AN EVALUATION OF THE PERCEIVED EFFECTIVENESS OF THE MUNICIPAL

FORESTER INSTITUTE ON ITS PARTICIPANTS

A Dissertation

by

MELANIE RENA' KIRK

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

December 2009

Major Subject: Agricultural Leadership, Education, and Communications

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Approved by:

Chair of Committee,	Gary E. Briers
Committee Members,	James R. Lindner
	John R. Hoyle
	Scott Cummings
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ABSTRACT

An Evaluation of the Perceived Effectiveness of the Municipal Forester Institute on Its

Participants. (December 2009)

Melanie Rena' Kirk, B.S.; M.S., Southern University and A&M College

Chair of Advisory Committee: Dr. Gary E. Briers

Despite the plethora of strategies used to educate urban foresters, many of the

training programs offered are not being evaluated for effectiveness, regardless of the

entity offering the training, which limits important information on whether the programs

were worth the dollars spent. This study evaluates the effectiveness the Municipal

Forester's Institute (MFI) had on its participants.

The MFI was developed as an in-depth leadership institute to train municipal

foresters in both the managerial and leadership aspects of urban forestry. The research

subjects in this study were the participants of the 2006 MFI. The satisfaction survey

measured the participant satisfaction rate on a 5-point Likert scale (1= Not at all, 2 =

Slightly Satisfied, 3= Somewhat Satisfied, 4= Mostly Satisfied, 5=Completely Satisfied),

and yielded an overall score of "Mostly Satisfied" (4.56). A five point Likert scale

online evaluation was used to measure the behavior change, and change in knowledge of

the study (1 = Strongly Disagree, 2 = Somewhat Agree, 3 = Neither Agree nor Disagree,

4 = Somewhat Agree, 5 = Strongly agree). The behavior change and increase in

knowledge portion of the survey was divided into categories that mirrored the objectives

of the study. These results had statistically significant increases, which were determined

not to have happened by chance. The final section of the survey included three open-

ended questions that participants identified as overwhelmingly positive impacts that the

trainings had on their position, career, and personal life.

Overall, the stakeholders of the Society of Municipal Arborists can be assured

that the participants of the 2006 Municipal Forester Institute were satisfied with the

training; had a substantial increase in knowledge; and positive change in behavior, which

acknowledge this as an effective training program that had a positive impact on its

participants.

DEDICATION

This dissertation is dedicated to two special people in my life.

Della Mae Goldman, who said, "You come from a *LONG* line of *STRONG* black women, who don't know how to give up. So, go'on and cry - get it out, then wipe your tears and get it done, cause you are one of Della's girls and Della's girls DON'T GIVE UP, it's just not in your blood!" I love you Grandma!

Evan Christopher Bailey - Son, if you take anything from this Ph.D. journey, remember, if you don't have to work for the things you want in life, they aren't worth having. Trust me on this one.

ACKNOWLEDGEMENTS

" I have learned that success is to be measured not so much by the position that one has reached in life as by the obstacles which he has overcome while trying to succeed."

- Booker T. Washington

I have to begin by thanking God for taking me THROUGH a journey that only he could of brought me to. Through all of my experiences, I can attest to the wonderful sense of humor God has! I would like to thank my wonderful committee: Dr. James Lindner, Dr. John Hoyle, Dr. Scott Cummings and Dr. Gary Briers (Chair/Superman) for their undying support and understanding. Dr. Charles T. Smith and Dr. C. Darwin Foster insisting that I get my Ph.D. then making sure I never lost sight of attaining that goal, and Dr. Eric Taylor for reminding me that the writing wouldn't just disappear. Mr. Tom Boggus, for seeing something in me that I didn't see in myself, for this I would like to thank him and the Texas AgriLife Extension Service for giving me this opportunity.

I would like to thank my family for standing "in the gap" for me for all of these years. My son Evan (my heart), for understanding the long nights and sitting through classes when I couldn't find a sitter; my mother Eva (my best friend), for praying for me through the entire process and listening to my complaints; my father Edward Pratt for his listening ear and encouragement; and my father Victor C. Kirk for never accepting anything less than the absolute best FROM me and teaching me to require the same FOR myself (YOU created this monster - LOL!); my cousin/sister Darica Flood who has

always been there through the tears and cheers; and my aunt Maxcine Flood for teaching me to appreciate a fine Cognac (I needed each glass).

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NOMENCLATURE

CADRE'	A group of experts working toward a particular purpose
MFI	Municipal Forester Institute
SMA	Society of Municipal Foresters
U&CF	Urban and Community Forestry
USFS	United States Forest Service

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CHAPTER I

INTRODUCTION

Copeland, Koller, and Murrin (1995) stated that there is no topic more relevant to an organization's success than that of its effectiveness. To date, published materials on the effectiveness of urban forestry training programs are limited. However, numerous extension agencies, governmental agencies, and non-profit organizations have executed evaluations of these programs across the nation. Many of these evaluations are being done to measure the satisfaction of participants and not the overall effectiveness of the programs' objectives as originally set by the stakeholders of the respective training program. These incomplete evaluations pose a potential problem to the urban forestry profession, since effectiveness is considered the measurement of the "difference we make in people's lives as a result of programs we conduct" (Diem, 2002, p. 1).

In many cases, assessments are essential to measuring impact because they help to decide whether training programs should be continued or not (Kirkpatrick, 1998). Assessments are also essential in determining the future existence of training entities. This determination is made by showing how the programs contribute to the goals and objectives of the funding agency through an evaluation (Kirkpatrick, 1998). One example of the essential need for assessments is shown in how the US Forest Service (USFS) has recently reduced its budget for the Urban and Community Forestry program

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This dissertation follows the style of *Journal of Agricultural Education and Extension.*

by 25.43 percent from the 2003 budget (see Appendix A). As a result, the USFS has increased its reporting requirements to better reflect the impact its dollars has on local communities. Because of these budgetary issues, it is crucial to focus attention on assessment and evaluation of the educational programs it funds (United States Forest Service, n.d.).

One example of an urban forestry training program with a detailed effectiveness evaluation is the Municipal Forester Institute (MFI). The MFI is a one-week leadership institute designed to train municipal foresters in both the managerial and leadership aspects of urban forestry (see Appendix B). The Society of Municipal Arborists (SMA) has offered this institute as its primary educational program since 2006. The *MFI Instructor Curriculum Guide* (2006) states that its curriculum offers various educational delivery techniques, which include classroom lectures, web-based modules, panel discussions, group exercises, and scenarios. The four focus areas of the institute's curriculum are "Developing a Leadership Approach to Your Position; Thinking and Planning Strategically to Advance Urban Forestry Programs; Working Effectively with Boards, Coalitions, and Non-Profit Organizations; and Managing the Relationship Between People and Trees" (SMA, 2006, p. 2). The SMA established the MFI training cadre, a group of experts working toward a particular purpose, to develop the curriculum and deliver presentations at the institute.

Many of the invited speakers at the MFI are industry experts and higher-level USFS administration. A number of them are also stakeholders in the Institute, either by their affiliation with the SMA, the entity that offers the MFI, or by the time they were

allowed to invest in the program by their employers. In an interview with George

Gonzales, Chief Forester for the City of Los Angeles, California, member of the MFI

stakeholder group, and member of the teaching cadre of 2003, he stated that, he [George]

and a group of other stakeholders "recognized a gap in the information that was

available to urban/municipal foresters, and that gap had to do with leadership,

management, communication, planning, advocacy, and collaborating" (G. Gonzales,

personal communication, April 7, 2008). Hence, the idea of an institute, which later

became the MFI, was born.

Statement of the Problem

Municipal foresters are individuals hired by cities to plant and manage trees in

the areas where people live, work, and play. Watson (2006) reported, "In communities

with urban forestry departments, 78 percent had been created within the last 10 years,"

and as the urban forestry profession has grown, so has the need to offer training

programs for urban forestry professionals (p. 4). These training programs are currently

offered by numerous federal and non-federal entities, using various delivery methods. In

fact, Braun (1979) states, "much of the federal government training effort is focused on

improving present or future competence through short-term training" (p. 3). Likewise,

these training opportunities are either open to the public in the form of conferences and

workshops or limited to employees in the private sector. However, many of the training

programs offered are not being evaluated for impact regardless of the entity offering the

training, which leaves a void in information on whether or not the programs were worth the dollars spent by the American citizens who, through tax dollars, are paying for them (Braun, 1979). As the field of urban forestry advances, many private, non-profit, and governmental agencies have been faced with the responsibility of providing continued education for these professionals.

One such program is the Municipal Foresters' Institute (MFI) offered by the Society of Municipal Arborists (SMA) in conjunction with several other governmental and professional organizations. The SMA Board of Directors and an advisory committee of experts in the field of urban forestry (who recognized the importance of enhancing foresters' leadership skills, stimulating an interest in individual certification, and fostering a more sustainable local urban forestry program) offers a weeklong training institute that administers curriculum applicable to the needs of foresters and the communities they serve (Society of Municipal Arborists, 2006).

Although a large amount of what an urban forester job requires is interaction with people, urban forestry research that focuses on the relationship between trees and people has stopped short of venturing into education evaluation research. It is imperative that urban forestry program developers include evaluations in the program development process. More importantly, these program developers should conduct more in-depth evaluations to measure the effectiveness (impact) of their programs and publish their findings.

Purpose of the Study

According to Mann and Robertson (1996), "the question of *what* to evaluate is crucial to the evaluation strategy" (p. 3). Therefore, it was the intent of the researcher to investigate the effectiveness the Municipal Forester's Institute (MFI) had on its participants, using a post-then-pre evaluation approach. This information will not only be valuable for the stakeholders of this Institute, but the tool may be used as a template for other urban forestry program developers. In addition, this study will provide insight into the importance of conducting more detailed evaluations than the more popularly used satisfaction surveys. These satisfaction surveys represent trainees' affective and attitudinal responses to the training program. However, there is very little reason to believe that how trainees feel about or whether they like a training program will tell researchers much, if anything, about (a) how much they learned from the program (*learning criteria*), (b) changes in their job-related behaviors or performance (*behavioral criteria*), or (c) the utility of the program to the organization (*results criteria*) (Arthur, et al., 2003).

In interviews held with the stakeholders of the MFI, a common overtone existed in the reason behind the development of the MFI: "MFI gives the participants basic tools that they can utilize to improve their leadership skills and most importantly it builds confidence that they are up to the challenge of running and improving municipal forestry programs" (G. Gonzales, personal communication, April 7, 2008). The importance of a training program, centered on leadership and management skills for municipal foresters,

is why it was imperative that an evaluation was done to ensure that the program met those specific objectives outlined in the curriculum guide and reiterated by the stakeholders.

Mann and Robertson (1996) state that although many people fear evaluations because of the possibility that the program will not meet its planned objectives, evaluations should be looked at as a tool to help improve the program rather than deem them good or bad. This point is reiterated by Dixon (1990), who states that evaluations should be used "to improve the design or delivery of learning events" (p. 2). With improvement of the curriculum for the training program as a key reason the stakeholders requested an evaluation, it is the intent of this study to recognize the MFI for its unique role in the urban forestry training arena and not to declare it good or bad; it is also the intent of this study to show whether or not the MFI met the expectations of its stakeholders.

Research Objectives

The following objectives were created to guide this study:

1. Describe the pre- and post-evaluation scores on "Developing a Leadership Approach For Your Position" as described in the *2006 MFI Instructor Curriculum Guide.*

2. Describe the pre- and-post evaluation scores on "Strategic Planning" as outlined in the *2006 MFI Instructor Curriculum Guide.*

3. Describe the pre- and post-evaluation scores on "Working Effectively With Boards, Committees, Coalitions, and Non-Profits" as outlined in the *2006 MFI Instructor Curriculum Guide.*

4. Describe the pre- and post-evaluation scores on "Growing and Enhancing an Urban Forestry Program" as outlined in the *2006 MFI Instructor Curriculum Guide.*

5. Describe the pre- and post-evaluation scores on "Managing the Relationship Between People and Trees" as outlined in the *2006 MFI Instructor Curriculum Guide.*

6. Describe the pre- and post-evaluation scores on "Putting MFI Principles to Action" as outlined in the *2006 MFI Instructor Curriculum Guide.*

7. Describe the differences in gain scores of Objectives 1-6.

This dissertation also seeks to examine the levels of satisfaction and collect impact statements from the participants of the study.

Operational Definitions

Urban Forestry: The care and management of a population of trees within communities in an effort to improve the ecosystem where people live, work, and play. (Miller, 1988)

Arboriculture: A specialized branch of horticulture, which concentrates on the health and maintenance of a single tree. (Miller, 1988)

International Society of Arboriculture: "A worldwide professional organization dedicated to fostering a greater appreciation for trees and to promoting research, technology, and the professional practice of arboriculture". (International Society of Arboriculture, n.d.)

MFI: Municipal Forester Institute – "an exciting new, high-level training opportunity educating professionals in the leadership and managerial aspects of urban forestry programs. This week long intensive educational program delivers a challenging professional growth opportunity to shape a successful community tree care program".

(Society of Municipal Arborists, n.d.)

MFI Teaching Cadre: Instructors at the Municipal Forester Institute.

Municipal Specialist Certification Program: "to provide the public and those in government with a means to identify those professionals who have demonstrated, through a professionally developed exam and education program, that they have a thorough knowledge of establishing and maintaining trees in a community". (International Society of Arboriculture, Municipal specialist certification page, n.d.)

Significance of the Study

Research to advance the technical aspects of urban forestry is plentiful; however, "there is not a comparable amount of literature on how to develop and maintain healthy urban forestry programs" (Wellman and Tipple, 1992, p.16). As a result, several private, non-profit, and governmental agencies have begun to provide continued education opportunities for these municipal program professionals. It is recognized by these agencies that, "unless we have healthy urban forestry programs, we will not have healthy urban forests" (Wellman and Tipple, 1992, p.16). These professional training programs are often planned and delivered by urban forestry professionals with minimal, if any, evaluation included in the curriculum. Many states and non-profit organizations that have traditionally offered these programs will be expected to show their value to and impact on the field of urban forestry beyond attendance and participant satisfaction.

In addition to budgetary setbacks, there are other reasons this study is of interest to the urban forestry profession. For example, there is a vast amount of literature on the importance of evaluation of training programs (Braun, 1979; Diem, 2002; Dixon, 1990; Fitzpatrick, 2004; Mann and Robertson, 1996; Tuckman, 1979), yet it is difficult to find published materials documenting results of training programs offered in the field of urban forestry and which of the suggested models would work best in the urban forestry training arena.

In any study the researcher must put forth items that are constant and understood throughout the study; these items are labeled as assumptions of the study.

Study Assumptions

1.	All participants had a basic level of knowledge of urban and community forestry and arboriculture.

2.	 All participants were experienced enough about municipal forestry to understand the terminology and techniques explained in the curriculum.

3.	Participants completing the study will respond honestly and openly about their experiences at the Municipal Forester Institute and on their jobs.

4.	The instrument used in the evaluation will accurately measure the impact of the MFI training on the participants.

5.	The term Municipal Forester will stand for the community forester who cares for trees in all cities, provinces, commonwealths, and areas that are on the local level of government.

6.	Urban Forestry will stand for the branch of forestry that focuses on the management of trees in and around the places where people live, work, and play; this includes rural communities and suburban districts.

Delimitations

This study was delimited to seventy-five participants who attended the Municipal Foresters Institute in Lake Arrowhead, California in February 2006. These individuals represented twenty-six of the fifty United States of America, while there were three individuals from Canada. Forty-one of the individuals were members of the SMA when they registered for the Institute, but only thirteen of the individuals worked for entities that had SMA accredited programs. Only four of the urban forestry programs represented had over fifty people employed in their departments. Of the remaining seventy-one programs only a staggering twenty-four came from programs with over ten employees.

Limitations

The purpose of this study was to investigate the impact attending the Municipal Forester's Institute (MFI) had on its participants; however, there are a few limitations.

1. The participants were not a geographically diverse representation of the total population of municipal foresters. Many were from California, while others traveled from as far away as Alaska and Newfoundland. As a result, the population was not an accurate representation of the municipal foresters across the nation.

2. The participants were from municipalities that were able to send their employees to a fairly expensive, weeklong institute. Therefore, it can be assumed that the work environments of the participants are environments that embrace a more contemporary approach to municipal arboriculture and will possibly support the use of advanced techniques, such as those learned at the institute, on the job.

