of learning objectives.	1	2	3	4	5
60	Youth can come up with project ideas that I never would have thought of.	1	2	3	4	5
61	Quality orientation and training reduces liability.	1	2	3	4	5
62	Reflection should provide a 'reality check' that guards against reinforcing inaccurate perceptions/biases.	1	2	3	4	5
63	I would utilize only formal evaluation in service-learning.	1	2	3	4	5
64	Youth can learn from members of the community as they jointly identify genuine community needs.	1	2	3	4	5
65	Service-learning projects do not require the identification of learning objectives.	1	2	3	4	5
66	Youth bring fresh ideas for problem solving.	1	2	3	4	5
67	Orientation and training are not important in the service-learning field. What is important is the action.	1	2	3	4	5
68	Reflection integrates service and the related learning into one's life.	1	2	3	4	5
69	I would nurture youth as the actors and leaders throughout the service-learning process.	1	2	3	4	5
70	Only those providing service should participate in the evaluation component.	1	2	3	4	5
71	Service-Learning allows youth to be viewed as resources rather than recipients of service projects.	1	2	3	4	5
72	It is important to conduct orientation and training before every service-learning project.	1	2	3	4	5

		Strongly Disagree	Somewhat Disagree	Undecided	Somewhat Agree	Strongly Agree
73	Reflection is an essential element of service-learning.	1	2	3	4	5
74	Evaluation is only important if it is a requirement of funding received for the service-learning project.	1	2	3	4	5
75	Youth are enthusiastic participants in service-learning projects.	1	2	3	4	5
76	I would not address student expectations during orientation and training.	1	2	3	4	5
77	I would use reflection in every service-learning project.	1	2	3	4	5
78	Non-formal evaluation is equally important to formal evaluation of a service-learning project.	1	2	3	4	5
79	Young people play an important role in all stages of service-learning.	1	2	3	4	5

SECTION III

To finish this survey, please provide the following information about yourself. Please respond to ALL questions. All information is confidential.

1. Which of the following best describes your occupation?
   - ☐ K-12 Educator
   - ☐ Extension Professional
   - ☐ Other (*please specify*) _____

2. Please check all of the statements below that apply to you:
   - ☐ I am an advisor to a community-based youth group (*Scouts, Boys & Girls Club, 4-H, Little League, etc.*)
   - ☐ I am an advisor to a school-based youth group (*FFA, school club sponsor, school sports coach, etc.*)

3. What is your gender?
   - ☐ Female
   - ☐ Male

4. What is your age? _____

5. How many years have you been employed in your current job? _____

6. On average, how many hours per week do you spend volunteering?
   (*Please enter a number. If none, enter a zero*) _____

7. Do you volunteer with 4-H Youth Development programs?
   Yes_____ No _____

APPENDIX E

SAMPLE STUDY COVER LETTER

AGRICULTURAL EXTENSION SERVICE
THE UNIVERSITY OF TENNESSEE INSTITUTE OF AGRICULTURE

State 4-H Office
205 Morgan Hall
2621 Morgan Circle
Knoxville, TN 37996-4510
Phone: 865-974-7434
Fax: 865-974-1628
www.utextension.utk.edu/4h

«First_Name» «Last_Name»
«Address»
«City», «State» «Zip»

Dear «First_Name»:

The Agricultural & Extension Education Program at The University of Tennessee is conducting a study of teachers and Extension professionals in order to develop an instrument that measures knowledge of service-learning based upon a model developed by The Points of Light Foundation. Recommendations based on information gathered from this study will be provided to the Tennessee Department of Education and to the Tennessee 4-H Youth Development program. We hope that you will help us accomplish this goal by participating in this study.

Your answers are confidential. The questionnaire identification number, located in the upper right-hand corner of the questionnaire, is used for mailing purposes only. This is so we can check your name off the mailing list when you return your questionnaire.

Your participation is voluntary. However, we would greatly appreciate your response. Return of the questionnaire constitutes your informed consent to participate and your willingness for us to use the results in a confidential manner.

Enclosed with this letter and questionnaire is a self-addressed stamped envelope for returning the questionnaire. Please return the completed survey by May 1, 2004.

Patrick Hamilton, a graduate student in Agricultural & Extension Education is working on this study. Results of this survey will be made available through The University of Tennessee. If you would like a free summary of the results or if you have questions or need additional information, please contact Patrick at 865-974-2128 or via e-mail at patrick@utk.edu.

Thank you for your assistance!

Sincerely,

M. Patrick Hamilton

Dr. Randol Waters
Professor & Program Leader

A Some Partner in the Cooperative Extension System
THE UNIVERSITY OF TENNESSEE, U.S. DEPARTMENT OF AGRICULTURE, AND COUNTY GOVERNMENTS COOPERATING
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national origin, sex or disability and is an Equal Opportunity Employer.

