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presented by

COURTNEY JEAN STEWART

has been accepted towards fulfillment
of the requirements for the

M.S.

degree in

AGRICULTURAL &
EXTENSION EDUCATION



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**AN EMPIRICAL ASSESSMENT OF MICHIGAN SECONDARY AGRICULTURAL
EDUCATORS USE OF THE SERVICE LEARNING MODEL**

By

Courtney Jean Stewart

A THESIS

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

MASTER OF SCIENCE

**Department of Agriculture Natural Resources
Education and Communication Systems**

2003

ABSTRACT

AN EMPIRICAL ASSESSMENT OF MICHIGAN SECONDARY AGRICULTURAL EDUCATORS USE OF THE SERVICE LEARNING MODEL

By

Courtney Jean Stewart

Service learning is a teaching method that integrates the use of community service in classroom instruction. This study investigates the use of community-based service learning by Michigan Agriscience instructors. In particular, the study investigated the use of the widely accepted service learning model of planning, implementation, evaluation, and reflection.

This study took the form of a census survey of the 130 Michigan Agriscience instructors. A total of 86 questionnaires were received out of 130 possible for a response rate of 66.2%.

Findings indicated that most Agriscience instructors have utilized community-based service learning. Most of the instructors followed the elements of the service learning model but lacked in reflection activities after the community service was complete.

Recommendations from this study include a workshop devoted to service learning, focusing on service learning and develop a curriculum guide on service learning. Further qualitative and longitudinal studies need to be performed for greater understanding of service learning.

ACKNOWLEDGMENTS

First and foremost, my deepest thanks go to my parents, Gary and Beverly Stewart and brother A. J. Stewart, for all of their support throughout my life. I appreciate all of the late night phone calls and encouragement throughout my masters program.

I would like to take the opportunity to thank my major professor Dr. Michael Woods for his assistance, guidance, and support throughout my masters program. I would also like to thank my other committee members: Dr. Dave Krueger for his research expertise and willingness to provide assistance and guidance with my statistics and Karen McKnight-Casey for her expertise in service learning and support.

My masters program in Agricultural and Extension Education would not be possible without my Grandpa Eugene McFarland. He was the person who encouraged me to get involved in 4-H and extension and helped shape my life.

A special thanks goes to Scott Rumble and Roberta Crabtree, for being my mentors and making my decision to enter a career in extension easy. Also to the Tippecanoe County Extension Office, thanks for providing the greatest work experience and environment.

A sincere thanks goes to the members of University Baptist Church for their support, prayers, and inviting me into their family.

Last, but certainly not least, a sincere thanks go to Leslie Reneau and Megan Skiles, for always providing laughter, brightening my days when I needed it, and always willing to talk on the phone at any time.

TABLE OF CONTENTS

Chapter 1: INTRODUCTION.....	1
1.1 A Heritage of Service.....	1
1.2 Service and Learning in American Education	2
1.3 Need for the Study	6
1.4 Statement of the Problem.....	7
1.5 Purpose.....	7
1.6 Limitation of the Study	7
1.7 Terms and Definitions.....	8
1.8 Summary	9
Chapter 2: LITERATURE REVIEW.....	11
2.1 Chapter Preview.....	11
2.2 Historical Foundation of Service Learning.....	12
2.3 Service Learning Research	14
2.4 Implementing Service Learning.....	15
2.4.1 Reflection.....	15
2.5 Hindrances to Service Learning.....	16
2.5.1 Scheduling Service.....	16
2.5.2 Costs.....	17
2.6 Effects of Service Learning	18
2.6.1 Impact on Students.....	18
2.6.2 Service Learning and Teachers.....	19
2.6.3 Service Learning and the Community	21
2.7 Service Learning in Agricultural Education	21
2.8 Summary	27
Chapter 3: METHODOLOGY.....	29
3.1 Chapter Preview.....	29
3.2 Population	29
3.3 Instrument Development.....	30
3.3.1 Design	30
3.3.2 Content.....	30
3.3.3 Validity	31
3.3.4 Reliability.....	31
3.4 Data Collection	32
3.4.1 Initial Questionnaire.....	32
3.4.2 Follow-up E-mail	32
3.4.3 Second Follow-up Questionnaire.....	33
3.4.4 Final Follow-up Questionnaire	33
3.4.5 Processing Procedures	33
3.5 Data Analysis Procedures	34
3.6 Summary	34

Chapter 4: FINDINGS	36
4.1 Chapter Preview	36
4.2 Objective 1	37
4.2.1 To describe the demographic composition of Agriscience instructors that utilizes community service as an integral part of their agricultural curriculum.....	37
4.2.2 Demographic Cross Tabulations.....	39
4.3 Objective 2	40
4.3.1 To describe the current use of community service by Agriscience instructors in Michigan	40
4.4 Objective 3	41
4.4.1 To describe the current use of service learning model elements (planning, implementation, reflection and evaluation) as practiced by Michigan Agriscience instructors.....	41
4.5 Summary.....	46
Chapter 5: CONCLUSIONS.....	48
5.1 Chapter Preview	48
5.2 Objective 1 Conclusions	48
5.2.1 Teaching Interests	49
5.2.2 Recommendations.....	49
5.2.3 Agricultural Education/FFA	52
5.2.4 Recommendations.....	52
5.2.5 Lesson Plans.....	54
5.3 Objective 2 Conclusions	55
5.3.1 Recommendations.....	56
5.4 Objective 3 Recommendations	57
5.4.1 Recommendations.....	58
5.4.2 Student Involvement	59
5.4.3 Recommendations.....	59
5.4.4 Reflection.....	59
5.4.5 Recommendations.....	60
5.4.6 Hindrances of Service Learning.....	61
5.4.7 Recommendations.....	62
5.5 Overall Recommendations.....	64
5.6 Study Summary.....	67
APPENDIX A.....	69
UNIVERSITY COMMITTEE ON RESEARCH INVOLVING HUMAN SUBJECTS	69
APPENDIX B.....	70
SURVEY INSTRUMENT.....	70
APPENDIX C	74

INITIAL COVER LETTER	74
APPENDIX D	76
FOLLOW-UP E-MAIL	76
APPENDIX E	77
DEMOGRAPHIC QUESTIONS	77
APPENDIX F	91
DEMOGRAPHIC CROSS TABULATIONS	91
Bibliography	103

LIST OF TABLES

Table 1	Demographics	38
Table 2	Teaching Demographics	39
Table 3	Implement Community Service in Courses	40
Table 4	Requirement of FFA Chapters to Participate in Community Service	40
Table 5	Community Service as a Part of Coursework	41
Table 6	Community Service Aligned with Course Content	41
Table 7	Students Had an Integral Part in Planning the Community Service Activity	42
Table 8	Community Service Met Community Needs	42
Table 9	Time Taken Before Community Service to Discuss	43
Table 10	Time Taken After Community Service to Discuss	43
Table 11	Reflection Activities were Performed	44
Table 12	Transportation Causes Difficulties	44
Table 13	Access to Funding Causes Difficulties	45
Table 14	Community Service Takes too Much Time to Perform	45
Table 15	Community Service Takes too Much Time to Organize	46
Table 16	Establishing Community Partnerships	46
Table 17	Teaching Contract	77
Table 18	Importance in Pursuing Career as an Agriscience Instructor	78
Table 19	Number and Type of Courses Taught	79
Table 20	Begin Career Again	79
Table 21	Teaching Interest	80