3. A convenience sample of municipal foresters was used for this study. Due to their willingness to attend, the participants were potentially more open to learning new techniques than were those who did not attend.

Organization of the Dissertation

Chapter II includes a literature review including the following topics:

1. History of Urban Forestry

2. Evaluation Theories

3. Evaluations

4. Agricultural Evaluations

5. Natural Resource Evaluations

6. Urban Forestry Evaluations

7. Conceptual Framework

8. Literature Supporting the Objectives of this Study

Chapter III outlines the method and procedure of this study.

Chapter IV includes the results and analysis of the data and discussion of the findings.

Chapter V includes a summary of the study and recommendations for future evaluation

in Urban Forestry.

CHAPTER II

LITERATURE REVIEW

History of Forestry

One cannot begin a discussion on the history of urban forestry without mentioning the history of traditional forestry from which urban forestry is deeply rooted. "Forestry" is traditionally defined as " the science and art of managing forests so they will yield continuously the maximum volume and quality of wood products, values, and influences. It involves the production growth, and protection of forests trees for the greatest number of benefits that meet the desires or need of the owner" (Weaver, 1952, p. 3). Those needs and desires are many, from timber production, and agroforestry, to nature tourism, and the protection of water resources. Early settlers began cutting timber to build homes, and clear areas for agriculture (Weaver, 1952). In 1876, after many decades of misuse of forested lands and natural resources, Congress set aside $2,000 for the development of a federal office to solely concentrate on forestry (Bergoffen, 1976). From its inception, the U.S. Forest Service (USFS) has become the leaders in forestry training, research and policy, while supporting job training programs for foresters and developing jobs for many natural resource professionals in the forestry arena (Bergoffen, 1976). Out of this forward thinking mentality came the establishment of the Cooperative Forestry Division of the USFS, which housed the Urban Forestry Program for the US Forest Service.

History of Urban Forestry

According to Jorgensen (1970), the term "urban forestry" is a relatively new term in the forestry management discipline. However, Grey and Deneke (1978) state, "The use of trees to enhance the environment and many of the principles relating to their care are extremely old. Indeed, one can find biblical reference to the planting of trees in the Garden of Eden" (p. 2). Elmendorf, Watson, and Lilly (2005) note the "earliest community forest in America was established in 1640 in Newington, New Hampshire" (p. 138). However, if one was to reference a more governmentally documented history of urban forestry, then the planting of trees in Boston Common, the "oldest park in America," as a place for Bostonians to allow their cattle to graze, would be one of the original urban forest in the United States (City of Boston, n.d.).

New York's Central Park, the first landscaped park in the United States, was designed in 1853 and is currently one of the most popular examples of urban forestry in the world (Blackmar and Rosenzweig, n.d.). In 1865, Fredrick Law Olmsted, the designer of New York's Central Park, designed Prospect Park in Brooklyn and exactly ten years later Congress "banned the unauthorized cutting or injury of trees on government property" (Louisiana Public Broadcasting, n.d.). This was the first known tree regulation, or tree protection law in the United States. By the year 1882, Arbor Day, a holiday that encourages people to plant and care for trees, which originated in Nebraska in 1872, was being celebrated nationwide (National Arbor Day Foundation, n.d.). These subtle occurrences of urban forestry and tree protection lawsuits were all

brought to the forefront in the 1950s and 1960s when Dutch Elm Disease virtually wiped

out the entire population of American elms. Thousands of streets that were full of trees

and dense canopies were, at that time, clear-cut and bare, raising awareness to the value,

both aesthetically and environmentally, of urban trees. It was around 1965 that college

professor Eric Jorgensen coined the phrase "Urban Forestry" in an attempt to find an

appropriate title for a student's thesis. He defined urban forestry as, "a specialized

branch of forestry (that) has as its objective the cultivation and management of trees for

their physiological, sociological, and economic well-being of urban society" (Gerhold

and Frank, 2002, p. 3). However, it wasn't until 1978, when Congress passed the

Cooperative Forestry Assistance Act which authorized the Secretary of Agriculture to

provide financial, technical, and other assistance to enable states to plan urban forestry

programs and to use trees in a variety of urban areas, that Urban Forestry became a

federally funded, nationally recognized program. Grey and Deneke (1978) state that the

federal funding of the urban forestry program was largely due to a push that began with

a report published by the Commission on Education in Agriculture and Natural

Resources in 1967, which referred to a need for foresters to pay more attention to an

increasingly urban America. This indirectly led to the Citizens Advisory Committee on

Recreation and Natural Beauty submitting a report to the President of the United States

of America, which suggested that the USFS establish an Urban Forestry Program in

1968. When the President accepted the report, urban forestry was officially recognized

in the US. This legislation was then followed by the 1990 Urban and Community

Forestry Assistance Program, which expanded those original funds, and established a

network of federal and state organizations dedicated to urban and community forestry

(United States Environmental Protection Agency, n.d.).

Globally, trees have been recognized for their extraordinary ecological and

economic benefits (Polgreen, 2007). However, more recently, urban forestry has been in

the news addressing the impact trees have on climate change (Lu, 2008). These views

are primarily vested in the process called "photosynthesis," where trees sequester carbon

from the atmosphere to produce oxygen. In addition to the media attention on trees

being environmentally focused, the research focus is (as it has been for decades) on more

species survival rates in urban environments (Gerhold, 2007; Gu, et al, 2007) and growth

regulators (Sullivan 2007). Most social science research in urban forestry had been

focused on statewide programs (Ries, et al, 2007) and citizen attitudes towards tree

maintenance practices (Kuhn and Reiter, 2007). Although studies of these types are

important, it is still important to focus an even larger amount of research on the training

programs offered to those who are responsible for the planting and maintenance of these

trees in order to be sure that the proper people are in place to utilize the wealth of

scientific knowledge we have gained over the years.

History of Evaluation

Although many have debated the true beginning of evaluations, Fitzpatrick, Sanders, and Worthen (2004) write that Scriven found citations of the origin of evaluation that were traced as far back to times of samurai sword evaluations, where samurai fighters would test various swords to decide which to take to battle. Fitzpatrick, et al. (2004) also found that student achievement evaluations date back as far as the 1800s with Horace Mann and Joseph Rice, and educational program evaluation, as a field of research, began in the 1940s. It was not until the National Defense Education Act (NDEA) was passed in 1958 that the lack of conceptual and methodological evaluation research was exposed. The NDEA was the first federal education legislation developed as a means to prepare American students to academically compete with the Soviets, and to create loans for college students. The purpose of the loans was to better prepare Americans in areas such as "science, mathematics, and foreign language in elementary and secondary schools, graduate fellowships, foreign language and area studies, and vocational-technical training" (United States Department of Education, n.d.). The absence of theoretical bases in the evaluations' early years caused criticism of past evaluations, and forced evaluators to develop theories in equivalent disciplines that would lead to better developed methodologies (Fitzpatrick, et al, 2004).

Although this section will highlight several individuals who are recognized as evaluation theorists, Alkin (2004) reported that none of the information provided by these individuals is predictive, and they fail to offer an empirical theory, "Thus, in the

strictest sense what we refer to as evaluation theories do not fully qualify for that status"

(p. 5).   It is the intent of this study to refer to these individuals as theorists to

acknowledge their contribution to the field of education evaluation.

Evaluation Theories

In an effort to describe evaluation theory and its components, Alkin and Christie

created an evaluation theory tree (Alkin, 2004). At the base of this tree are two central

roots: the first, accountability and control, and second, social inquiry. Both are placed

here because they are considered two reasons for the development of evaluation as a

field of research. From those roots is the trunk, which has coming from it three primary

branches that represent schools of thought: use, methods, and valuing. *Use* is described

as the work done by theorists who are concerned with the way the evaluation results will

be used and who uses them. The *methods* branch is intentionally placed as the central

leader branch due to the significance that authors give the role of the theorists who

concentrate on methods in the field of evaluation. The authors' explanation of placing

the methods branch as a continuation of the social inquiry trunk is that the authors

consider it as "evaluation as research, or evaluation guided by research methods," which

leads to the scholarly information we have thus far in evaluation (Alkin, 2004, p. 12).

The third and final branch from the evaluation theory tree is that of *valuing*, described as

the theorists who place value on data as the most essential component of the evaluator's

work (Alkin, 2004).

In all of the aforementioned branches many theorists are mentioned but only a few are critical to this study. In the valuing category, a pivotal theorist was Michael Sciven. In 1967, Michael Scriven introduced the terms formative and summative evaluation. These terms were used to define the curriculum evaluations imposed before or after the development of a curriculum (Scriven, 1967). In 1991, Scriven clarified these terms. He defined formative evaluation as the evaluation that takes place during the development of a program and is intended for internal purposes. Summative evaluation was defined as the evaluation that is conducted after the program and is intended for external audiences (Scriven, 1991).

Ralph Tyler was instrumental in addressing modern program evaluation's methodological concerns; however, for the purpose of this study, Donald Campbell and his contribution to Objectives-Oriented Evaluation will be emphasized, due to his model being the most appropriate conceptually. Kirkpatrick's model allows the researcher to not only measure the effectiveness of a training but also to answer the questions of "effective how?" and allow the researcher to categorize the areas of effectiveness; satisfaction, change in behavior, and/or change in knowledge (Arthur, et al, p. 234). In 1963, Campbell and Stanley wrote a book entitled *Experimental and Quasi-Experimental Designs for Research.* This book was of great importance to the advancement of several evaluation methods because it examined designs and the factors affecting their validity. One particular form of evaluation discussed was the retrospective Pretest, which allows the researcher to ask a person, after they have attended the event, questions about how they felt before attending versus how they feel after attending.

Rockwell and Kohn (1989) explored the Post then Pre Evaluation design and stated that due to the lack of knowledge of the participants in a pretest setting, the pretests are often an overestimate which will cause the evaluation results to appear as if the program had no effect on the participants when there was actually a significant increase (Rockwell and Kohn, 1989).

The theoretical category Alkin (2004) refers to as "Use" can commonly be referred to as decision-oriented theory, which considers it necessary to design evaluations for "key program stakeholders in program decision making" (p. 44). Three decision-oriented theorists in particular are noteworthy in relation to this particular study. The first is Daniel Stufflebeam who, with Egon Guba, developed what is referred to as the CIPP model. CIPP, stands for *Context, Input, Process, and Product*, and is an aspect of "process evaluation that consists of identifying shortcomings in a current program to refine implementation" (p. 44). This theory includes the stakeholder in the development of the evaluation tool in an effort to "assist decision making and producing an accountability record" (p. 45). While Stufflebeam continued to expand on his CIPP model, an area of theory grew from it that emphasized the end user of the data, not the decision maker's needs. Michael Patton was credited with developing the "most prominent theoretical explication of the utilization (or use) extension" (p. 48). This theory focused on identifying who the intended primary users were going to be in an attempt to engage "users actively and directly in all stages of the evaluation" (p. 48).

In this study, elements of many of the aforementioned theorists will be seen, yet mostly through their influences to the field rather than direct impact to this particular

study. To many in other fields of expertise it may seem counterintuitive to evaluate based on stakeholders objectives of a program, if the participants are satisfied, but as stated by Fitzpatrick, et al (2004) "evaluation has increasingly been used as an instrument to pursue goals of organizations and agencies at local, regional, national, and international levels" (p. 26).

Evaluations

Several evaluations that were done in other fields helped to shape this study (Lopez-Herce, et al, 2006; Hugue and Vyas, 2008; Boyle and Crosby, 1997; Sirianni and Frey, 2001). In rationalizing why the researcher should investigate the impact of an urban forestry training program the study by Lopez-Herce, et al (2006), stated that although information exists about trainings for intensive care specialists, there is little that exists on the "assessment of the results achieved"(p.19), stood out most. Boyle and Crosby (1997) state, "good programs have been eliminated because there was no data to prove what the program had accomplished" (p. 4). An example of a study that emphasized the importance of going beyond the satisfaction of training participants was conducted by Hugue and Vyas (2008). This study, "Expectations as Performance: Assessment of Public Service Training in Hong Kong," sought to assess the "skills and knowledge obtained from the programmes" offered by the Civil Service Training and Development Institute of Hong Kong (p.189). Boyle and Crosby (1997) state, "well-conceived and implemented level- four evaluation plan can reveal program weaknesses

before they become problematic, as well as, providing a strong rationale for continuance" (p. 4), which led to the review of the four level evaluation conducted by Sirianni and Frey (2001) of the Mellon Financial Services. This study suggested, "the applicability of their approach is relevant in any organization that is dealing with helping individuals learn, change, and develop" (2001).

Agricultural Evaluation Research

Although many evaluations of training programs in urban forestry have not been published, several have been done in numerous related fields. In the broad discipline of Agriculture, evaluations have been conducted for several purposes (i.e. evaluations of species strength in strong winds, and evaluations of the impact of state-wide urban forestry programs on the residents of that state). One such area is the evaluations done in agricultural education, whether it be the readiness of the participants to use a distance education tool, or the ability of the participants to adopt innovative technology in agriculture, most evaluation research done in agricultural related fields are done in agricultural education. A study, "Manure Use Planning: An Evaluation of a Producer Training Program," was conducted to measure the impact of a manure-use planning course by attempting to find the level of understanding participants had with the processes required for preparing and implementing a permit application (Wortman, et.al, 2005).

Another example of an evaluation, or assessment, of a particular educational tool

in agriculture was shown in the 1998 article by Gelb and Bonati, where the study
attempted to measure the adoption of the use of the Internet for extension in international
agricultural countries. "Evaluative Study of the United States Cooperative Extension
Services' Role in Bridging the Digital Divide" was written by Elbert and Alston (2005)
to evaluate the perceptions of the U.S. Cooperative Extension Service's administration
toward bridging the digital divide. By evaluating the perceptions, it was the intent of the
researchers to determine the role that Extension plays in bridging that divide. The study
concluded that although administrators found the 4H program to be the best avenue to
influence the use of technology in Extension, many of the individuals who "have most to
gain are the least likely too have access to technology" (p. 3).

The article "Assessment of Readiness to Utilize E-Learning at the International
Potato Center" was done to focus on the adoption or readiness of an organization (The
Potato Center – Lima, Peru) to use a tool rather than the effectiveness of the tool itself.
This study, conducted by Murphrey, Lindner, Malgamba, Elbert, and Pina, (2002)
concentrated on the readiness of the personnel at the International Potato Center.
Although it may seem as if this article focused on the personnel only, it also led to the
development of a template to assist personnel in the implementation of these distance
education technologies.

An article entitled "Experiential Evaluation of Effectiveness of a Computer-
Assisted Instructional Unit on Sustainable Agriculture" was written by Seofield and
Kahler (1993) and serves as a great example as well. It measured the success of a
program on improving student knowledge of sustainable agricultural concepts. The

purpose of the study was to determine the educational value of a program by measuring student knowledge and to measure the effectiveness of their program. As previously mentioned, evaluations can cover a large array of concentration areas within a single discipline. From evaluating learning of animal science students as done by Whittemore, Hinks, and West (1997) and assessments that explore competencies of graduate students as conducted by Lindner and Dooley (2002) to studies that explore Agricultural Education curricula (Alston, Miller, and Elbert, 2003) and the competence of secondary agricultural instructors for working with children with disabilities (Elbert and Baggett, 2003).

A discipline within agriculture from which urban forestry is derived is natural resources. An article by Stafne, McCraw, and Mulder (2006) entitled "Evaluation of an E-Learning Online Pecan Management Course," reported an evaluation of the online course usage. This study could more appropriately be considered an assessment of that online teaching method rather than an evaluation of the entire training program. Lynam, et al (2007) did a study in natural resources, where an evaluation was done to identify the strengths and weaknesses of the participatory tools for decision-making in natural resource. One final example of an evaluation done in the natural resources discipline is "A Successful Educational Program for Minority Students in Natural Resources" which was done to evaluate the success of a collegiate level degree program to recruit and retain minorities in the natural resource profession (Maughan et al, 2001).