APPENDIX F

SAMPLE STUDY NONRESPONSE COVER LETTER

AGRICULTURAL EXTENSION SERVICE
THE UNIVERSITY OF TENNESSEE INSTITUTE OF AGRICULTURE

State 4-H Office
205 Morgan Hall
2621 Morgan Circle
Knoxville, TN 37996-4510
Phone: 865-974-7434
Fax: 865-974-1628
www.utextension.utk.edu/4h

«First_Name» «Last_Name»
«Job_Title»
«Address»

Dear «First_Name»:

About two weeks ago we wrote to you seeking information about your knowledge of service-learning. Your input was solicited as part of a research project of the Agricultural and Extension Education Program of the University of Tennessee. As of today we have not received your completed questionnaire. If you have already returned the questionnaire and we simply haven't received it yet, thank you very much for your response and you may disregard this second notice.

If, however, you haven't returned it yet, or you have misplaced the original survey, a second copy is enclosed for your review. We would greatly appreciate you taking 15 to 20 minutes to complete it and return it in the enclosed self-addressed stamped envelope. Since this is a sample study, every response is important in order for us to draw conclusions from our research.

As a reminder, your participation in this study is voluntary, and you can be assured that your responses will be treated confidentially. However, if for some reason, you do not wish to participate in our study, please return your unanswered survey in the envelope. Upon receipt of your survey, we will remove your name from our list and not contact you again.

Thank you again, «First_Name», for your participation. As mentioned in the previous letter, if you have any questions, or would like to receive a summary report of the findings from this study, please contact Patrick at 865-974-2128 or via e-mail at patrick@utk.edu.

Thank you for your participation!

Sincerely,

M. Patrick Hamilton

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APPENDIX G

TEST-RETEST STUDY COVER LETTER

AGRICULTURAL EXTENSION SERVICE
THE UNIVERSITY OF TENNESSEE INSTITUTE OF AGRICULTURE

State 4-H Office
205 Morgan Hall
2621 Morgan Circle
Knoxville, TN 37996-4510
Phone: 865-974-7434
Fax: 865-974-1628
www.utextension.utk.edu/4h

«First_Name» «Last_Name»
«Address»

Dear «First_Name»:

A few weeks ago you completed a survey for the Agricultural & Extension Education Program at The University of Tennessee. This study is being conducted in order to develop an instrument that measures knowledge of service-learning based upon a model developed by The Points of Light Foundation. In an attempt to develop the most reliable instrument, we are asking that you complete the enclosed survey once again.

Please remember that your answers are confidential and that your participation is voluntary. However, we would greatly appreciate your response. Return of the questionnaire constitutes your informed consent to participate and your willingness for us to use the results in a confidential manner.

Enclosed with this letter and questionnaire is a self-addressed stamped envelope for returning the questionnaire. Please return the completed survey by June 1, 2004.

Patrick Hamilton, a graduate student in Agricultural & Extension Education is working on this study. Results of this survey will be made available through The University of Tennessee. If you would like a free summary of the results or if you have questions or need additional information, please contact Patrick at 865-974-2128 or via e-mail at patrick@utk.edu.

Thank you for your assistance!

Sincerely,

M. Patrick Hamilton

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national origin, sex or disability and is an Equal Opportunity Employer.

VITA

Michael Patrick Hamilton was born June 15, 1978, to Michael Clyde and Julia Kaye Hamilton of Hamblen County, Russellville, Tennessee. He graduated from Morristown-Hamblen High School East in Hamblen County, Morristown, Tennessee, in June 1996. He graduated from the University of Tennessee, Knoxville with a Bachelor of Science degree in agriculture in May of 2001. While attending UT, he became a member of Alpha Gamma Rho fraternity and served as the trainer of UT's mascot, Smokey, during the 1998 and 1999 football seasons.

After graduating, he worked for one year with the Points of Light Foundation and the Tennessee Commission on National and Community Service as the Youth Engaged in Service (YES) Ambassador for Tennessee. In the fall of 2002, he accepted a position with the University of Tennessee College of Agricultural Sciences and Natural Resources, Agricultural and Extension Education Program, as a Graduate Teaching Assistant. While employed in this role, he entered into a Master of Science program in the Agricultural and Extension Education Program to begin his graduate study.

He is a member of The Honor Society of Agriculture Gamma Sigma Delta, the Tennessee Association of Extension 4-H Workers, the Association for Volunteer Administration, and Church Street United Methodist Church.

Presently, he lives in Knox County, Knoxville, Tennessee. He is currently employed with the University of Tennessee Extension Service, Department of 4-H Youth Development, as an Extension Specialist.

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10/20/04
MAB