Table 22	Hours Spent on Activities Per Week	81
Table 23	Activities	82
Table 24	Issues of Importance	83
Table 25	Description of Respondent.....	84
Table 26	Importance of Issues as an Agriscience Instructor	85
Table 27	Sources of Stress	86
Table 28	Agree with Issues	87
Table 29	Standardized Testing.....	88
Table 30	Evaluation Methods	89
Table 31	Instructional Techniques/Methods.....	90
Table 32	Cross Tabulation- Implement Community Service Elements by Gender, Marital Status, Years Teaching, Grew Up	91
Table 33	Cross Tabulation- Community Service Aligned with Class Content by Gender, Marital Status, Years Teaching, Grew Up	92
Table 34	Cross Tabulation- Students had Integral Part in Planning Community Service by Gender, Marital Status, Years Teaching, Grew Up	93
Table 35	Cross Tabulation- Community Service Activities Met Community Needs by Gender, Marital Status, Years Teaching, Grew Up	94
Table 36	Cross Tabulation- Time Taken Before Community Service to Discuss by Gender, Marital Status, Years Teaching, Grew Up	95
Table 37	Cross Tabulation- Time Taken After Community Service to Discuss by Gender, Marital Status, Years Teaching, Grew Up	96
Table 38	Cross Tabulation- Reflection Activities were Performed by Gender, Marital Status, Years Teaching, Grew Up	97
Table 39	Cross Tabulation- Transportation Difficulties by Gender, Marital Status, Years Teaching, Grew Up	98
Table 40	Cross Tabulation- Funding Difficulties by Gender, Marital Status, Years Teaching, Grew Up	99

Table 41	Cross Tabulation- Too Much Time to Perform by Gender, Marital Status, Years Teaching, Grew Up.....	100
Table 42	Cross Tabulation- Too Much Time to Organize by Gender, Marital Status, Years Teaching, Grew Up.....	101
Table 43	Cross Tabulation- Establishing Community Partnerships Take too Much Time by Gender, Marital Status, Years Teaching, Grew Up	102

CHAPTER 1

INTRODUCTION

1.1 A Heritage of Service

The United States has a rich heritage surrounding community service. Franklin D. Roosevelt in 1933-1942 created the Civilian Conservation Corps (CCC). Specifically, the CCC provided millions of young people to serve terms of 6 to 18 months to help restore the nation's parks, revitalize the economy, and support themselves and their families (Corporation for National & Community Service, n.d.). Since this first call for national service by the government, presidents and leaders continue to challenge Americans to devote a portion of their time to serving and improving their communities.

President John F. Kennedy in his 1961 Inaugural Address provided one of the most notable calls to service, "And so, my fellow Americans: ask not what your country can do for you--ask what you can do for your country" (John F. Kennedy Library and Museum, 1961). From that call to action, numerous national organizations devoted to service were created such as the Peace Corps and Youth Conservation Corps. Likewise, as part of the "War on Poverty," President Lyndon B. Johnson in 1964 created VISTA (Volunteers in Service to America), which provides opportunities for Americans to serve full-time to help thousands of low-income communities (Corporation for National & Community Service, n.d.). President George Bush created the Office of National Service in the White House and the Points of Light Foundation to foster volunteering in 1989-1990 (Corporation for National & Community Service, n.d.). President Bill Clinton signed the National and Community Service Trust Act of 1994, creating the Corporation

for National and Community Service and AmeriCorps to expand opportunities for Americans to serve their communities (Corporation for National & Community Service, n.d.). Most recently, President George W. Bush in his 2002 State of the Union address stated, “My call tonight is for every American to commit at least two years, 4,000 hours over the rest of your lifetime, to the service of your neighbors and your nation” (CNN.com/Inside Politics, 2002). In the past decade, we have seen these calls to service go beyond citizens volunteering in their spare time to becoming an integral part of America’s K-12 education system (National Commission on Service-Learning, n.d.).

1.2 Service and Learning in American Education

For more than 100 years, service to the community has been an important part of the institutionalization of education in the United States (Stephens, 1995). Learning-by-doing and hands-on learning, which has been labeled by leading education researchers and practitioners as experiential learning (Dewey, 1916; Kolb, 1984), constructivism (Bruner, 1996), or situated learning (Lave & Wenger; 1991) has long been touted as a more desirable means of educating society. While service learning is not derived from a single theoretical framework, tenets from each of these theories can be seen in the application of learning through service.

Research has shown that the ideal situation for students to learn is not always within the confines of the classroom (Stephens, 1995). Research studies have demonstrated that learners fail to develop deep understandings of subject matter in traditional classrooms and therefore fail to apply this knowledge to settings outside of the classroom (Dailey, Conroy, & Shelley-Tolbert, 2001). Fletcher and Branen (1993) state

that when instructed with traditional lectures and demonstrations, students are primarily passive learners and therefore have limited opportunities to generalize concepts applied to settings. This common argument that students need to be active in their learning and engaged with real life was supported by Plato and Socrates in Greece, Rousseau in France, Tolstoy in Russia, and Dewey in America (Stephens, 1995). One popular method of students learning first hand is through community service, in the context of service learning. According to Gray et al (1999), service learning has been used in schools for more than 30 years and is an effective means of advancing student development.

According to the National and Community Service Trust Act of 1993, service learning:

1) is a method whereby students learn and develop through active participation in thoughtfully organized service that is conducted in and meets the needs of communities; 2) is coordinated with an elementary school, secondary school, institution of higher education, or community service program and the community; 3) helps foster civic responsibility; 4) integrated into and enhances the academic curriculum of the students, or the education components of the community service program in which the participants are enrolled; 5) and provides structured time for students or participants to reflect on the service experience (Corporation for National and Community Service, n.d.).

As popular press and research studies show, schools from around the country have advanced curricular delivery with the use of service learning (Neal, 2003). In fact, the National Center for Education Statistics (NCES) (1999) conducted the *National Student Service-Learning and Community Service Survey* in the spring of 1999 and found 64% of

all public schools, including 83% of public high schools, had students participating in community service activities arranged and/or recognized by the school. The study also found that 32% of all public schools incorporated service learning as part of their curriculum, including nearly half of all high schools.

Moreover, many states are adopting laws that require students to perform a set number of hours of service before they can graduate (Neal & Miller, 2003). According to the Education Commission of the States (2001), Maryland requires service to be performed in order to graduate and service is included in six state's education standards (Idaho, Michigan, Minnesota, New Jersey, New Mexico, and Vermont), but is not necessarily required.

Service learning continues to be the focus of journal articles, workshops, conferences, and curriculum to aid as a reference for teachers. There has been a plethora of literature and research encompassing the effects of service learning on students, communities, schools, and teachers in most disciplines (Eyler, Giles, Stenson, & Gray, 2001). However, to date, there has been minimal research conducted on service learning in the agricultural education discipline (Woods, 2002b). In reviewing ten years of service learning literature, Woods and Stewart (2003) found, 166 articles from five scholarly outlets, with only five articles related to agricultural education. As Trexler (2001) stated, [s]ervice learning is a new term for many in the profession and one that needs to be examined in detail. However, according to Hess (2001) "service learning is the complementary piece of the puzzle that helps tie together several aspects of the triad model of agricultural education, as well as the FFA's push for student's personal development" (p. 10).