Urban Forestry Evaluations

In gathering information on the evaluations currently used in urban forestry training programs, an e-mail was sent (see Appendix B) to the National Urban Forestry Internet Forum (UrbRNet), which is an online forum to discuss issues related to urban and community forestry with more than 2,000 subscribers who have varying backgrounds related to urban forestry (http://treelink.org).   In the e-mail that was sent to the UrbRNet group, individuals were asked to send examples of surveys they used to evaluate their training program and to categorize those surveys based on the four levels of an evaluation introduced by Donald Kirkpatrick in his historic articles in the journal *Training and Development*. The levels introduced by Kirkpatrick were Satisfaction, Knowledge Gained, Change in Behavior, and Impact. Following the email, a total of nine surveys were received and reviewed. The evaluation levels covered in the Urban Forestry surveys are presented in Table 1.

Table 1

Urban Forestry Training Evaluations Categorized by Kirkpatrick's' 4 Levels

| | S | K | B | I |
	Satisfaction	Knowledge Gained	Behavior Change	Impact
E1	X			
E2			X	X
E3	X			
E4	X			
E5	X	X		
E6	X			X
E7	X			
E8	X			
E9		X		

(E1)– Connecticut Urban Forestry Council 18th Annual Conference

(E2)– USFS Dialogue on Diversity Workshop Participant Survey

(E3)– Trees Mean Business Evaluation Form

(E4)– Connecticut Urban Forestry Council 17th Annual Conference

(E5)– Community Tree Management Institute (Oregon)

(E6)– How To Talk Trees Evaluation Form

(E7)– Missouri Department of Conservation

(E8)– Arboriculture 101 – Pruning, Cabling, and Bracing

(E9)– Virginia Cooperative Extension – Tree Board Questionnaire

Of the nine evaluations above, seven covered the level satisfaction. Of those

seven evaluations that covered satisfaction, two cover an additional level, which were:

Evaluation 7: *How to Talk Trees Evaluation Form* that also covered impact, and

Evaluation 5: *Oregon's Community Tree Management Institute,* which covers the

knowledge gained. The other evaluation in urban forestry that covers more than one

level of evaluation is Evaluation 2: *USFS Dialogue on Diversity Workshop Participant*

*Surve*y which covers both behavior change and impact. Although results shown in Table

1 illustrate the types of evaluations done on urban forestry programs, what the table does

not detail is that none of the aforementioned evaluation results have been published, nor

have their survey tools been published for future program developers to use as templates

in evaluating their urban forestry training programs.

Theoretical Framework for Study

The central theoretical construct for this study is based on the Theory of Learning

as introduced by Furjanic and Trotman (2000) as *Turning Training into Learning*.   In

this book Furjanic and Trotman (2000) discuss the process by which individuals learn

through training programs. The steps in the process are: assessing the need for training,

designing learner based training, delivering training that ensures learning, and evaluating

the training process. The model used to describe this theory is in Figure 1.
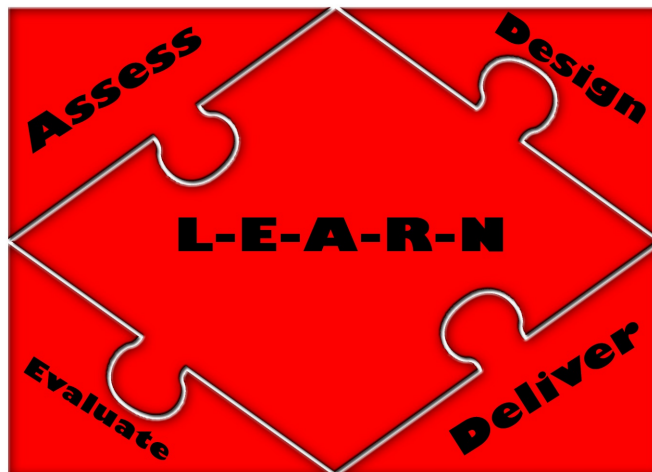
Figure 1: The training process puzzle developed by Furjanic and Trotman (2000).

Assess

Furjanic and Trotman (2000) describe this stage as the stage in which "you clarify the request, determine the driving force behind it, and decide whether or not training is the right response" (p. 7). To do an assessment, the Society of Municipal Arborists' gathered experts from numerous urban forestry backgrounds to meet in Portland, Oregon during the summer of 2005 to discuss the need for training municipal foresters in areas of communication, leadership, working with non-profits, committees and boards, strategic planning, and working with people and trees. The group answered key questions to assess the need for a training institute and the best means to get this information to everyone who needed it.

Designing Learner-Based Training

This is the stage where the training developers establish the skills needed and skill gaps that exist, while eventually developing learning objectives and presentations and other materials to deliver the training. (Furjanic and Trotman, 2000) The training developers covered this stage by having a series of conference calls over several months where they established learning objectives that covered areas identified as skills desired for a municipal foresters. At this point discussions began for the best way to deliver this information to influence learning.

Delivering Training that Ensures Learning

This particular section has its foundation embedded in the theory of Andragogy, which is " the art and science of helping adults learn" (Knowles, Holton, and Swanson, 1998, p. 61). This is the stage of the training development where the training developers use guidelines to ensure learning by their adult participants. Furjanic and Trotman (2000) describe five guidelines to use in order to complete assure learning by the adult participants. These steps are: allow for some self-direction; value their experience and build on it; recognize their readiness to learn; help them solve problems; and recognize internal motivation. All of these areas were covered in the curriculum guideline of the Municipal Forester Institute; one example was by allowing the participants to work together on projects that they were able to lead themselves.

Evaluating the Training Process

During the evaluation component of the Training Process it was imperative to use a mixture of concepts introduced by several of the aforementioned evaluation studies, along with a conceptual basis built from Kirkpatrick's model for program evaluation. Stufflebeam (2001) states, "Typically, the objective-oriented evaluation is done by a curriculum developer or other program leader. The usual purpose of an objective-based study is to determine whether the program's objectives have been achieved" (p. 17). This in addition to the decision-oriented evaluations described by Alkin (2004) as the evaluations that are "critical to assist key program stakeholders in program decision makers" (p. 44), will be used in this study.

One of the most widely used methods of training evaluation was established in November of 1959, when Dr. Donald Kirkpatrick began publishing a series of articles entitled, "Techniques for Evaluating Training Programs" in the *Journal of the American Society of Training Directors*. At the time of their publication, these articles redefined the concept of evaluations of training programs because they took the goals of the program and evaluated based on the program's ability to meet the goals originally set. Prior to the publishing of these articles the most common evaluations were those that evaluated for participant satisfaction, or as Braun (1979) states, "the emotional acceptance of the material taught" (p. 8). Since then, these articles have become some of the most recognized and widely utilized models of training evaluations (Gomez, 2003).

Reaction

  The first article discussed *Reaction* – also referred to as satisfaction. This type of evaluation focuses primarily on the satisfaction levels of those who participated in the training. This is "best defined as how well an attendee liked a particular training program" (Kirkpatrick, 1959a, p. 4). A trainer has every right to feel good about the positive reactions of participants, however, regardless of their reaction, there is no proof that any knowledge was gained or any of the participants' behaviors changed because of that program (Kirkpatrick, 1959a).

Learning

  Learning, the second level, describes, "what principles, facts, and techniques were understood and absorbed by the attendees" (Kirkpatrick, 1959b, p. 21). Kirkpatrick even wrote guidelines for evaluating in terms of learning. Those guidelines are as follows: "1) the learning of each conferee should be measured so that quantitative results can be determined. 2) A before-and-after approach should be used so that any learning can be related to the program. 3) As far as possible, the learning should be measured on an objective basis. 4) As far as possible, a control group should be used to compare with the experimental group, which received the training. 5) Where possible, the evaluation results should be analyzed statistically so that learning can be proven in terms of correlation or level of confidence" (Kirkpatrick, 1959b, p. 22).

Behavior

Kirkpatrick "began to realize there might be a big difference between knowing principles and techniques and using them on the job" (Kirkpatrick, 1960a, p. 13). This article, entitled *Behavior*, concentrates on the transfer of knowledge, skills, and attitudes when the trainees leave the classroom and return to their jobs (Kirkpatrick, 1998).

Results

The last article in this series focused on *Results*. The results of a training program are more difficult to measure since there are many variables that exist, which can make this type of study close to impossible, so it was recommended by Kirkpatrick to begin evaluating using the first three levels (Kirkpatrick, 1960b, p. 28). This study used two tools, one to evaluate satisfaction and the other to measure learning (knowledge gained), behavior changes, and collected Impact statements to evaluate the Impact of the study.

<div align="center">

The L-E-A-R-N Process

</div>

The final step in Turning Training into Learning is the process Furjanic and Trotman called the LEARN process. This particular piece of the training puzzle has a five step process of it's own, which is considered the L-E-A-R-N process. In this process it is the *L* stands for *Listen and Understand*, which is the step in the process where Furjanic and Trotman (2000) state the instructor should capture the attention of the participants. In the Municipal Forester Institute (MFI) curriculum, this is the area where orientation was done. The next step in the LEARN process is *E*, *Evaluate and Decide*. This step is where participants will decide what is in this training for them. At

this point they more or less decide if they will participate in the activity or just sit by and

watch. It is suggested that instructors be sure to engage the participants and use personal

stories to help the participants feel more connected to the information you are sharing

with them. The *A* step, which stands for *Attempt and Build*, is where you begin to be

more creative with the delivery of the information that you are giving the participants.

This step helps the participants try the information they have learned and realize

potential places they will be allowed to use this upon returning to their jobs. This step

and the previous one were used throughout the MFI, and the use progressed as the

Institute went along. By the end of the weeklong Institute, the participants were doing

mock presentations to a "City Council" where they were allowed to use many of the

skills demonstrated during the week to achieve a goal at the end of that week. *Return*

and Apply, the *R* in the process, is the stage where participants use materials given at the

Institute and apply them once they return to their jobs and use them in everyday

situations. It is at this step that the instructor should have provided the participants

resources to use and training notes to reference if needed on the job. To fulfill this level

the MFI provided each participants a learning journal for notes they could take during

the week, and a resource notebook they could refer to if there were any articles or

supporting materials related to the information given during the presentations. Furjanic

and Trotman (2000) also mention an important tool to use once participants are back at

work, which was the "Buddy System." The authors described this system as a "system

that enables the learners to have a support person to share experiences and successes

with after they leave the training program" (p. 182). Paul Ries, an MFI cadre' member,

developed a MFI Alumnae Internet site (http://mfigrads.ning.com) where graduates of

the MFI can connect with other graduates, share stories and accomplishments, and ask

questions of other graduates. The final step in the process is, *N*, the *Natural Transition*

stage. This is the stage in which the participant considers the skills that they learned as

their own, and become, "a permanent skill set of the learner" (Furjanic and Trotman,

2000, p. 191). This is where the trainer will need to review the training for Impact or

Results. At this point the trainer should ask two questions "(1) Was the training applied?

(2) Did it accomplish the goals that were established before the training began?"

(Furjanic and Trotman, 2000, p. 195).   Thorough evaluation of the MFI graduates the

researcher can fulfill the impact or results section for the Institute.

<div align="center">*Developing Leadership Approaches*</div>

As the International Society of Arboriculture was developing the Municipal

Specialist Certification Program, the instructors of the MFI were developing a

curriculum with a similar focus. Their curriculum focuses on areas the shareholders

regarded as important for a person who may have a formal education in Arboriculture,

yet no background in managing an urban forestry program. These areas focus on skills

that many arborists lack that would prepare them for the position of municipal or urban

forester. Of these focus areas, developing a leadership approach for your position was

regarded as an extremely important factor in the role of a municipal forester due to the

collective understanding by the stakeholders that, "to be successful, urban forest

program managers must exercise leadership in pursuit of public interest" (Wellman and

Tipple, 1992). The basis of this principle is aligned with the servant leadership theory,
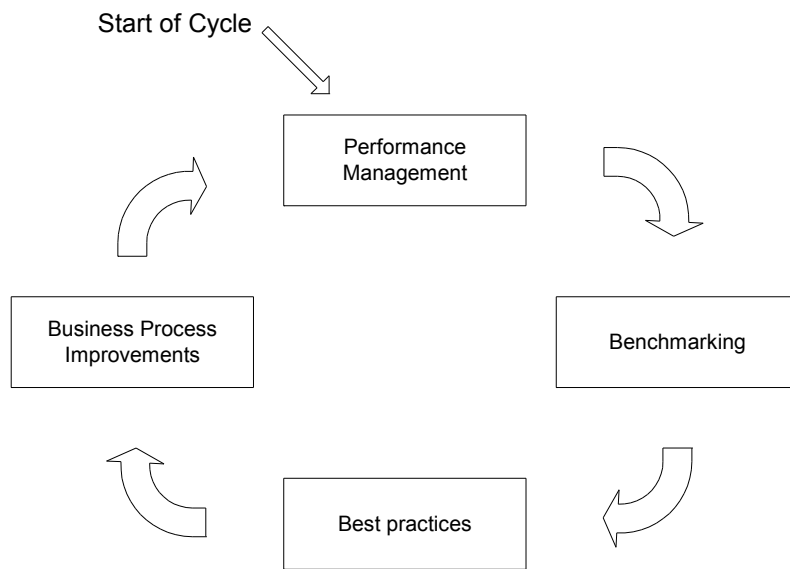
which describes servant leaders as "leaders who put other people's needs, aspirations and interests above their own" (Greenleaf, 1977 as cited in Sendjaya and Sarros, 2002). Although numerous articles and white papers were used as a foundation for this section, (Benzia, et al, 2001; Morgan and Shinn, 2001; Osborne and Gaebler, 1992), the leadership portion of the MFI was largely developed using concepts written by one of the MFI stakeholders, Paul Ries. In 2005 Paul Ries, an MFI Cadre' Member and Urban Forestry State Coordinator for the Oregon Department of Forestry, gave a presentation at the Wisconsin Urban Forestry Conference entitled "Applying Leadership Lessons to Urban Forestry." The white paper created from that conference was given to the MFI participants as reference material after they return to their respective municipalities.

In that paper, Ries focused on dispelling myths about leadership, such as, "leadership is often thought of as something that depends on your position in an organization" (p. 1). He, in turn, focused on the differences in management and leadership, which, as he implies, aren't one in the same. In fact, Ries states, that while "you manage things; you lead people" (p. 2), and "management is awarded" to someone, "while leadership is earned" (p. 1), and is based on an individuals decision to "follow" your lead. This is also true in Goleman's leadership theory of emotional intelligence, in which Goleman characterizes leadership in terms of a behavioral concept (emotion) rather than in intellectual one (education). Goleman (2001) indicates that "effective leaders are alike in one crucial way; they all have a high degree of what has come to be known as emotional intelligence…Without it, a person can have the best training in the world, an incisive, analytical mind, and an endless supply of smart ideas, but he still

won't make a great leader" (p. 5).   Ries closed his paper stressing the point that while

many leadership concepts, such as Goleman's, are used in business and education, most

of these concepts are "replicable in urban forestry" (p. 3), and it does not matter if one is

at the top of one's municipal hierarchy, anyone has the capacity to lead from whatever

level one currently found oneself at that time.

<div align="center">*Strategic Planning*</div>

Just as Hitt, Ireland, and Hoskisson (2007) describe strategic leadership as "the

ability to anticipate, envision, maintain flexibility, and empower others to create

strategic change as necessary" (p. 340) a strategic plan in urban forestry, if done

correctly, is a general document that guides the development of a successful urban

forestry program (Warriner and Croy, 2007).   This portion of the MFI focused on the

sections of a strategic plan, which are, the vision, mission, values, goals, and objectives.

At the same time the presenters focused on examples of municipal plans from both the

City of Sacramento, California and Surrey, British Columbia.   In addition to the focus on

the strategic plan document, additional tools were taught for better planning in an urban

forestry department.   One such resource was the SWOT (Strengths, Weaknesses,

Opportunities, and Threats) analysis created by Albert Humphrey, which was delivered

as a strategic planning tool for the participants to complete and use to help advance their

programs back home.   Another example of a suggested strategic planning tool was the

Continuous Improvement Cycle (CIC) presented by Owen Croy, Urban Forester for the

City of Surrey, British Columbia (Figure 2).

Start of Cycle

Performance Management

Benchmarking

Best practices

Business Process Improvements

The Continuous Improvement Cycle

Figure 2: Continuous Improvement Cycle (CIC) as presented by Owen Croy (Manager of Parks, Surrey, BC, Canada) at MFI 2006

In presenting this cycle the presenter discussed the numerous challenges faced by municipal foresters which include, but are not limited to: declining budgets, reduction of services, lack of a system to manage tree inventories, and antiquated delivery models which can be alleviated by performing a complete CIC (Croy, 2008). The performance management point in the cycle emphasizes the evaluative portion of the cycle where an assessment of your current situation is needed. Once that is completed you can move on to develop benchmarks in your program. These benchmarks can be internal or external and compare your program to those in the public or private sector. The reasons behind establishing these benchmarks are to improve on numerous services a municipal forester

would provide to the citizens of their municipality and to establish areas of improvement based on their municipal program goals and objectives. After establishing those benchmarks, it is suggested that best practices be gathered and compared to assist in future decision making and to develop a baseline for the services provided from their department or program. After completing all of the aforementioned items, it is necessary to look for potential improvements to one's program based on the information gathered during this process. In each of the stages of the cycle, suggestions were made to move to the next stage in an attempt to improve the quality of the urban forestry program offered in the municipality, however, it is imperative for the municipal forester to understand that a Continuous Improvement Cycle will take a substantial amount of time and is intended to influence change and not designed for those who are content with their current situation (Croy, 2008).

Working Effectively with Boards, Committees, Coalitions, and Non-Profits

Working with volunteers is a vital aspect in the role of a municipal forester due to the public's ability to serve as advocates for policies that protect and finance tree planting and care in municipal governments (Johnson, 1992). It is not only important that a municipal forester work with volunteers, but understand the value those volunteers and the general public are to the advancement of their municipal program. Several of the reasons to involve the public was described by Wellman and Tipple (1992), where they first emphasis the fact that volunteers can assist in achieving program goals due to their ability to help stretch resources when volunteering to help maintain trees and

inventories which can increase the overall effectiveness of the municipal forestry program.

A second reason Wellman and Tipple (1992) described was the role volunteers play as political activist for the betterment of the environment in which they live. The third, and quite possibly most important reason to involve the volunteers in your urban forestry program is that most municipal workers lose site of which they are serving, the citizens or their municipality. Unlike the concept of volunteer management described by King and Safrit (1998) where the agents were offering their perceptions of managing volunteers in various 4-H programs, this particular section of MFI focused on recruiting volunteers and encouraging them to serve on tree boards, tree coalitions, and other non-profit organizations throughout municipalities. Using these citizens as volunteers in an advisory capacity can serve as an opportunity for brainstorming projects and developing a small group of supporters if needed for political and/or fiscal decisions at a higher municipal level (Wellman and Tipple, 1992). A manual developed by the USFS in conjunction with the Oregon Department of Forestry entitled, "Organizational Training Materials", details the steps it takes to develop a Non-Profit Board. The manual outlines the steps for board development as: nomination and recruitment of members; orientation to give members information on the organization; training to build the needed skills of the board; evaluating the contribution of the board members; and recognition of those who have done a good job of committing themselves to the goals of the organization. The manual then continues with a breakdown of the roles of each member of the board and the expectations of that position. The article "What Makes Boards Effective? An

Examination of the Relationships Between Board Inputs, Structures, Processes and

Effectiveness in Non-Profit Organizations" was focused on "board performance and the

factors that influence it, rather than on the relationship between board performance and

organizational effectiveness (Cornforth, 2001).

Growing and Enhancing an Urban Forestry Program

The MFI instructor curriculum guide (2007) describes this particular section of

the training program as the point in which the instructors emphasize strategies for

developing a network of supporters beyond the boundaries of their local program, while

exposing the participants to the current issues facing the urban forestry profession on a

broader scale. At this point in the curriculum host state's Urban Forestry Coordinator

and a representative of the USFS are invited to discuss the current issues they are facing

on the State and Federal levels and how annually, various situations, like the President's

budget allocation and the number of emergency dollars spent on natural disasters

indirectly affect municipalities.

This section is informative, but varies from year to year based on the direction of

the National Urban Forestry Program and the state program. In addition to the political

aspects of this section, the curriculum, at this point, begins to show how other

professionals and agencies are interconnected to the larger urban forestry picture and

therefore can, indirectly, help to either improve or reduce the quality of the local

programs. In 1986, Don Willeke did a speech at the ISA conference, which a year later

became an article entitled *A SWAT Team for Urban Forestry*. Willeke (1987) states that

there is an additional problem with municipal arborists; they don't know how to

network. Willeke explains that, "They don't know how to create that web of contacts

that makes all the difference in getting something done well and in a hurry" (p. 1).

Willeke goes on to discuss the importance of developing a network of professionals that

possess unique skills to assist it the success of the municipal forestry program. This

"team" of professionals is referred to as, the SWAT (Special Wisdom and Tactics)

Team, which becomes the citizen army that each municipal forester needs to survive in

municipal government. The suggested members of this SWAT team are: Lawyer,

Public Relations Specialist, Corporate Leader, Plant Pathologist and Horticulturalist,

Journalist (or two), City Engineer, Politician (Legislator or Councilmember), and a rich

man or woman (Willeke, 1987).

Managing the Relationship Between People and Trees

This objective covers the importance of the media and other communication

outlets when managing the relationship between people and trees. This is not to be

confused with the physiological ties mentioned by Dwyer, Schroeder, and Gobster

(October, 1991) In the aforementioned article, Dwyer, Schroeder, and Gobster (October,

1991) gives numerous examples of two specific types of relationships that people have.

They are the sensory dimensions and symbolic values of trees. Instead of those

previously mentioned items, this section will focus on the important role that media

plays to every municipal forestry program. With this being said, it is imperative to

emphasize trees from two angles, "the public relations standpoint and the working press"

(Willeke, 1987). The public relations standpoint is referred to as the aspect of the media

that you can control the message and get your message out through this outlet. The

working press is primarily focused on the immediate tree issue. Which means, the

media attention, usually negative, that focuses on a tree story that isn't usually controlled

by a municipal forester (i.e. Tree Falls on Man; Limbs Fall and Cause Power Outage).

In addition to public relations training by the Ammerman Group, this objective was built

around the concepts of improving presentation skills and developing activities that each

participant could do to become a more effective presenter. Resources like, *The Tipping*

Point, by Malcolm Gladwell can be used to explore the many opportunities for the

dissemination of information, and sources for improving presentations skills, like those

available through the online resource group *PublicSpeakingSkills.com*. (n.d.).

Encouraging participants to increase their involvement in professional organizations in

an attempt to stay abreast of current information and the latest innovations in urban

forestry was the final portion of this objective.

CHAPTER III

METHODOLOGY

In this section, the investigator will describe the processes used to answer the research questions mentioned in Chapter I. This study is a Quasi-Experimental Design, using the retrospective pretest, introduced by Campbell and Stanley (1963).

Background

In June of 2006, the investigator was invited to attend a planning meeting centered on the development of a new training institute that was to highlight the management and leadership aspect of Municipal Forestry, which later became the Municipal Forester Institute (MFI). At the same time, the International Society of Arboriculture (ISA) and Society of Municipal Arborists (SMA) were working together to develop a new level of ISA certification, or specialization, the municipal specialist. This certification revolves around specific domains: communication skills, public relations, administration, risk management, arboriculture, and policy/planning. It was the decision of that advisory group to center the objectives of the MFI on the domains of the municipal specialist certification, excluding arboriculture, since numerous ISA chapters offer arboriculture conferences in their respective regions. Following that meeting, the investigator contacted the Executive Director of SMA to discuss a potential research opportunity in evaluating the perceived effectiveness of the MFI on its

participants.   It was agreed that the role of the investigator on the teaching cadre' was to develop and deliver the web-based pre-institute modules, and do the same for the evaluation component.

As part of the agreement, the SMA allowed the investigator to survey the MFI participants in person, immediately following the MFI, and to use the data collected to gather additional information related to the impact of this program on its participants. The Texas AgriLife Extension Service developed the customer satisfaction survey, which was issued on paper immediately following the Institute. The second survey tool used for this study (retrospective pretest) was developed using the Internet software package, Survey Monkey[©]. The investigator sent the retrospective pretest survey to the 2006 MFI participants that included both quantitative and qualitative questions to establish the behavior change (BC), change in knowledge (CK), and Impact in a post-then-pre survey format.

An e-mail was sent to the an on-line list of more than 800 urban forestry professionals, academians, and government employees; the email requested information from anyone who offers a continued education program. This request was for a copy or description of the evaluations they have used (See Table 1). While a number of individuals responded to this request, confirming that they offer various forms of training, many did not evaluate their programs. Of the urban forestry continuing education programs that included evaluations, few evaluated aspects beyond participant satisfaction. An even smaller number measured knowledge gained by participants or impact, and none used the post-then-pre evaluation approach.

Study Sample

The group involved in this study was a convenience sample of municipal

foresters (n=77) from across the United States and Canada, between the ages of 18 and

69, who chose to attend the Municipal Forester Institute in 2006. This group had 51 ISA

Certified Arborists. During the second survey phase it was determined that 15 of the

certified arborists that responded to that particular survey (n= 35) were municipal

specialists. There were 16 females and 61 males between the ages of 18 and 69. Of the

participants who attended the Institute, 100 percent of the participants filled out the

satisfaction survey, and 56 percent completed the behavior change (BC) and change in

knowledge (CK) survey (n=41). The investigator used the email addresses collected by

the SMA during registration to send the survey tool to the participants in December of

2007.

Instrument Development

Satisfaction Survey

The customer satisfaction survey, developed by the Texas AgriLife Extension

Service, was originally used as an accountability measure for the time that was spent on

this project by an Extension Program Specialist. Once, an agreement was reached to

allow an evaluation component to the MFI, this satisfaction survey was the most logical

starting point. The instrument itself (satisfaction survey) consists of a total 23 questions

of which 4 concentrated on specific demographic information. The questionnaire

(Appendix C) differed slightly form the survey normally provided for Texas AgriLife

Extension programs due to the MFI being a partnership with Texas AgriLife Extension

and not completely developed and run by that organization.

Knowledge Gained and Behavior Change (KG and BC)

An internal document developed by the SMA, entitled *Municipal Forester*

Institute (MFI) Instructor Curriculum Guide, was given to each member of the teaching

cadre' to assist in the development of their presentations. This document includes

curriculum goals, modules outlines, and educational objectives for each of the modules,

and logistical information to notify the presenter of the room setting and audiovisual set-

up.

The investigator randomly selected 45 of the 78 educational objectives for the

modules offered as part of the Institute to use as areas of focus for the study. It was the

investigator's assumption that since the educational objectives were the items that

participants were expected to understand upon completion of the Institute, then it only

logical to use these items as direction for the survey. In addition, when the stakeholders

were asked what questions they felt would be most important to include in the study,

most suggested questions that pertained to the objectives of the program. At that time, it

was determined that the objectives of the modules were to be the basis of the questions

for the KG and BC survey. The 5-point Likert scale format of this survey was developed

using a template designed by Survey Monkey[©], which gave participants five answer

choices for the questions associated with the objectives (Strongly Agree, Somewhat

Agree, Neither Agree nor Disagree, Somewhat Disagree, Strongly Disagree). Each

answer choice was given a numerical value of 1-5 for data analysis purposes.

Impact

The first two questions developed to measure impact were chosen due to the

intent of the MFI, which was to better prepare the participants for their positions and

hopefully assist them in further advancing their careers. The investigator developed the

last impact question due to Cadre' discussions during the 2006 MFI. In these

discussions the Cadre' discussed the applicability of the items taught at the MFI to their

personal lives. Therefore, the development of these particular questions was to measure

if these three items were actually achieved at the MFI.

Pilot Testing

In an effort to test the validity of the study, the investigator pilot tested a group of

individuals, MFI instructors, and other individuals who were professionals in the urban

forestry profession (20). These individuals were emailed and given two weeks to

complete the survey. Two of the MFI instructors were excluded from the pilot test due

to their roles as participants during the previous MFI session (2006). Nine of the total 20

individuals asked actually completed the pilot test. This preliminary data allowed the

researcher the opportunity to test the system and work out any kinks that may have

existed to this point.

Protection of Human Subjects

The Institutional Review Board (IRB) of Texas A&M University approved this study (see Appendix E). For the purpose of gaining the consent of the participants, the online survey required that the participants either agree or disagree with taking the survey prior to allowing them access to the actual instrument (see Appendix D). If the participants chose to continue, they were directed to the first page of the survey; if they chose not to take the survey, they were sent to a page thanking them for participating and allowed to leave the website. Participant responses were not completely anonymous upon receipt of the surveys. Without the investigator's knowledge, the survey tool collected the IP and e-mail addresses of each person who responded to the survey. At that point, all information was exported to a Microsoft Excel® spreadsheet where all information was kept and sorted, except the information that could be used to identify the participant and his or her responses.

Collection of Data

Satisfaction Survey

Immediately following the 2006 MFI, satisfaction surveys were handed out to the participants and after each participant completed the survey, they turned them into the researcher.

Knowledge Gained, Behavior Change (KG & BC), and Impact

The email addresses of the 2006 MFI participants were acquired through the SMA registration information. On December 21, 2007, an email was sent using the Message Manager feature offered by Survey Monkey©. The original email was sent to the 70 participants; however, the subject line read, "MFI07 - Your help is needed," which the investigator later discovered led to many 2006 participants not responding. Many were under the assumption that the email did not pertain to them. So, on January 7, 2008 with response numbers below twenty (16), the investigator resent the survey extending the original deadline of January 14, 2008 to February 4, 2008. Between the dates of January 14, 2008 and February 4, 2008 the remainder of 47 participants took the survey at that time. After the data was collected, the information was exported into a Microsoft Excel® spreadsheet for further analysis.

Data Management

Satisfaction Survey

The questionnaires that were collected following the 2006 MFI were taken to Paul Pope of the Texas AgriLife Extension Service, who scanned each of them into their system and generated an Adobe Acrobat file with the results for use in this study.

Knowledge Gained, Behavior Change (KG & BC), and Impact

Due to the investigator's use of Survey Monkey©, data management wasn't as cumbersome as in other studies. The data were collected using this online tool then

exported to a Microsoft Excel® file where it was cleaned, which included deleting incomplete data. Once the data was cleaned in Microsoft Excel®, it was then imported to Statistical Package for the Social Sciences program version 16 (SPSS v16). All data analysis was done in SPSS, and once tables were created, they were then exported to Microsoft Excel® where the investigator could cut and paste into this document.

Data Analysis

Satisfaction Survey

The statistical analyses used on the satisfaction survey were descriptive statistics, which include: frequency, mean, and mode.

Knowledge Gained and Behavior Change (KG & BC)

In an effort to determine if there was a change in the pre and post scores of the survey, the mean score and standard deviation were calculated for each of the forty-five questions asked. After calculating these two items, the paired samples t-test and p-score were calculated for each of the objective areas of the study. Another item measured was the gains scores of the perceived effectiveness of the Municipal Forester Institute on its participants. After determining if there was a significant difference in the retrospective pretest scores, the investigator measured the size of the difference by calculating the difference between means as introduced by Jacob Cohen (1998) in which he measures the effect size using a statistical tool he named Cohen's *d*. This statistic determines the

degree of the change expressed in standard deviation exists. Cohen (1998) also defined

the effect sizes as small $d = .2$; medium $d = .5$; and large $d = .8$.

Impact (Results)

Using the practice described by Diem (2002) this study used impact statements to

display "concise, but meaningful overviews of the program results" (p. 40). These

statements will be reviewed and presented as representation of the statements that were

submitted as part of the survey results. However, due to the lack of information gathered

prior to attending the MFI, the researcher decided to only categorize the impact

statements in terms of positive, negative, or no change responses. Responses that used

words like "positive" and "empowered", or that showed some form of progression in the

statement were categorized as positive responses. Responses that used "no change" and

"did not," or had some neutral comment were categorized as no change. Those

responses that used words like, "negative" and "set back" or described the MFI with a

negative overtone were categorized as negative responses.

CHAPTER IV

RESULTS

The purpose of this study was to investigate the effectiveness the Municipal

Forester's Institute (MFI) had on its participants. In the subsequent paragraphs the

results will be reported by first covering the satisfaction survey results collected in

person immediately following the 2006 MFI, second by reporting the results of both

Behavioral Change and Change in Knowledge, using a post-then-pre evaluation

approach, and the third and final results that will be reported are of the impact statements

given by the participants using the online survey tool.