While there is a growing interest to utilize service learning within agriculture, use of service learning is not a new idea in agricultural education. The principles of community service or service learning have long been advocated as a method for advancing civic awareness and citizen responsibility in both agricultural education and the Future Farmers of America (FFA) (Edman, 1953; Scott, 1952; Smith, Martin, McMahon, 1954; Sperlich, 1975). “Our first responsibility is to educate for more effective democratic living in a culture of social, economic and political struggle” (Baker, 1957). Community service projects also strengthen the FFA and agricultural education because of the wonderful moral impact of helping others through service (Cummings, 1957). In some cases, like the ‘Building our American Community’ (BOAC) program, service had been institutionalized in agricultural education and FFA. The BOAC program was formed to help FFA members, working together in chapters, to know the development process and to organize and conduct community development projects (National FFA Organization, n.d.).

The FFA was established in 1928 as an intracurricular part of agricultural education (National FFA Organization, 2002). Ekstrom (1955) stated that before FFA was a national organization, it was known in some states and areas as Community Service Clubs; which is one of the major purposes of FFA. The FFA Motto of “Learning to Do, Doing to Learn, Earning to Live, Living to Serve” exhibits the dedication to service (National FFA Organization, 2002). There are individual and national chapter awards based on community service involvement.

Literature about the use of community service by students has shown tremendous benefits for students, teachers, and communities. As Woods (2002a) noted, community-

based service learning “offers students an opportunity to explore the connections between the theoretical realm of AgriScience in the classroom and the practical scientific needs of the community” (p. 27) By making the effort to involve students in the community can forge new bonds between students, teachers, and citizens, while helping solve community problems (Israel & Hoover, 1996). Research has shown that service participants have a slightly higher grade point average (Gray et al, 1998); were more satisfied with their course (Gary et al, 1998); placed higher importance on volunteering (Markus, Howard, & King, 1993); and showed positive improvements on ability to work with diverse groups and felt self worth in social situations (Osborne, Hammerich, & Hensley, 1998).

1.3 Need for the Study

Research literature addressing service learning over the past decade has provided the effects of service learning on the student, instructor, school, or community; but minimal research reflected if teachers in a specific discipline used it in their classroom and to what extent. Likewise, as Woods and Stewart (2003) noted, research on service learning in the discipline of agriculture is slowly surfacing. While community service has long been incorporated into FFA activities, very little has been written about those activities and if they were incorporated in classroom teaching, involved reflection activities, and whether there was a community need for that activity. This study assessed Agriscience instructors’ use of community service and provided a better understanding of existing knowledge and needs of community service. The lack of studies addressing the use of service learning in agricultural education within public education was the central problem that this study was designed to address.

1.4 Statement of the Problem

Agriscience education and FFA have a long standing foundation built upon service, as demonstrated by the FFA motto of “Learning to Serve.” With the call to service already instilled in agriscience education and FFA programming, it is important to know what service activities Agriscience instructors are using to uphold the motto and commitment to maintaining a strong linkage with community stakeholders. Therefore, the need to know if and to what extent Agriscience instructors use community service provided the focus for this study.

1.5 Purpose

The purpose of this study was to examine the use of community service by Michigan High School Agriscience instructors. The objectives are:

- 1) To describe current use of community service by Agriscience instructors;
- 2) To describe the current use of service learning model elements (planning, implementation, reflection and evaluation) as practiced by Michigan Agriscience instructors; and
- 3) To describe the demographic composition of Michigan Agriscience instructors that utilize community service as an integral part of their agricultural curriculum and FFA programming.

1.6 Limitations of the Study

The words community service and service learning were used interchangeably. All questions in the study used the term community service since service learning is still

a new term in the education field and no single definition of service learning has been accepted. Therefore, in order to insure reliability, the term community service was used.

1.7 Terms and Definitions

Agricultural Education- prepares students for successful careers and a lifetime of informed choices in the global agriculture, food, fiber and natural resources systems (National FFA Organization, 2002).

Community Service- Community Service is volunteerism that occurs in the community-action taken to meet the needs of others and better the community as a whole (National Service Learning Clearinghouse, 2001).

FFA- A nationally recognized intracurricular youth organization dedicated to making a positive difference in the lives of young people by developing their potential for premier leadership, personal growth and career success through agricultural education (National FFA Organization, 2002).

Reflection- Reflection describes the process of deriving meaning and knowledge from experience and occurs before, during and after a service-learning project. Effective reflection engages both teachers and students in a thoughtful and thought-provoking process that consciously connects learning with experience (National Service Learning Clearinghouse, 2001).

Service Learning- 1) is a method whereby students learn and develop through active participation in thoughtfully organized service that is conducted in and meets the needs of communities; 2) is coordinated with an elementary school, secondary school, institution of higher education, or community service program and the community; 3) helps foster

civic responsibility; 4) integrated into and enhances the academic curriculum of the students, or the education components of the community service program in which the participants are enrolled; 5) and provides structured time for students or participants to reflect on the service experience (Corporation for National and Community Service, n.d.).

1.8 Summary

This thesis presents theoretical and empirical work on the use of community service within secondary agricultural education programs. The goals are to describe and analyze the state of community service and service learning model elements, and situate the findings within this framework. The thesis consists of five chapters, including this introductory one.

Chapter 2: Review of Literature. Theories of service learning and research literature on community service and service learning are outlined and explored as they relate to this study.

Chapter 3: Methodology and Research Design. The study utilized a census study of 130 Michigan Secondary Agriscience instructors. A total of 86 usable surveys were collected with a response rate of 66.2%.

Chapter 4: Findings. The previous chapters set the stage for developing the researcher's propositions for a study that assesses the use of community service within secondary agricultural education. In this chapter, the empirical research findings are discussed and analyzed in detail using different clusters for comparison.

Chapter 5: Conclusions and Recommendations. Conclusion from presented in this thesis implicates for the use of community service in agricultural education and FFA programs. As implicates for practice, these results can help secondary agricultural instructors, university agricultural education teacher educators and FFA staff to better understand the process of implementing community service and service learning model elements.

CHAPTER 2

LITERATURE REVIEW

2.1 Chapter Preview

This study drew on five areas of literature: 1) historical foundations of service learning; 2) research in service learning; 3) implementation of service learning projects; 4) effects of service learning; and 5) agricultural education and FFA's commitment to advancing service learning. Each of these literature reviews either defined the study's area of investigation or aided in the creation of the study's conceptual framework.

The researcher used this body of knowledge to meet the objectives of the study: 1) to describe the current use of community service by Agriscience instructors in Michigan; 2) to describe the current use of service learning model elements (planning, implementation, reflection, and evaluation) as practices by Michigan Agriscience instructors; and 3) to describe the demographic composition of Michigan Agriscience instructors that utilize community service as an integral part of their agricultural curriculum and FFA programming. This review of literature was used to answer the following research questions:

1. Is there a clear sense of service learning among Michigan Agriscience instructors?
2. Do Michigan Agriscience instructors have a clear commitment to the basic idea and principles of service learning?
3. Is there support from Michigan Agriscience instructors for infusing service learning into agricultural education curriculum and FFA programming?

Ultimately, the review of literature provided a conceptual framework for the research methodology outlined in Chapter 3. In particular, the research methodology was grounded in the existing literature, theory, and the researcher's experience.

2.2 Historical Foundation of Service Learning

Service learning is the most recent manifestation of what is now almost a 100-year history of American educational reform (Kraft, 1998). This reform attempts to bring the school and community back together, to build or rebuild a citizenship ethic in our young people, and bring more active forms of learning to our schools (Kraft, 1998). It incorporates traditional principles of apprenticeship and builds on educational traditions described as project-based learning, hands-on learning, and experiential learning that began to spread in the late 19th and early 20th centuries (National Commission on Service-Learning, n.d.).