Satisfaction Survey Results

The Customer Satisfaction Survey created by the Texas AgriLife Extension

Service was used to measure the satisfaction of the participants, which was the first of

the four levels applied in this study. In the table below questions 1-2m were asked of

participants who were given the choice to answer Completely (5); Mostly (4); Somewhat

(3); Slightly (2); and Not at all (1). The questions for 1-2m are as follows:

1) Overall satisfaction with this activity.

2a) Satisfaction with the information being what you expected to receive.

2b) Satisfaction with accuracy of the information.

2c) Satisfaction with the information being easy to understand.

2d) Satisfaction with the completeness of the information.

2e) Satisfaction with the timeliness of the information.

2f) Satisfaction with the helpfulness of the information in discussion about your

own situation.

2g) Satisfaction with the relevance of the examples used.

2h) Satisfaction with the quality of course materials.

2i) Satisfaction with the instructor's knowledge level.

2j) Satisfaction with the instructor's speaking/presentation abilities.

2k) Satisfaction with the instructor's organization/preparedness.

2l) Satisfaction with the instructor's response to student questions.

2m) Satisfaction with physical setting's contribution to ease of listening and

participation.

For the aforementioned questions, descriptive statistics were run to give the

frequency, percent, mean, and totals for each response. The highest satisfaction score

was given to the question, "Satisfaction with the instructor's knowledge level" with a

frequency of 60 and a percent of 77.9, which means participants, were completely

satisfied (M= 4.78). The next highest satisfaction score was given to the question,

"Satisfaction with the instructor's organization/preparedness," with a frequency of 53

and a percent of 68.8 completely satisfied (M=4.65). The lowest satisfaction score was

for the question, " Satisfaction with the completeness of the information" which yielded

a frequency of only 17, which is 22.1 percent of the respondents (M=4.04). However,

this same question that had the second highest respondents for the category of "mostly satisfied" at a frequency of 46 and a percent of 59.7 percent and the highest score in the category of "slightly," which yielded a frequency of 12, which has a percent of 15.6 percent. Results from the Satisfaction Survey – 1 are detailed in Table 2 below.

Table 2:

Satisfaction Survey Frequency Results (1)

Question	Completely Satisfied		Mostly Satisfied		Somewhat Satisfied		Slightly Satisfied		Missing		Total		Mean
	f	%	f	%	f	%	f	%	f	%	f	%	
1	35	45.5	27	35.1	-	-	-	-	15	19.5	77	100	4.56
2a	28	36.4	40	51.9	7	9.1	1	1.3	1	1.3	77	100	4.25
2b	43	55.8	31	4.03	1	1.3	-	-	2	2.6	77	100	4.56
2c	23	29.9	49	63.6	5	6.5	-	-	-	-	77	100	4.23
2d	17	22.1	46	59.7	12	15.6	1	1.3	1	1.3	77	100	4.04
2e	43	55.8	32	41.6	2	2.6	-	-	-	-	77	100	4.53
2f	46	59.7	27	35.1	4	5.2	-	-	-	-	77	100	4.55
2g	44	57.1	31	40.3	2	2.6	-	-	-	-	77	100	4.55
2h	48	62.3	29	37.7	-	-	-	-	-	-	77	100	4.62
2i	60	77.9	17	22.1	-	-	-	-	-	-	77	100	4.78
2j	40	51.9	32	41.6	5	6.5	-	-	-	-	77	100	4.45
2k	53	68.8	21	27.3	3	3.9	-	-	-	-	77	100	4.65
2l	49	63.6	22	28.6	5	6.5	-	-	1	1.3	77	100	4.58
2m	47	61	24	31.2	6	7.8	-	-	-	-	77	100	4.53

Note: Completely Satisfied = 5; Mostly Satisfied = 4; Somewhat Satisfied = 3; Slightly Satisfied = 2

As part of the same Satisfaction Survey, three additional questions were asked with the categories available to select as Yes or No. These questions were:

Q1) Would additional information on this subject be useful to you?

Q2) Do you plan to take any action or make any changes based on the

information from this activity?

Q3) Do you anticipate benefiting economically as a direct result of what you

learned from this Extension activity?

Of the seventy-seven participants of the MFI seventy-six stated they would take

action or make some change based on the information gathered at the MFI in 2006.

Those who chose to take action or make some change were calculated as over twenty

additional participants than the question, "Do you anticipate benefiting economically as

a direct result of what you learned from this Extension activity" which received twenty

responses of "No" and over thirty more than the question, "Would additional

information on this subject be useful to you?"   The data gathered from Satisfaction

Survey-2 are in Table 3.

Table 3

Satisfaction Survey Frequency Results (2)

	Yes	No	Missing	Total
Q1	44	16	17	77
Q2	76	1	0	77
Q3	55	20	2	77

Survey Respondents

While collecting the satisfaction data, demographic information was collected from the respondents. The information collected was, their gender (Table 4); their categorized age (Table 5); whether they were certified arborists or not; whether they were municipal specialists or not; and whether they planned to take any actions or make any changes based on the information gathered from the MFI (Table 6).

Table 4

Participant Gender

Gender	n
Female	11
Male	30
Missing	7
TOTAL	48

Table 5

Participant Age

Age Group(s)	n
18-39	6
40-49	20
50-69	15
Missing	7
TOTAL	48

Table 6

Additional Demographic Questions

	Yes	No	Note sure/ Never heard of it	Missing	Total
Are you a certified arborist?	35	6	-	7	48
Are you a municipal specialist?	15	26	-	7	48
	30	5	6	7	48
Do you plan to take action or make changes based on the information you gathered at MFI 2006?					

Behavioral Change and Change in Knowledge Results

For six of the seven objectives of this study, a paired sample t-test was run on each of the questions associated with that objective. The purpose was to determine if there was a difference in how the participants felt before and after attending the MFI. This was accomplished by calculating the difference between the mean before (M^b) and standard deviation before (SD^b); and the mean after (M^a) and the standard deviation after (SD^a) the participants attended the MFI for each of the questions related to that particular objective. Using an email survey procedure, a total of 77 participants were issued the survey for this study. Of the 77 e-mails sent, three were returned as incorrect e-mail addresses, two opted out of taking the survey, 24 were non-respondents, and of the 48 participants who started the survey, 41 completed it. The results of the following objectives were calculated using an alpha of .05 and a t score greater than or equal to 2.021.

Objective 1: Describe the Pre and Post evaluation scores on "Developing a Leadership

Approach for Your Position" as described in the 2006 MFI Instructor

Curriculum Guide.

The first objective of this study was to describe the pre and post evaluation scores on "developing a leadership approach for your position" as described in the 2006 *MFI Instructor Curriculum Guide*. Although there was an increase in means before and after the MFI in each of the questions to fulfill Objective 1, there was a larger increase in the mean of participants who felt they thought strategically about the direction of their Urban and Community Forestry program, which increased from "Neither Agree Nor Disagree" (M^b=3.49) to "Strongly Agree" (M^a=4.65). The question with the highest mean before attending the MFI was, "I find myself open to accept changes in my workplace" which the average of the participants chose "Somewhat Agree" (M^b=4.14), while the question with the highest mean after attending the MFI was "I apply leadership concepts to my U&CF situation" of which the participants scored it as "Strongly Agree" (M^a=4.74). Complete results of Objective 1 are in Table 7.

Table 7

Pre and Post Evaluation Scores on Developing a Leadership Approach for Your Position

Leadership approach	M^b	SD^b	M^a	SD^a
I think strategically about the direction of my U&CF program.	3.49	.88	4.65	.75
I apply leadership concepts to my U&CF situation.	3.67	1.04	4.74	.44
I understand what it means to apply leadership principles in my workplace.	3.84	.79	4.60	.66
I understand the various characteristics of leaders.	3.84	.84	4.65	.53
I understand the role of Urban and Community Forestry in governmental organizations.	3.95	.79	4.60	.90
I find myself open to accept changes in my workplace	4.14	.80	4.58	.59
Mean	3.82	.63	4.64	.39

Note: M^b= Mean score for item before training; SD^b= Standard Deviation; for item before training; M^a= Mean score for item after training; SD^a= Standard Deviation for item after training

Note: 5=Strongly Agree; 4=Somewhat Agree; 3=Neither Agree nor Disagree; 2=Somewhat Disagree; 1=Strongly Disagree

Objective 2: Describe the Pre and Post evaluation scores on "Strategic Planning" as

described in the 2006 MFI Instructor Curriculum Guide.

The second objective of this study was to describe the pre- and post-evaluation

scores on "strategic planning" as described in the 2006 *MFI Instructor Curriculum*

Guide. For Objective 2, the largest increase in mean was for the question, "I understand

the importance of looking beyond my U&CF program" which had an average of

"Neither Agree Nor Disagree" (M^b=3.51) that increased to an average score of "Strongly

Disagree" (M^a=4.74). The question with the largest mean before the Institute was, "I

understand why I should have a management plan for my urban forest" which started

with a score of "Strongly Agree" and (M^b=3.98), while the same question had the

highest mean following the Institute which was also "Strongly Agree" (M^a=4.79). The

complete results for Objective 2 are shown in Table 8.

Table 8

Pre and Post Evaluation Scores on Strategic Planning

Strategic planning	M^b	SD^b	M^a	SD^a
I understand the importance of performing an external appraisal of my U&CF program.	3.12	.98	4.26	.82
I am equipped to address portions of my U&CF Management Plan at a policy and planning level.	3.26	1.20	4.30	.74
I am aware of the various methods of getting management plans completed.	3.33	1.17	4.47	.55
I am able to cultivate stakeholder support for my management plan.	3.40	1.05	4.33	.64
I am familiar with the components of a Management Plan	3.40	1.10	4.51	5.5
I am comfortable with putting planning into practice	3.74	.98	4.53	.59
I understand the importance of looking beyond my U&CF program.	3.51	1.10	4.74	.49
I understand why I should have a management plan for my Urban Forest.	3.98	1.08	4.79	.56
Mean	3.47	.86	4.50	.36

Note: M^b= Mean score for item before training; SD^b= Standard Deviation; for item before training; M^a= Mean score for item after training; SD^a= Standard Deviation for item after training

Note: 5=Strongly Agree; 4=Somewhat Agree; 3=Neither Agree nor Disagree; 2=Somewhat Disagree; 1=Strongly Disagree

Objective 3: Describe the pre and post evaluation scores on "working effectively with

boards, committees, coalitions, and non-profits" as described in the 2006

MFI Instructor Curriculum Guide.

The third objective of this study was to describe the pre- and post-evaluation

scores on "working effectively with boards, committees, coalitions, and non-profits" as

described in the 2006 *MFI Instructor Curriculum Guide*. The largest increase in mean

of any question is "I am interested in improving the use of partnerships in my U&CF

program" which increased from "Somewhat Agree" (M^b=3.60) to "Strongly Agree"

(M^a=4.67). The highest mean of any of the questions stating how a participant felt prior

to attending the Institute was, "I understand the role of the a tree board" with a mean of

"Somewhat Agree" (M^b=3.86), while the highest mean for questions in this objective

describing how the participants felt after attending the Institute was, in "improving the

use of partnerships in my U&CF program" which was "Strongly Agree" (M^a=4.67). The

complete results for Objective 3 are in Table 9.

Table 9

Pre and Post Evaluation Scores on Working Effectively with Boards, Committees,

Coalitions, and Non-Profits

Working effectively with boards, committees, coalitions, and non-profits	M^b	SD^b	M^a	SD^a
I have a successful retention rate of volunteers in my municipality.	2.91	1.13	3.37	1.02
I recognize the difference in working with groups vs teams.	3.30	1.12	4.12	.93
I use effective meeting management techniques.	3.44	1.10	4.30	.77
I am able to recruit volunteers for assistance in my municipality.	3.44	1.30	4.02	1.08
I am interested in improving the use of partnerships in my U&CF program.	3.60	1.00	4.67	.57
I know the benefits of volunteers in my municipality.	3.81	1.14	4.56	.63
I understand the role of a tree board.	3.86	.94	4.56	.59
Mean	3.48	.76	4.23	.46

Note: M^b= Mean score for item before training; SD^b= Standard Deviation; for item before training; M^a= Mean score for item after training; SD^a= Standard Deviation for item after training

Note: 5=Strongly Agree; 4=Somewhat Agree; 3=Neither Agree nor Disagree; 2=Somewhat Disagree; 1=Strongly Disagree

Objective 4: Describe the pre and post evaluation scores on "Growing and Enhancing

an Urban Forestry Program" as described in the 2006 MFI Instructor

Curriculum Guide.

The fourth objective of this study was to describe the pre- and post-evaluation

scores on "growing and enhancing an urban forestry program" as described in the 2006

MFI Instructor Curriculum Guide.   Not all of the means in this category increased, there

was a decrease of .44, which was from "Somewhat Agree" to "Neither Agree nor

Disagree" for the question I am currently working to expand my U&CF network. The

largest mean increase from "Neither Agree nor Disagree" (M^b=3.12) to "Somewhat

Agree" (Ma=4.23) for this particular objective was in the statement "I know of strategies

for leveraging stakeholder support for my U&CF program." The largest mean in the

objective for a question pertaining to their views before and after the Institute was, "I am

familiar with the various certification and accreditation programs that are available for

Urban Foresters and Arborists" which was "Somewhat Agree" before the institute and

"Strongly Agree" after the institute (M^b=4.35; M^a=4.88). The complete results for

Objective 4 are in Table 10.

Table 10

Pre and Post Evaluation Scores on Growing and Enhancing an Urban Forestry Program

	M^b	SD^b	M^a	SD^a
Growing and enhancing an urban forestry program				
I know of strategies for leveraging stakeholder support for my U&CF program.	3.12	1.10	4.23	.61
I am comfortable with garnering support for my U&CF program from elected officials in my area.	3.5	1.21	4.29	.77
I am currently working to expand my U&CF network	3.56	.91	3.12	1.10
I feel I am capable of making an opportunity out of a crisis in my urban forest.	3.60	.88	4.53	.70
I understand the meaning of term political.	3.60	1.22	4.19	1.01
I understand the relationship of urban forestry and the political process.	3.70	1.08	4.63	.54
I am familiar with the various certification and accreditation programs that are available for Urban Foresters and Arborists.	4.35	.72	4.88	.32
Mean	3.64	.76	4.44	.39

Note: M^b= Mean score for item before training; SD^b= Standard Deviation; for item before training; M^a= Mean score for item after training; SD^a= Standard Deviation for item after training

Note: 5=Strongly Agree; 4=Somewhat Agree; 3=Neither Agree nor Disagree; 2=Somewhat Disagree; 1=Strongly Disagree

Objective 5: Describe the pre and post evaluation scores on "Managing the

relationship between people and trees" as described in the 2006 MFI

Instructor Curriculum Guide.

The fifth objective of this study was to describe the pre- and post-evaluation

scores on "managing the relationship between people and trees" as described in the 2006

MFI Instructor Curriculum Guide. In this objective, the largest increase from "Neither

Agree nor Disagree" (M^b=2.88) to "Somewhat Agree" (M^a=3.98) for the question, "I am

familiar with the term 'elevator speech." The largest mean for questions asked in the

objective for how participants felt before the Institute was also the largest for those

questions asked after the Institute, which was, "I feel it is important to create an effective

relationship with the media". The scores for this question were "Somewhat Agree"

before the Institute (M^b=4.09) and "Strongly Agree (M^a=4.77) afterwards. The complete

results for Objective 5 are in Table 11.

Table 11

Pre and Post Evaluation Scores on Managing the Relationship Between People and

Trees

Managing the relationship between people and trees	M^b	SD^b	M^a	SD^a
I have an elevator speech prepared.	2.40	1.11	3.31	1.39
The department that my urban forestry program is in has a communications plan.	2.74	1.18	3.30	1.26
I am familiar with the term "elevator speech".	2.88	1.16	3.98	1.19
I have avenues set in place to allow the general public to voice their opinions and views in my municipality.	3.02	1.06	3.67	1.20
I am familiar with ways to structure public input and meetings.	3.40	1.22	4.16	.90
I am comfortable with preparing for media interviews.	3.49	1.12	4.28	.91
I am able to identify the difference between good and bad media interaction.	3.67	1.04	4.63	.49
I am familiar with methods of promoting trees both internally and externally to the city structure.	3.74	.95	4.63	.54
I am comfortable with making formal and technical presentations that benefit my program.	3.81	1.12	4.51	.67
I am familiar with ways to use research and information to my advantage.	3.86	.97	4.53	.63
I feel it is important to create an effective relationship with the media.	4.09	.97	4.77	.61
Mean	3.38	.75	4.16	.56

Note: M^b= Mean score for item before training; SD^b= Standard Deviation; for item before training; M^a= Mean score for item after training; SD^a= Standard Deviation for item after training

Note: 5=Strongly Agree; 4=Somewhat Agree; 3=Neither Agree nor Disagree; 2=Somewhat Disagree; 1=Strongly Disagree

Objective 6: Describe the pre and post evaluation scores on "Putting MFI Principles to Action" as described in the 2006 MFI Instructor Curriculum Guide.