The concept and philosophy of service learning has been around since the turn of the twentieth century. It was the ideas of John Dewey and others associated with the progressive education movement in the early and middle twentieth century that were the most influential in the service learning movement (Stephens, 1995). Dewey advanced the view that active student involvement in learning was essential in effective education (Dewey, 1956; Waterman, 1997). He also strongly advocated that the community is an integral part of educational experiences, because what is learned in the school must be taken and utilized beyond its bounds, both for the advancement of students and the betterment of future societies (Dewey, 1916; Waterman, 1997). "While family, church, the media, and the streets all play powerful roles in children's development, it is schools

that provide the greatest opportunity for youth to experience community, to work toward common goals, and to uphold both individual rights and collective good” (Wade, 1997, p. 4).

As of December 2000, 16 states advance service learning in their statutes and 23 mentioned service learning in either their regulations or state code (Neal & Miller, 2003). A number of factors brought community service as an approach to learning into the awareness of educators (Stephens, 1995). Stephens (1995) found that there was a persistent dissatisfaction with schools, the theme of boredom, restlessness, and disengaged students going through life as bystanders rather than participants. Despite the rapid growth of service learning, the number of schools offering service learning is still limited, and in many of those schools, only few teachers participate (National Commission on Service-Learning, n.d.).

The practice of service learning varies widely, and even devoted practitioners are not always clear about the essence of the pedagogy or whether they are implementing service learning or community service (Billig, 2002). The quality of programs also varies widely, and many service-learning experiences do not occur often enough to have a positive impact on learning and development (National Commission on Service-Learning, n.d.). Service learning is not a model and does not have specific steps, however, it usually involves 1) meeting authentic community needs, 2) student involvement in planning and implementing service activities, 3) reflection to gain greater insight and learning from the service experience, and 4) celebration or recognition of the activity (Billig, 2002).

The degree to which service learning is integrated with standards and curriculum also differs widely across the United States, as do the types of reflection activities which students engage, the amount of responsibility and choice students are given, the length of the experience, and the ways that teachers help students to understand how the experience relates to the real world (Billig, 2002). Every service learning project is a unique experience.

2.3 Service Learning Research

The rise in service learning over the past several years has prompted a growing number of educators, researchers and policy makers to seek out research findings that define the effects of service learning on students, faculty, communities, and educational institutions (Furco, 2000). Researchers who have investigated the claims of service learning report only a small research base to support program effectiveness (Bradley, 1997; Chapin, 1998; Woods, 2002b). While research has shown some benefits of service learning, there is a lack of research backing long-term effects on students (Woods, 2002b).

The research in service learning should be read with caution; many studies were performed as program evaluation rather than pure research; therefore their general applicability to the field is limited (Billig, 2002). One of the major difficulties in evaluating and researching service learning is the lack of agreement on the term and what it is meant to accomplish (Billig, 2000a, Kraft, 1998; Neal, 2003).

Recent reviews of literature, such as those by Billig (2000b) and Andersen (1998) revealed a relative lack of research on service learning in K-12 (Billig & Furco, 2002).

Billig and Furco (2002) reported in July 2001, a group of researchers convened to discuss the research in K-12 service learning and generated a research agenda for the next decade. Due to time constraints, their work focused on three broad areas: personal/social development, civic engagement, and impact of service learning on students' academic achievement; a list of questions accompanied each area (Billig & Furco, 2002).

Several challenges face service learning research including lack of funding, methodological rigor, longitudinal data, and large-scale studies (Neal, 2003). It is too early to predict the long-term impact of service learning on educational reform, citizenship education, community building, or pedagogical and curricular change (Kraft, 1998). Since service learning is interpreted differently, it is difficult to assess its results and combine studies. (National Commission on Service-Learning, n.d.).

2.4 Implementing Service Learning

2.4.1 Reflection

A recurrent theme in service learning has been the concept of reflection as a necessary component for the realization of educational objectives (Waterman, 1997). This is the time where the “learning” part of service learning is exercised. Learning is intensified by reflection - students are required to contemplate the meaning of their service, evaluate it, thereby reaching a greater understanding of themselves, their studies, and the society (Stephens, 1995).

In a meta-analysis of research studies on service learning and community service, Conrad and Hedin (1981) found that reflection was the single most necessary element in a service program leading to student learning, though it is typically not a central focus in

school (Seigel, 1997). Billig (2000b) and Barkley (1999) found that when reflection included elements that encouraged students to make meaning of their experiences and draw connections to the roots of community needs, students developed greater understanding and more empathy for others.

Reflection activities can be carried out orally, during class time, in the form of student questions and comments that draw on what they have observed and/or take the form of a written assignment (Waterman, 1997). Billig (2000b) found when teachers facilitate discussions that help students to see deeper meaning to the activity they were more apt to identify and retain the outcomes for a longer period of time.

2.5 Hindrances to Service Learning

2.5.1 Scheduling Service

Teachers may often feel that there is not enough time during the day to add an additional activity. Wade (1997) reported while there are many different hindrances teachers might experience with service learning, most of their concerns can be linked to one critical factor: time.

Of the many ways that service learning activities differ from traditional academic instruction, three have particular significance for teachers in terms of the time problems they experience. First, most service-learning activities cannot be taught directly from a curriculum guide or textbook. Because service-learning projects must address a school or community need, teachers usually need to develop tailor made plans for the project and seek creative ways to tie the service activity to the

academic curriculum. Reflection lessons must also be developed specific to the project and students' experiences.

Second, almost all service-learning projects involve collaboration with others...It is a challenge for teachers to find the time to plan collaboratively and to make needed contacts with community members.

Third, service-learning activities usually involve some unforeseen problems or surprising events. Because most projects involve other people in the school or community and because service-learning centers around trying to change existing problems, with the logistics of a visit to a service site, many things can go wrong (pp. 87-88).

Although time is frequently mentioned as a problem with service learning, other problems with service learning include: transportation, funding, parental complaints, lack of support from colleagues or administrators, lack of student motivation, and student misbehavior out in the community (Wade, 1997).

2.5.2 Costs

Service learning in American schools takes on an almost infinite array of shapes and strategies, and the associated costs depend on the scope of the efforts, the ways in which it is integrated into the school and the type of service projects that make up the program (Melchior, 2000). Melchior added that the majority of schools have integrated service learning into their curriculum have done so without additional, outside funding. Neal (2003) reported, "a further indication of the growth, possibly reflecting the

institutionalization within school budgets and policies, are the 84% of public schools who reported that they did *not* receive outside financial help for their programs” (p. 7).

2.6 Effects of Service Learning

A growing concern with school leaders is with students’ apparent lack of skills, information or even caring about society in general and their own communities (Billig, 2000a). Billig further noted that service learning has been found to help this problem. Research has found that service learning increased students’ feelings of both civic and social responsibility. Students involved with service-learning projects gain a greater sense of civic responsibility, a feeling that they can make a difference and an increased desire to become active contributors to society (National Commission on Service-Learning, n.d.).

The National Commission on Service-Learning (n.d.) reported that service-learning accomplished the following: 1) reverses student disengagement, 2) reinforces and extends the standards-based reform movement, 3) promotes the public purposes of education, and 4) builds on the growing willingness of students to become involved.

2.6.1 Impact on Students

Most research on service learning has been on personal/social development, civic responsibility, academic learning, and career exploration. Research has shown that students engaged in quality service learning showed increased measures of personal and social responsibility, communication, and sense of educational competence (Billig, n.d. and Weiler, et al., 1998). Leming (1998) and Billig (n.d.) reported that students felt a higher sense of responsibility to their schools when involved with service learning.