The sixth objective of this study was to describe the pre- and post-evaluation scores on "putting MFI principles to action" as described in the 2006 *MFI Instructor Curriculum Guide*. The largest increase in mean scores for this objective was for the question, "I understand how to maintain an effective strategic plan" which increased from "Neither agree nor disagree" (M^b=3.33) to "Somewhat agree" (M^a=4.14) The question with the largest mean of "Somewhat agree" (M^b=4.28) before participants attended the Institute was also the largest mean of "Strongly agree" (M^s=4.74) after participants attended the Institute, was, "I am familiar with U&CF organizations beyond my city". The complete results of Objective 6 are in Table 12.

Table 12

Pre and Post Evaluation Scores on Putting MFI Principles to Action

Putting MFI principles to action	M^b	SD^b	M^a	SD^a
I feel that my city has a sustainable urban forestry program.	2.81	1.2	3.4	1.20
I understand how to maintain an effective strategic plan.	3.33	.94	4.14	.60
I feel I need to enhance my leadership skills.	3.98	.96	4.35	.81
I participate in U&CF organizations beyond my city.	4.05	1.11	4.56	.85
I am familiar with U&CF organizations beyond my city.	4.28	.80	4.74	.49
Mean	3.69	.54	4.24	.46

Note: M^b= Mean score for item before training; SD^b= Standard Deviation; for item before training; M^a= Mean score for item after training; SD^a= Standard Deviation for item after training

Note: 5=Strongly Agree; 4=Somewhat Agree; 3=Neither Agree nor Disagree; 2=Somewhat Disagree; 1=Strongly Disagree

Before reporting the results of Objective 7, it is imperative to view the results of

the objectives in one table, Table 13. This table compiles the paired sample t-test for the

perceived effectiveness of the MFI on its participants based on the six objectives

previously mentioned. Of all of the objectives mentioned, the objective with the largest

t-score was *Objective 1: Developing a Leadership Approach for Your Position* (t=8.47)

and the objective with the lowest t-score was *Objective 6: Putting MFI Principles to*

Action (t=7.12). Objectives 1-6 all had a p-score of zero (0). This table also includes the

effect size (Cohen's *d*) to show the standardized difference between the means. This

shows the size of the difference between the means before and after the Institute. The

scores in this table ranged from *d* = 1.10 to *d* = 1.56. Thus, all effect sizes were large.

Table 13

Paired Samples t-test on Objectives 1 – 6

Perceived effectiveness	M^b	SD^b	M^a	SD^a	t	p	d
Developing a Leadership Approach for Your Position.	3.82	.63	4.64	.39	8.47	.00	1.56
Strategic Planning	3.47	.86	4.50	.36	8.32	.00	1.56
Working Effectively with Boards, Committees, Coalitions, and Non-Profits.	3.48	.76	4.23	.46	8.25	.00	1.19
Growing and Enhancing an Urban Forestry Program.	3.64	.76	4.44	.39	7.12	.00	1.32
Managing the Relationship Between People and Trees.	3.38	.75	4.16	.56	7.42	.00	1.18
Putting MFI Principles to Action	3.69	.54	4.24	.46	7.12	.00	1.10

Note: Mean [5=Strongly Agree; 4=Somewhat Agree; 3=Neither Agree nor Disagree;
2=Somewhat Disagree; 1=Strongly Disagree]; Cohen's *d* [small *d* = .2; medium *d* = .5;
large *d* = .8]

Objective 7: Describe the Differences in Gain Scores of Objectives 1-6.

Although all of the objectives had a positive gain score, the largest gain score was for Objective 2: Describe the Pre and Post evaluation scores on "Strategic Planning" as described in the 2006 MFI Instructor Curriculum Guide (M=1.03; SD=.81). The objective with the smallest gain was Objective 6: Describe the pre- and post-evaluation scores on "Putting MFI Principles to Action" as described in the 2006 MFI Instructor Curriculum Guide (M= .55; SD=.50). The results of Objective 7 are in Table 14.

Table 14

Gain Scores on Objectives 1 – 6

Perceived effectiveness	M	SD
Developing a Leadership Approach for Your Position.	.82	.63
Strategic Planning	1.03	.81
Working Effectively With Boards, Committees, Coalitions, and Non-Profits	.75	.59
Growing and Enhancing an Urban Forestry Program	.81	.63
Managing the Relationship Between People and Trees	.78	.69
Putting MFI Principles to Action	.55	.50

Note: 5=Strongly Agree; 4=Somewhat Agree; 3=Neither Agree nor Disagree; 2=Somewhat Disagree; 1=Strongly Disagree

Impact Results

The Impact section of the evaluation was collected as impact statements answering three specific questions. Those questions are:

1) How did attending the 2006 MFI change the way you look at your position?

2) How did attending the 2006 MFI change the way you look at your career?

3) How did attending the 2006 MFI change the way you look at your personal life?

Because of the large number of responses to the Impact statement portion of the evaluation a complete list of all of the responses to these questions are in Appendix E. Examples of the responses received are categorized as positive, negative, or no change in the sections below.

How did attending the 2006 MFI change the way you look at your position?

Of the 41 responses received there were 39 positive responses, two responses that had no change, and no negative responses. Examples of the responses are below.

Positive responses

- "In my current position, I am director of a small parks and recreation department. I have not been an "urban forester" for ten years, having moved ahead of that position in my career. Attending MFI reestablished my connection with urban foresters. I was reinvigorated to come back and improve (invent) urban forestry in this community. Living and working in Southern Arizona, it can be difficult to see the forest for the desert."

- "It gave me a much broader understanding of the importance of my job and the impact that I have to potential to make if I rally my resources. I feel more confident and competent."

- "It made me realize I'm not as alone as I thought I was. It also connected me with others around the country and Canada who I know will help out if I have questions. It also made me think about the position as more as an asset to the community rather than a necessary evil."

- "It gave me the opportunity to see what a fully vested program could do, be and accomplish. The components of smaller programs are the same as larger but there is more overlapping of responsibility. The principle part of the program involves partnerships with government and the public, with the public being the stronger asset. The benefits of the U&CF program are endless and come full circle in every town & city if managed correctly."

- "MFI empowered me to be an agent of change at my position."

No change

- "It was a power surge for a time afterwards and then things have settled back to some of the same routine. It didn't impact me much in regard to this question."

How did attending the 2006 MFI change the way you look at your career?

Of the 41 responses received there were 38 positive responses, three responses that had

no change, and no negative responses. Examples of the responses are below.

Positive responses

- "I had been only a city forester for about 2 years before attending MFI. I was not confident in myself as to what I really could accomplish in my career. But after MFI I feel I have a clear and concise career path a head of me. And I am going to apply for a Superintendent position in my city. I feel more confident."

- "It helped provide me with a long-term perspective in the U&CF program and that many municipalities are dealing with similar challenges. Knowing I'm not alone and that there are other "heroes" dealing with these same challenges helped with my patience & success in providing workable solutions."

- "Learning from the cadre, I was able to re-examine my future. I saw that I could continue my quest of advancing in the Public Works Agency. Although this may mean growing beyond tree care, I will continue to serve the public by leading an

Operations Department. The education of MFI will still be relevant. Almost all of the principals can be applied to any maintenance department."

- "After attending I felt great about my future in urban forestry. I felt like there a lot of people around the country who are committed to this field. I also realized that most other managers in urban forestry would be retiring in the next 10 years, and that is comforting."

- "It provided me with ways to think outside the "bark" and to embrace, encourage and prepare for change."

No change

- "No real change except the focus from the above question.

- "It didn't"

How did attending the 2006 MFI change the way you look at your personal life?

Of the 41 responses received there were 31 positive responses, 10 responses that had no change, and no negative responses. Examples of the responses are below.

Positive response

- "It was a real energy boost. Over a 25-year career, MFI was the absolute best training program that I ever attended. I felt privileged. MFI revived my outlook toward striving in any endeavor to make a positive difference. The generosity of the cadre touched me. Everyone gave so much energy and time to make the program excellent."

- "I have more of a sense of accomplishment. The people I am around want to know more about my endeavors and goals. There seems to be more interest from outside sources that want information about my career and personal goals."

- "The knowledge that I gained at MFI gave me the tools I needed to more effectively do my job. Being able to be more effective helped to relieve the stress and tension of my job."

- "I cannot rest. Too much to do if you want to stay ahead of the game. Also, I need to improve on my organizational skills."

No change

- "It didn't."

- "Did not affect my personal life"

CHAPTER V

SUMMARY/CONCLUSIONS/RECOMMENDATIONS

Summary

The purpose of this study was to evaluate the effectiveness the Municipal

Forester Institute had on its participants. The objectives of this study were: Describe the

pre- and post-evaluation scores on "Developing a Leadership Approach For Your

Position" as described in the *2006 MFI Instructor Curriculum Guide*; Describe the pre-

and-post evaluation scores on "Strategic Planning" as described in the *2006 MFI

Instructor Curriculum Guide*; Describe the pre- and post-evaluation scores on "Working

Effectively With Boards, Committees, Coalitions, and Non-Profits" as described in the

2006 MFI Instructor Curriculum Guide; Describe the pre- and post-evaluation scores on

"Growing and Enhancing an urban forestry program" as described in the *2006 MFI

Instructor Curriculum Guide*; Describe the pre- and post-evaluation scores on

"Managing the Relationship Between People and Trees" as described in the *2006 MFI

Instructor Curriculum Guide*; Describe the pre- and post-evaluation scores on "Putting

MFI Principles to Action" as described in the *2006 MFI Instructor Curriculum Guide*;

and to Describe the differences in gain scores by selected characteristics. These were

achieved using both the traditional event closing questionnaire also referred to as "happy

sheets" by Reay (1994, p.101), and the post-then-pre-evaluation method as introduced

by Campbell and Stanley (1963) then tested by Rockwell and Kohn (1989). The survey

tools were designed with the intent to explore the possibility of completing a four-level

evaluation as designed by to follow the suggestions of Donald Kirkpatrick (1959a, 1959b, 1960a, and 1960b). This design was used in an attempt to gather more detailed information about the training than traditional urban forestry training evaluations have gathered in the past.

Results of this study will assist the stakeholders of the MFI in completing an assessment of the existing MFI and provide information on what direction should be taken on higher-level training offered by the Society of Municipal Foresters. Also, the results received can assist other urban forestry training organizations and granting agencies in setting criteria to the level of evaluations they should require of their grantees. Lastly, the survey tool can be used as a template for other natural resource professionals who aren't familiar with evaluation tools. This chapter will summarize the findings from this dissertation and discuss what these results may mean while offering recommendations to the field of urban forestry and the stakeholders of the MFI.

All 77 participants of the 2006 Municipal Forester Institute were invited to participate in this study, since this study was of the participants of the 2006 Municipal Forester Institute a population study was done instead of gathering a sample of the participants. The participants of this study were both male (n=30) and female (n=11), majority certified arborists (n=35), and the majority are between the ages of 40-49 (n=20).

Immediately following the closing remarks of the 2006 MFI the satisfaction surveys, developed by Texas AgriLife Extension Service (Texas Cooperative Extension), were given to each participant. Once the participants completed the survey,

the participants turned them in and were dismissed. A total of 77 satisfaction surveys were collected and analyzed using descriptive statistics. The descriptive statistics used to analyze the satisfaction data were frequency, percentages, means, and standard deviations.

In December of 2007 a pilot test was run in an attempt to test the validity and reliability of the online survey tool. The participants of the pilot test were several municipal foresters and urban forestry experts who were familiar with the Municipal Forester Institute but were not participants. Later that same month an e-mail was sent to the 77 participants of the 2006 Municipal Forester Institute announcing the behavioral change and change in knowledge portion of the study and inviting them to participate. The survey was created and administered using Survey Monkey©, an online survey tool. An e-mail was sent a month later in an effort to increase the response numbers, which yielded a total of 48 participants of which, 47 (53%) completed the survey.

The data from the online survey was then downloaded into the Statistical Package for the Social Sciences (SPSS® version 16) program. The analysis in SPSS was done to compute the means and standard deviations, before and after the participants attended the Municipal Forester Institute of each of the objectives of the study. The study also includes the change in gain scores of the objectives of the study. The last items collected as part of the online survey were the Impact Statements as suggested by Diem (2002) in an attempt to complete the fourth and final level of the four-level evaluation. These questions were categorized based on positive, negative, and no

change responses to the questions that the participants received as part of the impact

portion of the questionnaire.

Conclusions

Satisfaction Survey

The first part of the study was to determine the participants' satisfaction with the

2006 Municipal Forester Institute. Participants were found to be *mostly satisfied* with

this training opportunity overall. Although scores varied between participants being

completely satisfied and *mostly satisfied*, the highest number (12) of participants to score

lower than *mostly satisfied* on any one question in the survey was for the question

satisfaction with the completeness of the information, which was less than 16 percent of

the participants that attended. Some would view this negatively, however it is quite the

contrary, this should be viewed as an opportunity to revamp the curriculum and give

more time for the topics covered. The overall mean scores from the satisfaction survey

resulted in 57 percent (n=8) of the questions being answered *mostly satisfied*. The

cumulative mean score for the remaining 43 percent (n=6) of the questions answered

were *completely satisfied*. While the cumulative mean of all of the scores of the

satisfaction survey were 4.49, which equates to an overall satisfaction rating of *mostly*

satisfied for the 2006 Municipal Forester Institute. Furthermore, these findings suggest

that the 2006 MFI was an overall success and if not evaluated further one would gain

from these scores that the 2006 MFI had a positive impact on its participants, however

this information has not yet been proven. This was expressed when Kirkpatrick (1959a)

stated, "when training directors effectively measure participants' reaction and find them favorable, they can feel proud. But they should also feel humble; the evaluation has only just begun." (p.3) Therefore the remaining three levels of the evaluation were needed to accurately report the effectiveness of the institute.

Behavioral Change and Change in Knowledge

The second part of this study sought to measure the increase in knowledge and change in behavior participants experienced due to their attendance at the 2006 MFI. This was an integral part of the study since studies have shown that the actual satisfaction results have no true relationship with participant learning and behavior changes (e.g., Alliger and Janak, 1989; Alliger, Tennenbaum, Bennet, Traver, and Shotland, 1997; Arthur, Tubre, Paul, and Edens, 2003; Colquitt, LePine, and Noe, 2000; Kaplan and Pascoe, 1977; Noe and Schmitt, 1986). The questions in this portion of the study were developed based on the objectives of the study. In each section of the questionnaire specific questions were asked about concepts taught in those corresponding sections.

For all of these areas there was a statistically significant increase in mean scores, standard deviations, and the effect sizes ranging from d=1.10 to d=1.56. The study revealed in each of the six focus areas of the MFI, there was a substantial increase in knowledge and change in behavior. This increase was between M=.55 (Putting MFI Principles to Action) and M=1.03 (Strategically Planning) which gave an average increase of (.79). It was also established through this study that the increase was statistically significant and three of the objectives: Developing a Leadership Approach to

your Position (t=8.47; p=. 00); Strategic Planning; and Working Effectively with Boards

(t=8.32; p=. 00), Committees; and Coalitions, and Non-Profits (t=8.25; p=. 00) had a

higher probability, than the other objectives, to have not happened by chance. This

means that the statistically significant increase in the change in knowledge and behavior

were due to the participants attending the Municipal Forester Institute in 2006, and

therefore supports the Theory of Learning.

The last and final step in a four-level evaluation is to measure Impact. With the

lack of any pre-planning of what the stakeholders were wanting to find, it was difficult

to measure impact as described by Donald Kirkpatrick (Feb 1960). However, following

the suggestions detailed by Diem (2002) where the author described the benefit of using

impact statements as going, "Beyond Explaining the 'What' or 'how' to answer the

questions 'Who Cares?' or 'So what?'", the researcher was able to find that when

participants were asked *"How did attending the 2006 MFI change the way you look at*

your position?" each of the participants had a positive response and detailed various

ways they made changes at their jobs. When asked, *"How did attending the 2006 MFI*

change the way you look at your career?" Many participants had positive responses;

however, there were far more responses that were "no change" than any other category.

When asked, *"How did attending the 2006 MFI change the way you look at your*

personal life?" many responses were similar to the change in career question. Although

a large number of responses were positive, many didn't recognize a change in their

personal life due to attending the MFI. Since a formative evaluation of the Institute was

not done, the results of the impact statements were unexpected by the stakeholders.

The most important conclusions to draw from this study are that, first, the participants of the 2006 Municipal Forester Institute were satisfied with the training that they received; second, the participants of the 2006 MFI had a statistically significant increase in knowledge and change in behavior due to their attendance at the 2006 MFI; and third, the 2006 MFI had a positive impact on the way the participants view their positions, career, and personal lives. This also implies that the 2006 Municipal Forester Institute was an effective training for its participants to attend.

Recommendations

Based on the aforementioned findings, conclusions, and data acquired through research collection, the following recommendations for actions and further research are made:

Programmatic Recommendations

1. Due to the positive impact and perceived effectiveness the Municipal Forester Institute had on its participants, strategies should be created to secure additional funding needed to continue and expand this program.

2. To increase the satisfaction of the participants who rated the category, *"satisfaction with the completeness of the information"* poorly, the stakeholders of the MFI should work to revamp the curriculum and possibly offer mini-institutes to cover on a larger scale the topics that warrant more detail.

3.   The stakeholders of the MFI should develop programmatic benchmarks associated with the anticipated impact this program should have on its participants. By developing detailed, impact specific benchmarks, questions can be developed to measure these goals and a better determination can be made for the impact of the MFI.

Recommendations for Additional Research

1.   The instrument used in this study should be revamped to establish a mechanism to better associate the demographic information with other data collected during the study.

2.   More organizations should publish results from program evaluations to advance the field of urban forestry education to a level equivalent to other disciplines in the natural resource field.

3.   A more detailed study of multiple years of the MFI should be done to see if the programmatic impact stays the same over years.

4.   More research on program evaluation tools used in urban forestry should be published and shared as a resource for educators in our field.

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APPENDIX A

URBAN AND COMMUNITY FORESTRY NATIONAL PROGRAM BRIEF 2/27/06

Urban and Community Forestry Program
National Program Brief
February 27, 2006

Recent Funding History (in thousands):

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007 President's Budget
Budget Line Item	$36,000	$34,864	$31,950	$28,451	$26,846
Cumulative Reduction		3.16%	11.25%	20.97%	25.43%

Program Description

The USDA Forest Service's Urban and Community Forestry Program (UCF) has a very simple mission: ***to improve the condition and extent of trees and forest cover in cities, suburbs and towns so people may reap the environmental, economic and social benefits that healthy trees and forests provide to communities***. The Program accomplishes this mission by encouraging communities in the establishment of self-sufficient local UCF programs that contain four key elements: an urban forest management plan; an ordinance to ensure best management practices; the services of a professional urban forester, and; a local advisory/advocacy group. Finally, UCF encourages communities to adopt these elements by providing technical, educational, financial and research services which act as the catalyst for local community involvement and investment.

Since 1972 UCF has remained true to that mission and its delivery. Working through its state and local partners UCF has engaged 7,000 communities in all 50 States and 9 Territories throughout the U.S., representing nearly 165 million people. And, because of the significant state and local involvement, the federal dollar investment is matched at more than 3:1. The UCF Program will continue engaging local communities throughout the U.S. to perpetuate sound, locally funded community programs that bring the benefits of healthy, abundant trees and forests to millions of Americans each year.

Program Issues and Opportunities

➢ The UCF program has established a new system of performance measures to evaluate performance at the national, regional, state and local level, and to allocate Program funding, based on the four key program elements.

➢ In 2005 a new Community Accomplishments Reporting System (CARS) was created to track this performance. This CARS database is linked to US Census data to better report on the places, number of people, and the demographics of the people served by the Program. This data will also be tied to a Geographic Information System (GIS) to graphically display performance.

➢ In order to learn more about the extent, structure and health of urban forests, the 25% of our nation's tree cover that exists in metropolitan areas, UCF will continue to support Urban Forest Health Monitoring (UFHM) pilot projects. This work, begun in 2001, is being done in partnership with state forestry agencies and other Forest Service Programs.

➢ A clear public understanding of the benefits that urban trees and forests provide to the community is necessary to create well funded, sustainable, local urban and community forestry programs across the country. UCF will continue to assist Forest Service researchers and other partners in the development of an urban forest analysis and benefits assessment software tool called i-Tree. i-Tree allows communities to collect, analyze, and display information on the structure, function, condition, costs, benefits and other attributes of the urban forest.

➢ UCF will continue to strengthen national partnerships to promote Urban and Community Forestry and emphasize the ecosystem services that community forests provide. One national partnership that has recently formed is the Sustainable Urban Forests Coalition (SUFC). This diverse group of 14 national organizations has a demonstrated focus on urban forests and was formed "to advance a unified urban forest agenda for our nation's communities."

APPENDIX B

EMAIL TO UrbRNet LISTSERV

Hello UrbRNet'ers,

> *I am currently in need of your help. I am looking for various forms of evaluations used on Urban Forestry Training Programs. If you offer a training program (conference, workshops, safety training, etc) about urban forestry and/or arboriculture, I am requesting a copy of those evaluations, or a description of them.*

> *By description, I mean, are they summative or formative; participant, consumer, or expertise – oriented; or do they measure satisfaction, change in learning, behavior, or impact. If you have no idea, but use an evaluation and don't mind me categorizing them; I am willing to do so – if you send me an example.*

> *If you offer a training program, but currently have no evaluation tool, I would be interested in knowing this as well.*

> *This information is being gathered as part of a research project I am working on and unfortunately there is no clearinghouse of this information as it pertains to urban forestry training programs. My deadline to receive this information is December 22, 2006 and if I don't receive any responses, I will have to assume that they don't exist. Can you help me....PLEASE?*

> *Please send this information to me directly at mrkirk@tamu.edu or you can fax it to me at 979–845–6049 (attn: Melanie Kirk).*
> *Thank you for your assistance – Melanie*

APPENDIX C

SATISFACTION SURVEY

Texas Cooperative
EXTENSION
The Texas A&M University System

Municipal Forester Institute
Participant Satisfaction Survey

Your views on the quality and effectiveness of Extension programs are extremely important. Please take a few minutes to tell us about your experience with this activity. Your answers to the following questions will help us better meet your needs. Please do not write your name on this form so that your responses are anonymous. Thank you!

MARKING INSTRUCTIONS
CORRECT: ● INCORRECT: ⊘ ⊗ ◌ ◔

1. **Overall, how _satisfied_ are you with this activity?**

   O Not at all   O Slightly   O Somewhat   O Mostly   O Completely

2. **How _satisfied_ are you with the following aspects of the activity?**

Content	Not at all	Slightly	Somewhat	Mostly	Completely
a. Information being what you expected to receive	O	O	O	O	O
b. Accuracy of information	O	O	O	O	O
c. Information being easy to understand	O	O	O	O	O
d. Completeness of information given	O	O	O	O	O
e. Timeliness of information (being received in time to be useful)	O	O	O	O	O
f. Helpfulness of the information in decisions about your own situation	O	O	O	O	O
g. Relevance of the examples used	O	O	O	O	O
h. Quality of course materials	O	O	O	O	O

Instructor(s)					
i. Instructor's knowledge level of subject matter	O	O	O	O	O
j. Instructor's speaking / presentation abilities	O	O	O	O	O
k. Instructor's organization / preparedness	O	O	O	O	O
l. Instructor's response to questions	O	O	O	O	O

Facilities					
m. Physical setting's contribution to ease of listening and participation	O	O	O	O	O

3. **What did you like _most_ about this activity?**

4. **What did you like _least_ about this activity?**

5. **Would additional information in this subject area be useful to you?**

   O Yes, I would like more information on: �

   O No, I have adequate information

Please continue on the other side.   7873413193

6. *Do you plan to take any actions or make any changes based on the information from this activity?*

    O Yes   O No   O Not sure

    If "no" or "not sure," which of the following best describes why? (select one only)
        O Information was not applicable or relevant to my situation
        O Information was relevant to my situation but taking no action is the best or most appropriate decision at this time
        O Need more information (or research further) before making a decision on action or changes
        O Just wanted the information - had no particular plans to implement
        O Something else