Students engaged in service learning were more likely to treat each other kindly (Berkas, 1997; Billig, n.d) and more likely to increase their sense of self-esteem and self efficacy (Shaffer, 1993; Billig, n.d.). Students also felt more aware of community needs, believed they could make a difference, and increased their understanding of how the government works (Berkas, 1997; Billig, n.d.; Melchior, 1999; National Commission on Service-Learning, n.d.).

Students that were involved with service learning projects reported a sense of educational accomplishment and homework completion (Weiler, LaGoy, Crane & Rovner, 1998; Billig, n.d.). Students were also less likely to be referred to the office for disciplinary measures (Follman, 1998; Billig, n.d.). High school students who participated in high quality service showed greater empathy and cognitive complexity (Courneya, 1994; Billig, n.d.) and reported a greater acceptance of cultural diversity (Melchior, 1999; Berkas, 1997; Billig, n.d.). Students also reported developing career skills (Berkas, 1997; Billig, Jesse, Calvert & Kleimann, 999; Billig, n.d.), communication skills, positive work orientation attitudes and skills (Weiler et al, 1998; Billig, n.d.)

2.6.2 Service Learning and Teachers

While the use of service learning in teacher education is growing, the number of teacher educators who recognize and understand the concept remains small (Root & Furco, 2001). In a recent 3-year study of service learning in California's teacher education programs, Furco and Ammon (2000) found that service learning was not widely understood by teacher educators, despite statewide initiatives to advance service learning in K-12 schools (Root & Furco, 2000).

The National Commission on Service-Learning (n.d.) reported that teachers who use service-learning successfully often find new meaning and energy as they see their students learn. They also found that teachers find that problems, such as misbehavior, disappear when students are excited about their work and understand the subject they are learning better.

Organizing meaningful service-learning experiences are not easy (Stephens, 1995). Teachers must be able to use a complex set of skills: leading reflection activities, moving from presenter-style teaching to coach-style teaching, and identify the most appropriate curriculum connections for a community project (National Commission on Service-Learning, n.d.). The National Commission on Service-Learning (n.d.) reported that teachers frequently raise concerns about finding the time to fit service-learning into the school day since many high schools typically have 50-minute classes, it can be difficult to fit a service learning project into a single class.

Wade (1997) found that teachers decide to participate in service learning for a variety of factors, including instilling a sense of caring, social responsibility, or self-esteem in their students. Not only do teachers find service learning beneficial to their students, but also to themselves. Wade (1997) found that some of the gratifying aspects of service learning include: public attention in the media; recognition from colleagues, administrators, and parents; student motivation and learning; and the benefits they perceive resulting from the service activity for the community. Seigel (1997) also found that teacher's past experiences with community service, knowledge about service learning, and beliefs about teaching and learning played a significant role in the teacher's interest level and implementation of service learning activities in the curriculum.

2.6.3 Service Learning and the Community

There is little research on the impact of service learning on the community. The National Commission on Service-Learning (n.d.) reported that community members who participated as partners in service learning as well as those who became familiar with the activities tended to change their perceptions of young people, viewing them as important contributors and resources to the community.

2.7 Service Learning in Agricultural Education

“The FFA Mission Statement: FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth, and career success through agricultural education” (Mattingly & Morgan, 2001, p. 14). Mattingly and Morgan notes that those three elements: premier leadership, personal growth, and career success, demonstrate how the FFA uses each to be a leading youth organization in the area of service learning. “Service learning is an unparalleled means of achieving the FFA’s motto: *Learning to Do; Doing to Learn; Earning to Live; Living to Serve*, while linking agricultural education to our communities” (Woods, 2002a, p. 27). The best thing about service learning is that the students learn without realizing it because they are actively participating in something they are interested in, which is what every teacher should strive for (Mattingly & Morgan, 2001). Woods, (2002d) stated “service learning represents a holistic approach to youth development and the building of multiple competencies often promoted by numerous FFA activities and agricultural education initiatives” (p. 18).

Agricultural education is built upon a triad model consisting of FFA, classroom instruction, and supervised agricultural/occupational experiences (SAE/SOE). In addition to these three opportunities for learning, most agricultural education programs engage in several community service activities per academic year, engaging students with their community and citizens in need (Wade, 1998; Dailey, Conroy, & Shelley-Tolbert, 2001). Service learning is the complimentary piece of the puzzle that helps tie together several aspects of the triad model, as well as the FFA's push for students' personal development (Hess, 2001). Hess further stated:

The only aspect of service learning that is different from what agriculture teachers currently do is that we put an emphasis on self-reflection and interpretation of our work to better understand the knowledge carried away from an activity. The service learning model only enhances the overall program of instruction in agriculture, while strengthening the development of FFA members (p. 10).

Woods (2002c) noted "while no single formula for academic improvement fits every agricultural education program, innovative service learning is invariably a key feature of local programmatic and student success" (p. 26). Likewise, Trexler (2001) stated, "It is easy to see that service learning fits well within the historical framework of agricultural education's focus on the community" (p. 5).

Community service projects, such as demonstration plots, farm improvement, and mentoring, have complemented agricultural education throughout the years (Born, 1955, Edstrom, 1955; Mattingly & Morgan, 2001). The Building Our American Communities was once a program sponsored by the FFA that was built upon community service. Since 1971 FFA members have participated in BOAC projects implemented in high schools

across the nation as one way to solve problems communities face (Bachman, 1981). In 1981, Bachmann (1981) found that more than 1,300 U.S. communities received millions of dollars of community development aid throughout the year through projects carried out by the FFA.

The BOAC program is two-fold in its educational objectives. The first objective is learning about community development, along with other topics of instruction in the classroom (National FFA Organization, n.d.). The second objective is the experiences of the chapter and citizens of the community as the students study their community and plan and act on a specific community project (National FFA Organization, n.d.). The design of this program is similar to the service learning model by incorporating the service activity with the classroom instruction and studying the community needs.

Though this program was very successful, it was cancelled as a national program in the 1990's. While it is no longer a national program, it is still used and/or has been modified in some states, including Michigan. Currently, there is no program in the FFA that is directly associated with community development/service.

Michigan maintained the principles of the BOAC program but renamed it Building Our Michigan Communities (BOMC). The BOMC project closely relates to service learning. The Michigan FFA Association (2001) outlined some main objectives of the BOMC project:

1. Community development taught as part of instructional program
2. Studied the needs, boundaries and resources of the community
3. Considered how the project would contribute over time in the community

4. Explored possible cooperative community development efforts with other groups
5. Discussed community needs with at least one local, state, or federal agency
6. Involved leading community and civic leaders/groups to participate in the project
7. Conducted a “how could we have done it better” evaluation at the completion of the project
8. Identified and recognized local leaders for support in the chapter’s BOMC project.

The BOMC project resembles the model of many service learning projects. This project is not required for every FFA chapter in the state. While this program is intentionally centered on communities, other programs agricultural education and FFA offer can also incorporate components of community service.

Supervised agricultural/occupational experience programs in agriculture consist of all the practical agricultural activities of educational value conducted by students outside of class and laboratory instruction or on school-released time (Phipps & Osborne, 1988). These programs provide students to transfer the knowledge they learn in the classroom to real life settings. “While classroom experiences develop understanding of principles, genuine understanding and problem solving occur when students are faced with real problem situations that are solved only by application of principles” (Phipps & Osborne, 1988, p. 314). The use of SAE/SOE’s is also similar to the some objectives of service learning.