7. *Do you anticipate <u>benefiting economically</u> as a direct result of what you learned from this activity?*   O Yes O No

~~~~~~

8. *You are . . .*   O Female   O Male

9. *Your age?*   O 18 - 24   O 30 - 34   O 40 - 44   O 50 - 54   O 60 - 64   O 70 - 74
                    O 25 - 29   O 35 - 39   O 45 - 49   O 55 - 59   O 65 - 69   O 75+

10. Place of residence?
    O Town under 10,000   O Town or city between 100,000 and 250,000 persons
    O Town or city between 10,000 and 50,000 persons   O City between 250,000 and 500,000 persons
    O City between 50,000 and 100,000 persons   O City over 500,000 persons

11. Highest level of education obtained?
    O Some high school or less   O Vocational or technical degree   O Bachelor degree
    O High school graduate or GED   O Some college   O Post-graduate degree(s)

APPENDIX D

IMPACT SURVEY

1. Municipal Forester Institute Impact Evaluation

Consent to Participate

CONSENT FOR ONLINE PARTICIPANT
An Evaluation of the Impact of the Municipal Forester Institute

You have been asked to participate in a research study entitled: An Evaluation of the Impact of the Municipal Forester's Institute. You were selected to be a participant because you attended the 2006 Municipal Forester's Institute. A total of 75 people have been asked to participate in this study. The purpose of this study is to (1) examine the way in which urban forestry training programs are currently being evaluated, (2) measure the impact of the Municipal Forester's Institute, and (3) identify barriers that exist in evaluating urban forestry training programs.
If you agree to participate in this study, you will be asked to complete an online survey. This study will take approximately 10 minutes to complete. There are no risks associated with this study. Your participation in this study will provide feedback on the impact of the Municipal Forester's Institute, and urban forestry training on a national level.

You will receive no monetary contribution for your participation.

This study is anonymous. The records of this study will be kept private. No identifiers linking you to the study will be included in any sort of report that might be published. Research records will be stored securely at the Texas Cooperative Extension – Ecosystems Science and Management Unit office.

Your decision whether or not to participate in this study will not affect your current or future relations with Texas A&M University, Society of Municipal Arborists, or any other sponsoring agency.

Please contact Melanie R. Kirk (mrkirk@tamu.edu), 979-845-1369, Dr. Chanda Elbert (celbert@tamu.edu), 979-458-2699, or Dr. Alvin Larke (a-larke@tamu.edu), 979- 862-3008 with any questions about this study.

This research study has been reviewed by the Institutional Review Board - Human Subjects in Research, Texas A&M University. For research-related problems or questions regarding subjects' rights, you can contact the Institutional Review Board through Ms. Melissa McIlhaney, IRB Program Coordinator, Office of Research Compliance, (979)458-4067, mcilhaney@tamu.edu.

PARTICIPANT STATEMENT:
I have read the above information and I have printed a copy of this consent for my records.
By completing this questionnaire, I agree to participate in the study.

* 1. Please choose one of the options below

　⬚ Yes, I want to participate
　⬚ Sorry, I choose not to participate

2. 2006 Municipal Forester Institute Impact Evaluation

Your input regarding this institute will contribute to future planning and institute improvements. It will only take a 8-10 minutes to complete the survey. We greatly appreciate your time and input.

Please answer each of the questions below considering how you felt BEFORE you attended the 2006 MFI, then based on how you felt AFTER you attended the 2006 MFI.
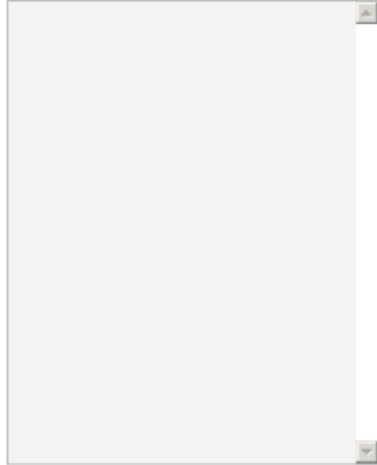
* 2. For each of the following statements please indicate whether you: Strongly Agree, Somewhat Agree, Neither Agree nor Disagree, Somewhat Disagree, Strongly Disagree.

	BEFORE MFI	AFTER MFI
1. I find myself open to accept changes in my workplace.	▼	▼
2. I understand what it means to apply leadership principles in my workplace.	▼	▼
3. I understand the various characteristics of leaders.	▼	▼
4. I understand the role of Urban and Community Forestry (UCF) in governmental organizations.	▼	▼
5. I think strategically about the direction of my U&CF program.	▼	▼
6. I apply leadership concepts to my U&CF situation.	▼	▼
7. I am aware of the various methods of getting management plans completed.	▼	▼
8. I understand the importance of looking beyond my U&CF program.	▼	▼
9. I understand the importance of performing an external appraisal of my U&CF program.	▼	▼
10. I understand why I should have a management plan for my Urban Forest.	▼	▼
11. I am equipped to address portions of my UCF Management Plan at a policy and planning level.	▼	▼
12. I am familiar with the components of a Management Plan.	▼	▼
13. I am comfortable with putting planning into practice.	▼	▼
14. I am able to cultivate stakeholder support for my	▼	▼

management plan.
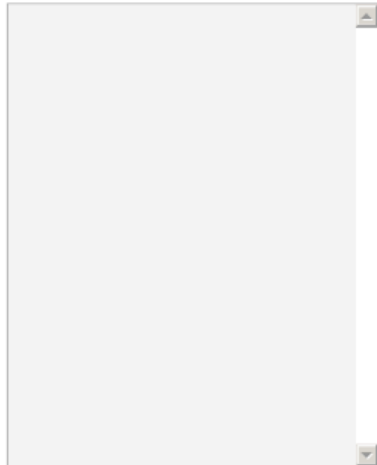
15. I know the benefits of volunteers in my municipality.	[▼]	[▼]
16. I am able to recruit volunteers for assistance in my municipality.	[▼]	[▼]
17. I have a successful retention rate of volunteers in my municipality.	[▼]	[▼]
18. I recognize the difference in working with groups vs teams.	[▼]	[▼]
19. I use effective meeting management techniques.	[▼]	[▼]
20. I understand the role of a tree board.	[▼]	[▼]
21. I am interested in improving the use of partnerships in my U&CF program.	[▼]	[▼]
22. I am currently working to expand my U&CF network.	[▼]	[▼]
23. I know of strategies for leveraging stakeholder support for my U&CF program.	[▼]	[▼]
24. I understand the relationship of urban forestry and the political process.	[▼]	[▼]
25. I feel I am capable of making an opportunity out of a crisis in my urban forest.	[▼]	[▼]
26. I am capable of assessing my local political structure, both formal and informal.	[▼]	[▼]
27. I understand the meaning of the term political capital.	[▼]	[▼]
28. I am comfortable with garnering support for my U&CF program from elected officials in my area.	[▼]	[▼]
29. I am familiar with the various certification and accreditation programs that are available for Urban Foresters and Arborists.	[▼]	[▼]

3. Impact Statements

* 3. How did attending the 2006 MFI change the way you look at your position?

* 4. How did attending the 2006 MFI change the way you look at your career?

* 5. How did attending 2006 MFI change the way you look at your personal life?

* 6. Are you a Certified Arborist?

⌷ Yes
⌷ No
⌷ Never heard of it

* 7. Are you an ISA Municipal Specialist?

⌷ Yes
⌷ No
⌷ Never heard of it

* 8. You are:

⌷ Female
⌷ Male

* 9. Do you plan to take any actions or make any changes based on the information from this activity?

⌷ Yes   ⌷ No   ⌷ Not sure

If "no" or "not sure" please provide a brief description of why?

* 10. Your age?

⌷ 18-29   ⌷ 30-39   ⌷ 40-49   ⌷ 50-59   ⌷ 60-69   ⌷ 70+

4. SURVEY COMPLETE

Thank you for your participation in this online survey. Your input will allow myself and other urban forestry educators to better evaluate programs, while increasing the quality of the programs we create.

Your input was valuable,

Melanie R. Kirk, MS

APPENDIX E

IMPACT STATEMENTS

How did attending the 2006 MFI change the way you look at your position?
P = Positive Response N = Negative Response NC = No Change Response

P 1. There are only a few programs in MT. I have felt somewhat isolated in the past, but not so much anymore.We all have similar problems, just to different degrees. I am not cutting edge, but not far behind the curve. MFI showed me that I have a long way to go, but have also have come a long way MFI has made me and our program more professional and more open to new ideas and change. MFI was a great networking tool during and after the conference.
P 2.   I have a wonderful program with many resources. However this program was wonderful because it showed all of us that no mater how large or small the program may be, that we always have room to grow.
P 3.   I feel fortunate to run a program of the scale that I have to do every piece of it. And I really mean everything! I now have 18,000 trees inventoried, manage 300 acres of wooded areas, 190 acres of cemeteries and am a Division of 1 with an annual budget of $34,000 for it all.
P 4.   There is a lot more I can do and there is a lot more out there to support those efforts.
P 5.   It revitalized me and helped me to become engaged again and care.
P 6.   In a positive direction.
P 7. It gave me the opportunity to see what a fully vested program could do, be and accomplish. The components of smaller programs are the same as larger but there is more overlapping of responsibility. The principle part of the program involves partnerships with government and the public, with the public being the stronger asset. The benefits of the U&CF program are endless and come full circle in every town & city if managed correctly.
P 8.   I now look at my position not only as municipal forester but also as a facilitator, "politician", mediator, reporter, planner, leader, teacher, etc.
P 9.   It made me aware of opportunities to work with other organizations and how these organization can be a key to the growth of our urban forestry management
P 10.   I need to align with other departments and our public advisory board to be able to accomplish ANY tree-related goal(s)in my organization.
P 11.   I have a outside my box understanding of how my profession relate or how other feel t relates to their world views
P 12.   MFI empowered me to be an agent of change at my position.
P 13.   MFI solidified the approaches that I bring to my consultations with municipalities to develop strategic management plans for the urban forest.
P 14.   The 2006 MFI gave me more tools in my toolbox to help me take better care of what we have in our urban forests, now and in the future.

P 15.   I felt like the MFI helped me to take a more confident approach to managing the urban forest. Even more importantly, the MFI gave me tons of contacts that have helped me in areas where research of other Cities was essential.

P 16.   It was good to know there are many others in the same or similar boat as me. It bolstered my opinion that what we do is as important as any other positions at the city if not more so. It allowed me to look at ways to increase my stature in my community.

P 17.   I showed me how much more other Cities are doing that we have not yet been able to achieve.

P 18.   I grasped the wide difference between municipal forestry programs in this country. This helped me understand, from a relative perspective, how the City that I work for has a strong tree program. Given clear comparisons, I saw that my position and program would generally be perceived as well-funded and technologically modern. Prior to attending, I thought otherwise.

P 19.   Understanding that there is more to Urban Forestry than the technical information. In order to make a difference in city series, a new approach is needed to be effective at communicating across disciplines.

P 20.   It is up to me to take the lead and show how the forestry profession is as important as any other department in the city structure

P 21.   It made me realize the breadth of knowledge, expertise and applied professionalism in the area of Urban Forestry there is out there and the available support there is out there.

NC 22. Did not have a position, but used it to create 3 part-time positions if I could get funding.

P 23.   It made me realize I'm not as alone as I thought I was. It also connected me with others around the country and Canada who I know will help out if I have questions. It also made me think about the position as more as an asset to the community rather than a necessary evil.

P 24.   I very much enjoyed networking with other professionals and learning where the other cities, counties and municipalities were in the overall process and programs

P 25.   It made me feel like more of a champion or advocate for urban forestry.

P 26.   2006 MFI helped with providing skills to enhance my effectiveness in my position. It provided a broader perspective to U&CF. It gave me a great network of peers to see how other municipalities handled similar issues, concerns & opportunities dealing with U&CF that provided successful results.

P 27.   Being in an assistant position, I try to find ways to help the department and my supervisor. The opportunities I look for I also use to increase my resume for future advancement.

P 28.   I feel it is more important to promote UF Management plans and also to get out an communicate about the benefits UF to the general public and legislators

P 29.   It helped me focus on the bigger picture concerning Urban Forestry and how it relates to my department. I understand the importance of partnerships of all types including volunteers. Helped me understand how to lead and empower others and the importance of those things.

NC 30. It was a power surge for a time afterwards and then things have settled back to some of the same routine. It didn't impact me much in regard to this question.

P 31.   It broadened my belief that the City Arborist is a key role in municipal agencies and is viewed as an important leadership position, not just with the parks staff but also with all departments.

P 32.   I moved away from the technical side.

P 33.   It gave me an awareness that I could strive for. I have made great advancement towards our upper management's view of how we need to improve the way we manage our City's urban forest. I feel more equipped at meeting different challenges.

P 34.   It gave me a much broader understanding of the importance of my job and the impact that I have to potential to make if I rally my resources. I feel more confident and competent.

P 35.   I realized even more that my position was an important part of planning and growing my community. I also realized that to be successful I needed to go far beyond simply making sure that trees were being planted and well cared for.

P 36.   That I'm part of a continent wide urban forestry community

P 37.   In my current position, I am director of a small parks and recreation department. I have not been an "urban forester" for ten years, having moved ahead of that position in my career. Attending MFI reestablished my connection with urban foresters. I was reinvigorated to come back and improve (invent) urban forestry in this community. Living and working in Southern Arizona, it can be difficult to see the forest for the desert.

P 38.   It helped me see my role as a leader in maintaining the benefits of the urban forest in my community.

P 39.   It brought to light the need for me to be a greater ambassador for change.

P 40.   Tremendous value in understanding the broad range of stakeholders and a variety of ways to include them to positive effect. Also, the leadership focus was really excellent, and changed the way I lead dramatically towards greater simplicity and staff and stakeholder inclusion.

P 41.   There is more I can do to improve the strategic plan for our urban forest

How did attending the 2006 MFI change the way you look at your career?
P = Positive Response N = Negative Response NC = No Change Response

P 1.   I would say that attending the 2006 MFI has added more legitimacy and professionalism to my career. I passed the Municipal Specialist exam this past summer, with a great deal of help from what I experienced at MFI.

P 2.   That we all are making a difference. Many people at different levels, all for one common goal. Making the urban forest a better place.

P 3.   It has allowed me to use well the skills I have, to work on areas I have wanted to improve on and it gives me the opportunity to practice stewardship.

P 4.   It can be more professional and recognized.

P 5.   I don't believe it changed the way I look at my career, it changed the way I look at me in my career. I am an active participant in my career now rather than being directed in my career.

P 6.   In a positive direction

P 7.   It made me more of a principal player on the bus. I understood whom the bus was for and who should be on it. My expertise is integral to the success of the program. I am the hub in certain instances not just one of the spokes. I have the better understanding of the program than all others and should act accordingly.

P 8.   I had been only a city forester for about 2 years before attending MFI. I was not confident in myself as to what I really could accomplish in my career. But after MFI I feel I have a clear and concise career path a head of me. And I am going to apply for a Superintendent position in my city. I feel more confident.

P 9.   It provided me with ways to think outside the "bark" and to embrace, encourage and prepare for change.

P 10.   I hope to be able to make a difference at my agency before I retire.

P 11.   Broad my scope and have more understanding of other. I clarified many things and what they naturally don't work. Ex tree people are not really people and people skills can be challenging

P 12.   MFI has motivated me to do more in my community and to also help communities beyond.

P 13.   Solidified ties with other professionals.

P 14.   The 2006 MFI made me realize how an important role that I have and the tools necessary to make the changes that are needed within the our particular urban forest, management and community.

P 15.   After attending I felt great about my future in urban forestry. I felt like there a lot of people around the country who are committed to this field. I also realized that most other managers in urban forestry would be retiring in the next 10 years, and that is comforting.

P 16.   It supported my belief that what we do is professional and important.

P 17.   Helped me to see that someone with more tree experience is needed in our City to be able to help educate and promote trees.

P 18.   Learning from the cadre, I was able to re-examine my future. I saw that I could continue my quest of advancing in the Public Works Agency. Although this may mean growing beyond tree care, I will continue to serve the public by leading an Operations Department. The education of MFI will still be relevant. Almost all of the principals can be applied to any maintenance department.

P 19.   It was the best post-graduate training that I have done. The futurist perspective was interesting and the media training invaluable!

P 20.   It is as important as any other career choice and the more I talk it up the better results I will get

P 21.   In the remaining few years left in my career (I am 59) I would prefer to take more of a background/support/role. I have put my name forward to be part of a committee / panel to work with the various agencies here in British Columbia and the private sector to bring Arboriculture into the realm of apprenticeships such as a carpenter or electrician etc. There is strong support (and $$) this time within the industry, B.C. Hydro and the various government dept's of the Province of BC.

P 22.   Networking opportunities. Value of professional standing is now much higher, gave me strengths to improve my level of certification. See #7 below, was not before MFI 06

P 23.   I have focused on that portion of my job a little more intently. I am now taking a prep course to go for the State arborists exam and am now on the CT Urban Forest Council Board of Directors.

P 24.   Enjoyed MFI very much and reinforced the fact that others were in similar processes and had similar challenges.

P 25.   It helped me make the most of my position while looking towards the future

P 26.   It helped provide me with a long-term perspective in the U&CF program and that many municipalities are dealing with similar challenges. Knowing I'm not alone and that there are other "heroes" dealing with these same challenges helped with my patience & success in providing workable solutions.

P 27.   It helped to open up ideas and ways to look at different situations I was not sure how to get a positive result out of. It backed my beliefs of being proactive and looking ahead to help your program not just now but in the future.

NC 28. No real change except the focus from the above question

P 29.   It made me realize that I have to be the inspiration for change, and that status quo will not be acceptable. And, I realize now how much I have yet to accomplish to get my department ready for the next century.

NC 30. It didn't.

P 31.   MFI helped me to realize that there is a tremendous resource of other Arborists all dealing with very similar career challenges and opportunities.

P 32.   It opened my sights to look outside the box.

P 33.   I have set different goals to better my career. I am more motivated. I value the opportunities to improve my career through various seminars and classes.

P 34.   I see avenues of opportunity that hadn't occurred to me previously.

P 35.   MFI helped me realize the difference between a true manager and someone running a crew or department. MFI also helped me learn more about the processes of planning.

P 36.   Re-energized it.

P 37.   2006 MFI brought my attention back to urban forestry. It also primed me to work on urban forestry issues not only in my immediate community but on a state level.

NC 38. It didn't. I love what I do.

P 39.   As a Park Superintendent, Urban Forestry is a component of what I do. Attendance in the MFI solidified my belief our organization needs a dedicated urban forestry professional.

P 40.   Increasing my sense of confidence and clarity in leadership skills made a much larger realm of civic and international activity seem within my grasp.

P 41.   My skill set could apply at many other larger cities than mine

How did attending 2006 MFI change the way you look at your personal life?

P 1.   I would answer as I did in the previous question, and add that it increased personal satisfaction.

P 2.   That leaving a career in LA/ design field for a career were I could make a difference feels good. It may not be the highest paying career, but at the end of the day you made a impact on the quality of life for future generations.

NC 3. It's fun to have fun. "What happens at MFI stays at MFI."

P 4.   Even in my personal life I have an obligation to the Urban Forests around me.

P 5.   It changed how I look at myself and where I want to be in my personal life. I accept where I am and what my role is in my personal life. I am an active participant in my personal life.

P 6.   Refreshing

P 7.   It really didn't change my personal life except to understand who I am in the midst of all the others who are involved. I am more important to the process than others have made me feel previously.

P 8.   I am able to communicate what is acceptable and not acceptable in personal relationships. Also, I look for the positives as much as possible in a bad situation (relationship).

P 9.   It allowed me to look at myself as a part of a movement to improve the quality of life for myself, my family, and those that I encounter in my lifetime.

P 10.   Helped me focus on what's important to me about the natural world.

NC 11. I am still a toys r us kid. Which means instead of making the hard decision what I am going to be I'll remain a kid

P 12.   I think that many of the things taught at MFI are applicable to life situations especially how to communicate with others and how you can lead from the middle.

NC 13. Did not affect my personal life.

NC 14. The 2006 MFI didn't so much change my personal life as much as it has changed my work life.

P 15.   I am more confident in all areas of my life because of the MFI.

P 16.   It let me know that I was on the right track in many areas; it challenged me to get involved in some other areas that impact my personal life for the better.

P 17.   It helped me realize that other people are also in the same position that I am in, in that we may not be arborists, but we are still the local 'tree expert'.   P 18.   It was a real energy boost. Over a 25-year career, MFI was the absolute best training program that I ever attended. I felt privileged. MFI revived my outlook toward striving in any endeavor to make a positive difference. The generosity of the cadre touched me. Everyone gave so much energy and time to make the program excellent.

P 19.   More strategic in what I choose to take on.

P 20.   How I approach it affects my professional life as well and my professional life has an impact on my personal life

NC 21. It was an amazing week at Lake Arrowhead. As much as I enjoyed it I can't really say it changed the way I look at my personal life. Perhaps if I were to have attended MFI 10-15 years ago my focus would be different then and probably today

P 22.   Dropped useless activities, added productive activities.

P 23.   The materials on leadership and preparation for working with the press were very helpful in many assets of life - including raising teenagers!

NC 24. None.

P 25.   I applied some of the strategies I learned to my personal life.

P 26.   It enhanced my personal life in reinvigorating my convictions to U&CF.

P 27.   Every once in a while, I sit and reflect on where I am at, where I want to be, and what steps I need to take to get there. MFI help to give me ideas and incentives to make those steps.

P 28.   The importance of standing up for myself at work translates to showing my self-dependence and self worth at home as well

P 29.   I cannot rest. Too much to do if you want to stay ahead of the game. Also, i need to improve on my organizational skills.

NC 30. It didn't.

NC 31. I am not aware of any personal changes.

P 32.   Confirmed my opinion of up coming changes.

P 33.   I have more of a sense of accomplishment. The people I am around want to know more about my endeavors and goals. There seems to be more interest from outside sources that want information about my career and personal goals.

P 34.   My horizons were broadened by the experience.

P 35.   The knowledge that I gained at MFI gave me the tools I needed to more effectively do my job. Being able to be more effective helped to relieve the stress and tension of my job.

NC 36. It did not.

P 37.   I reminded me how blessed I am to have been guided towards this occupation and community.

NC 38. It didn't.

P 39.   It reinforced my core values.

P 40.   The spinoffs of the above made me much more relaxed about life in general and able to apply same principles in my volunteer work have a better sense of effective career counseling for my children and other young people I work with.

P 41.   Ed Barlow never took the time to smell the roses.... I am glad I touched nature each day I was MFI during a morning run...instead of checking emails and searching the web for what is happening in the world. I feel like I had the correct balance of both positive learning experience and one of really focusing on what is truly important.

VITA

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EDUCATION:

12/2009	Texas A&M University College Station, TX Ph.D. - Agricultural Leadership, Education, and Communication (*Program Evaluation and Assessment*) Dissertation Title: *An Evaluation of the Perceived Effectiveness of the Municipal Forester Institute on its Participants*.
5/2001	Master of Science in Urban Forestry - Policy Southern University and A&M College, Baton Rouge, LA Capstone Project: *"The Creation of a Landuse Map in an ArcView Database for the East Baton Rouge Parish Recreation and Parks Commision"*
5/1997	Bachelor of Science in Urban Forestry - Management Southern University and A&M College, Baton Rouge, LA

PROFESSIONAL EXPERIENCE

5/2001 – 3/2002	City Arborist – City of Dallas, TX Building Inspection Division – The position required the City Arborist to perform landscape review of plans. After which, the City Arborist is required to perform site visits to assure proper installation of landscape materials prior to receiving certificates of occupancy.
3/2002 – present	Extension Program Specialist – Urban Forestry Texas AgriLife Extension – College Station, TX This position will cooperate with colleagues in Texas Cooperative Extension system at State, County, and City levels, the Texas Forest Service, Texas Agricultural Experiment Station, and Texas A&M University in planning, conducting, and evaluating education and applied research programs in urban and community forestry. The position will provide state-wide leadership, and program development, delivery, and assessment in urban and community forestry.