Although SAE/SOE's are important in agricultural education, it may be difficult for students who have no background in agriculture to perform these activities. One solution to this problem is a finding good, relevant, supervised experience programs for agricultural students to utilize volunteer opportunities within the local community (Connors, 1992). "Since I started incorporating service learning into my Ag Ed curriculum, my lessons have been easier to plan, preparing a Program of Activities (POA) with my officers has been less tedious, and I found new supervised agricultural experience programs for my non-traditional ag students, said Pace" (Davis & Scott, 2001, p. 8).

Community service, volunteerism and citizenship have long been important components of agricultural education and FFA; however, many agricultural teachers consider them group activities (Connors, 1992). Agricultural educators are community-oriented and believe that the program they provide should serve the community (Phipps & Osborne, 1988). With the latest push for more experiential education and service learning for high school students, community service and volunteerism can play a major role in all students' supervised experience programs (Connors, 1992).

Service learning benefits the students by helping them gain valuable life skills, communication skills, and puts the student in a real world work setting (Davis & Scott, 2001). It is an excellent vehicle for students who come from a farm background because many have never been exposed to urban issues and problems (Barkley, 1999). Teachers also benefit from service learning by having new, fresh and innovative approaches to present to their students and could possibly allow greater flexibility (Davis & Scott, 2001).

Vocational agriculture must be more than a process of absorbing and storing facts and figures; it must be the development of specific knowledge and skills necessary for successful participation in agriculture and the development of understandings, ideals, and attitudes (Bach, 1954). Ekstrom (1954) stated, “sometimes we fail to recognize that we are training individuals who must work and live with other individuals and with groups in a complicated society” (p. 29). Leaders of tomorrow are not only needed, but also citizens of tomorrow- good, patriotic, community-minded citizens to follow and support leaders (Sperlich, 1975). Therefore, by initiating service learning in agricultural education, students become leaders and involved citizens.

The Michigan Association of Agriscience Educators developed a strategic plan for its agriscience and natural resources educators in Michigan. Many topics, outcomes, and objectives were addressed in this plan. They stressed that “all ANRE (agriscience and natural resource education) programs need to have three components: defined agriculture and natural resources instruction, quality experiential education and premier leadership training” (p. 4).

Two outcomes presented in this plan were interrelated to the call of service and the community. One outcome is to “implement the three components of an ANRE program: defined agriscience and natural resources instruction, quality experiential education and premier leadership training” (MAAE, n.d.). The tasks included in this outcome are preparation of teachers to implement experiential education, develop teachers’ awareness of options for experiential education, and define experiential education (MAAE, n.d.). Experiential education includes many different teaching

methods, one example is service learning. This strategic plan is the stepping stone into the integration of service learning in agricultural education.

The other outcome is to expand ANRE in-service opportunities to include other groups within schools and communities (MAAE, n.d.). Two of the tasks that are associated with the outcome are inviting various individuals and groups within the school and county to existing in-service activities and to provide information on ANR topics and career pathways to community groups and schools (MAAE, n.d.). It is important to not only have the school involved in determining service learning projects, but to establish partnerships within the community.

2.8 Summary

As this review of literature shows, a vast range of approaches and studies exist that address the use and impact of service learning. There is a large amount of research, some of which is complementary to agricultural education and FFA programming. But no consistent literature – not to mention a common definition of service learning and use of service learning in agricultural education and FFA programming- has been developed thus far.

The literature was also used to develop, expand upon and illustrate the conceptual framework of service learning in agricultural education and FFA programming. Specifically outline by Cooper (1995) service learning needs to be on educators agenda for five important reasons, 1) to allow life experiences to inform one's learning; 2) to apply academic knowledge in real-life situations; 3) to broaden one's understanding of

various realities; 4) to encourage reflection; and 5) to recognize one's responsibility and connection to the local community and society (Patterson, 2002).

“The time is now ripe for U.S. schools to embrace service-learning as a means of overcoming wide-spread academic and civic disengagement among American students and of raising a generation of American youth who are both world-class learners and world-class citizens” (National Commission on Service-Learning, n.d., p. 5). While service learning is a strong movement now, it is impossible to predict its future and if it is a fad that will sparkle briefly and then fade away (Seigel, 1997).

In the next chapter, this review of service learning literature further serves as the grounding of a method used to assess the use of service learning by Michigan Agriscience instructors.

CHAPTER 3

METHODOLOGY

3.1 Chapter Preview

The previous chapters outlined the scope of this study, the relationship of the investigation to existing research and the conceptual framework used in this study. This chapter explores the research design and methodology implemented. The methods for data collection and analysis used in this study are presented in this chapter. The following topics were discussed in this chapter: introduction, research design, population and sample, data collection, research questions, validity, reliability, instrument development, data analysis, statistical procedures and limitations of this study.

3.2 Population

The study population was composed of 130 Michigan Agriscience instructors. For the purposes of this study, the term Michigan Agriscience instructor applies to those teaching middle school, high school, or career/technical centers. The population was based in the field and geographically dispersed throughout the state of Michigan.

The entire population of agriscience instructors was selected for the study. The census was performed using the 2002-2003 Michigan Agriscience Educators Directory, which included all Agriscience educators that teach in middle school, high school, and career/technical center.

3.3 Instrument Development

3.3.1 Design

The instrument followed an altered design recommended by Dillman (2000) in *Mail and Internet Surveys: The Tailored Design Method*. The survey instrument is included in Appendix B. The instrument was designed using Microsoft Word 2000 software. Empty space was provided throughout the questionnaire for respondents to make comments. The researcher expressed appreciation to the respondents for taking time to complete the questionnaire and the back page provided address information for any additional information or comments.

3.3.2 Content

The content of the instrument included a brief description on the inside cover with a description of the survey and directions for completion. Items included in the questionnaire were modified from the University of California, Los Angeles Higher Education Research Institute Faculty Survey (UCLA, n.d.) and literature reviewed by the researcher including service learning and agricultural education. While the questionnaire contained twenty-three questions with sub questions, only one question with the sub questions was used for the research. Other demographical questions were cross-tabulated with the one question.

Items on the questionnaire included demographics, teaching and personal values, and what and how instructors taught agriculture. The study was a survey instrument used to collect the necessary data providing quantitative data. The survey instrument (see Appendix b) contained open-ended, nominal, and ordinal questions and Likert-type

items. The one question used for the research was a 5-point scale question with the scale as followed: 1 = never, 2 = rarely, 3 = sometimes, 4 = frequently, 5 = always. Scaled items will be described as 1-1.8 = never, 1.8-2.6 = rarely, 2.6-3.4 = sometimes, 3.4-4.2 = frequently, and 4.2-5 = always. The demographics section consisted of questions surrounding gender, age, race/ethnic group, education, what type of school taught in, years in agricultural education, and where teachers were raised. These questions were both closed and open-ended, nominal and ordinal.

3.3.3 Validity

The instrument was evaluated for both face and content validity from a panel of experts. Validity is “the extent to which an instrument measured what it claimed to measure” (Ary, Jacobs, & Razavieh, 2002, p. 242). A panel of five experts with the expertise in research, evaluation, and agriscience education from the Department of Agriculture and Natural Resources Education and Communication Systems (ANRECS) at Michigan State University (MSU) reviewed the instrument.

3.3.4 Reliability

Twelve agriscience education interns from Michigan State University were identified and asked to serve as a pilot test group to complete the questionnaire for reliability. Reliability is “the degree of consistency with which it measures whatever it is measuring” (Ary, Jacobs, & Razavieh, 2002, p. 242). The researcher administered the instrument in person. Questions pertaining to service learning were added after the pilot test; therefore a post hoc reliability was run.

3.4 Data Collection

The survey was conducted using a modified approach outlined by Dillman's (2000) *Mail and Internet Surveys: The Tailored Design*. Data collection included: questionnaire distributed at a conference, follow-up e-mail, second follow-up mailed questionnaire, and final questionnaire distributed at a conference. The two conferences where survey were distributed were the summer and fall Professional Development Institute conferences attended by most of the agriscience instructors from Michigan. The surveys were color coded, yellow for the first round, pink for the second, and blue for the third.

3.4.1 Initial Questionnaire

On July 9, 2003, the initial questionnaire was distributed at the Summer Professional Development Institute (PDI) for Michigan agriscience instructors. The conference did not attract all 130 teachers, therefore only a portion of the teachers received the initial questionnaire. The questionnaire was in the conference packet the teachers received on the first day. The teachers were instructed to fill out the survey and return to a manila envelope and sign their names on the paper taped on the front of the envelope. Signing the sheet would allow the researcher to know who completed the survey and also allow for confidentiality.

3.4.2 Follow-up E-mail

An individualized follow-up e-mail was sent on July 11, 2003 to agriscience instructors thanking them for their participation and telling them if they had not been at the conference, they would receive the survey in the mail (See Appendix D).

Respondents who had been at the conference and did not turn in the questionnaire were urged to complete and return it immediately.

3.4.3 Second Follow-up Questionnaire

On July 25, 2003, two week after the initial questionnaire was distributed, a second questionnaire was sent to those who had not responded along with a cover letter and self-addressed stamped return envelope. The agriscience teachers were instructed to write their name on the envelope to eliminate sending out multiple mailings. The cover letter was on ANRECS department letterhead and signed by a faculty member.

3.4.4 Final Follow-up Questionnaire

On September 29, 2003, a follow up questionnaire was distributed at the Fall PDI conference for Michigan agriscience teachers. Respondents were instructed to fill out the questionnaire in their conference folder and return and sign a manila envelope.

3.4.5 Processing Procedures

The questionnaire was printed on 8 ½" X 11" paper, with the questions in two vertical columns. The questionnaire was folded in half vertically with one staple in the middle. The packet included the questionnaire; cover letter, and self-addressed stamped return envelope.

The respondents were told to write their names on the outside of the return envelopes for identification purposes. Many of the returned questionnaires did not have a

name on the envelope. The survey questionnaires were kept in a file drawer for security purposes.

3.5 Data Analysis Procedures

The Statistical Package for the Social Sciences (SPSS) version 11.0 was used in the data analysis. All questionnaires that were returned were entered into SPSS. Each questionnaire was labeled with the date it was received, the row the data was entered, and if it was an early or late respondent. After all of questionnaires were entered, the researcher went back through and verified each instrument with the data in SPSS. If more than one response was given on an item, the first response the researcher came to was entered.

Data analysis began on July 11, 2003. Early and late respondents were compared to determine if there was a difference between the groups. A post hoc reliability test was performed to questions added after the initial pilot test. Descriptive statistics including frequencies, percentages, means, standard deviations, cross tabulations, t-tests and Chi-squares were performed to describe the data. Chi-square tests were run to determine if there were significant differences between demographical data and use of community service.

3.6 Summary

This chapter outlined the procedures and methods used for this study. The study population consisted of 130 Michigan agriscience instructors and 86 surveys were returned for a response rate of 66.2%. Statistics used to analyze the data included:

frequencies, percentages, means, standard deviations, cross tabulations, t-tests and Chi-squares.

Research methods for this study of Michigan agriscience instructors' use of service learning have been described. This chapter provided an overview of: population, instrument development, data collection, data analysis procedures, and summary. Chapter 4 presents the findings of the research and Chapter 5 presents the conclusions.

CHAPTER 4

FINDINGS

4.1 Chapter Preview

The previous chapter outlines the scope of this study, the relationship of the investigation to existing research, the conceptual framework used in the study, and a research design and methodology for the study. This chapter reports on the results of the study. It presents the data of the study in answer to the research objectives:

- 1) To describe current use of community service by Agriscience instructors.
- 2) To describe the current use of service learning model elements (planning, implementation, reflection and evaluation) as practiced by Michigan Agriscience instructors (Billig, 2002).
- 3) To describe the demographic composition of Michigan Agriscience instructors that utilize community service as an integral part of their agricultural curriculum and FFA programming.

The analysis of the survey data was completed using the Statistical Package for the Social Sciences (SPSS) version 11.0. Findings are presented correlated with the three objectives used to guide this study. Statistical procedures that were used to measure the results were frequencies cross tabulations, t-test, and chi-squares.

A reliability test found an $\alpha = .7884$, therefore the survey was found to be reliable. According to Ary, Jacobs, & Razavieh (2002) a reliability test is “the extent to which a measure yields consistent results” (p. 249). A t-test was also performed to investigate if there was a difference between early and late respondents. The significance

(2-tailed) ranged from .242-.977, therefore as noted by Ary, Jacobs, & Razavieh, there was no significance between early and late respondents.

4.2 Objective 1

4.2.1 To describe the demographic composition of Agriscience instructors that utilizes community service as an integral part of their agricultural curriculum.

Data collected from the respondents was relative to their demographic composition: gender, marital status, racial/ethnic group, education, place they grew up, years teaching agricultural education, and type of school where they teach. Table 1 depicts the demographic composition of the teachers pertaining to gender, marital status, racial/ethnic group, and where they grew up.

Respondents were 53.5% ($n=46$) male and 44.2% ($n=38$) female. Of the respondents, 77.9% ($n=67$) were married, 5.8% ($n=5$) unmarried, and 16.3% ($n=14$) single. The racial composition of the teachers was 98.8% ($n=85$) white/Caucasian and 1.2% ($n=1$) Asian American/Asian.

Respondents were asked to identify which place best described where they grew up. Two categories were formed, urban and rural. Urban settings are defined in this study as cities of 25,000 to over one million people and rural pertains to populations fewer than 2,500 to 24,999 people. Table 1 shows that 76.6% ($n=66$) of the respondents grew up in rural settings while 23.3% ($n=20$) grew up in urban settings. Educational level was asked of the respondents and 46.5% ($n=40$) had earned their Bachelors degree with 2.3% ($n=2$) working on it. Respondents who had earned a Masters degree were 54.7% ($n=47$) with 30.2% ($n=26$) working on it. Teachers with an Ed.D. totaled 2.3%

(n=2), working on a Ph.D totaled 2.3% (n=2) and those earning other degrees totaled 1.2% (n=1).

Table 1
Respondent Demographics

Variable	<i>n</i>	%
Gender (N=84)		
Female	38	44.2
Male	46	53.3
Total	84	97.7
Marital Status (N=86)		
Married	67	77.9
Unmarried with partner	5	5.8
Single	14	16.3
Total	86	100
Race (N=86)		
White/Caucasian	85	98.8
Asian/Asian American	1	1.2
Education		
Bachelors		
Earned	40	46.5
Working on	2	2.3
Masters		
Earned	47	54.7
Working on	26	30.2
Ed.D		
Earned	2	2.3
Working on	-	-
Ph.D.		
Earned	-	-
Working on	2	2.3
Other		
Earned	1	1.2
Working on	-	-
Grew up (N=86)		
*Urban	20	23.3
**Rural	66	76.7

*Urban=25,000-over one million people.

**Rural=under 2,500-24,999

The remaining demographic questions were as follows: how many years teaching agricultural education and what level of school taught. These demographic questions are illustrated in Table 2. The respondents were asked how many years they had been

teaching agricultural education. The years were distributed into two categories, 0-14 and 15-34 years due to a small population. Sixty-four percent ($n=55$) have taught 0-14 years while 34.9% ($n=30$) have taught for 15-34 years.

Respondents reported the 19.8 % ($n=17$) teach courses in middle schools, 72.1% ($n=62$) teach courses in high schools, 27.9% ($n=24$) teach in career/tech centers, and 2.3% ($n=2$) teach in other places. Table 2 illustrates the findings. Further demographical results are shown in Appendix E.

Table 2
Teaching Demographics

Variable	<i>n</i>	%
Years ($N=85$)		
0-14	55	64
15-34	30	34.9
School		
Middle School	17	19.8
High School	62	72.1
Career/Tech Center	24	27.9
Other	2	2.3

4.2.2 Demographic Cross Tabulations

Cross tabulations were performed to distinguish if there was a significant difference between demographical information and questions pertaining to community service. If the asymptotic significance (p) value is less than 0.05, then it is considered significant (Norusis, 2000). The results (Appendix F) showed no significant difference.

4.3 Objective 2

4.3.1 To describe the current use of community service by Agriscience instructors in Michigan

Respondents were asked how often they implemented community service elements into their agricultural education courses in Table 3. The findings illustrate that 36% ($n=31$) of the respondents either “sometimes” or “frequently” implement community service elements in the agricultural education course(s). Only 4.7% ($n=4$) “never” implement community service elements in their courses.

Table 3
Implement Community Service in Courses

Variable ($N=83$, $M=3.43$, $SD=.978$)	<i>n</i>	%
Never	4	4.7
Rarely	7	8.1
Sometimes	31	36
Frequently	31	36
Always	10	11.6

(1=never, 2=rarely, 3=sometimes, 4=frequently, 5=always)

Table 4 illustrates the results found from the respondents about their FFA chapter requiring all members to participate in community service. The results show that 53.5% ($n=46$) do not require FFA chapters to participate in community service while 33.7% ($n=29$) do require community service.

Table 4
Requirement of FFA Chapters to Participate in Community Service

Variable ($N=84$)	<i>n</i>	%
Yes	29	33.7
No	46	53.5
Not applicable (NA)	9	10.5

Respondents in Table 5 were asked how often they used community service as a part of coursework. The findings indicate that 38.4% ($n=33$) “sometimes” and 30.2% ($n=26$) “rarely” use community service as a part of coursework. Further findings indicate

that 9.3% ($n=8$) “never” use community service as a part of coursework while none of the respondents “always” use community service as a part of coursework.

Table 5
Community Service as a Part of Coursework

Variable ($N=83$, $M=2.72$, $SD=.908$)	<i>n</i>	%
Never	8	9.3
Rarely	26	30.2
Sometimes	33	38.4
Frequently	18	20.9
Always	-	-

(1=never, 2=rarely, 3=sometimes, 4=frequently, 5=always)

4.4 Objective 3

4.4.1 To describe the current use of service learning model elements (planning, implementation, reflection and evaluation) as practiced by Michigan Agriscience instructors.

The findings in Table 6 depict if the respondents align community service with class content. The results found that 43% ($n=37$) “frequently” align the community service with class content while 10.5% ($n=9$) “always” align community service with class content. Further results show that 4.7% ($n=4$) “never,” 4.7% ($n=4$) “rarely” and 33.7% ($n=29$) “sometimes” align community service with class content.

Table 6
Community Service Aligned with Course Content

Variable ($N=83$, $M=3.52$, $SD=.929$)	<i>n</i>	%
Never	4	4.7
Rarely	4	4.7
Sometimes	29	33.7
Frequently	37	43
Always	9	10.5

(1=never, 2=rarely, 3=sometimes, 4=frequently, 5=always)

Respondents were asked if their students had an integral part in planning the community service activity. Table 7 reveals that 34.9% ($n=30$) “frequently” allow their

students to have a part in planning the community service activity while 24.4% ($n=21$) either “sometimes” or “always” allowed their students to help plan the service activity. Further findings show that only 4.7% ($n=4$) “never” and 8.1% ($n=7$) “rarely” allow their students to have a part in planning the community service activity.

Table 7

Students Had an Integral Part in Planning the Community Service Activity

Variable ($N=83$, $M=3.69$, $SD=1.092$)	<i>n</i>	%
Never	4	4.7
Rarely	7	8.1
Sometimes	21	24.4
Frequently	30	34.9
Always	21	24.4

(1=never, 2=rarely, 3=sometimes, 4=frequently, 5=always)

Respondents were asked if the community service activities met community needs. The results show in Table 8 that 44.2% ($n=38$) “frequently” had community service activities meet community needs while 29.1% ($n=25$) “always” met community needs. The findings reveal that 18.6% ($n=16$) “sometimes” and 4.7% ($n=4$) “never” had their community service activities meet community needs.

Table 8

Community Service Met Community Needs

Variable ($N=83$, $M=3.96$, $SD=.968$)	<i>n</i>	%
Never	4	4.7
Rarely	-	-
Sometimes	16	18.6
Frequently	38	44.2
Always	25	29.1

(1=never, 2=rarely, 3=sometimes, 4=frequently, 5=always)

Respondents were asked if time was taken before the community service activity to discuss the project. The findings reveal in Table 9 that 39.5% ($n=34$) “frequently” and 33.7% ($n=29$) “always” take time before community service activities to discuss the

project. Further findings indicate 3.5% ($n=3$) of the respondents “never” and 19.8% ($n=17$) “sometimes” take time to discuss before the project.

Table 9
Time Taken Before Community Service to Discuss

Variable ($N=83$, $M=4.04$, $SD=.943$)	<i>n</i>	%
Never	3	3.5
Rarely	-	-
Sometimes	17	19.8
Frequently	34	39.5
Always	29	33.7

(1=never, 2=rarely, 3=sometimes, 4=frequently, 5=always)

Findings in Table 10 reveal if respondents take time after the community service project to discuss the activity. Findings illustrate that 31.4% ($n=27$) “frequently” take time after the project to discuss. The results show that 25.6% ($n=22$) “sometimes” and 23.3% ($n=20$) “always” take time after the community service to discuss the project. Lastly, 3.5% ($n=3$) “never” and 12.8% ($n=11$) “rarely” take time after the community service project to discuss the activity.

Table 10
Time Taken After Community Service to Discuss

Variable ($N=83$, $M=3.60$, $SD=1.104$)	<i>n</i>	%
Never	3	3.5
Rarely	11	12.8
Sometimes	22	25.6
Frequently	27	31.4
Always	20	23.3

(1=never, 2=rarely, 3=sometimes, 4=frequently, 5=always)

Respondents were asked if reflection activities were performed. The results in Table 11 show that 30.2% ($n=26$) “sometimes” and 27.9% ($n=24$) “frequently” perform reflection activities while only 7.0% ($n=6$) “always” perform reflection activities. Additionally, findings reveal 20.9% ($n=18$) “rarely” and 10.5% ($n=9$) “never” perform reflection activities.

Table 11
Reflection Activities were Performed

Variable ($N=83$, $M=3.00$, $SD=1.115$)	<i>n</i>	%
Never	9	10.5
Rarely	18	20.9
Sometimes	26	30.2
Frequently	24	27.9
Always	6	7.0

(1=never, 2=rarely, 3=sometimes, 4=frequently, 5=always)

Respondents were asked if transportation issues cause difficulty when performing community service activities. The results in Table 12 found that 37.2% ($n=32$) “sometimes” find transportation issues cause difficulty when performing community service activities. The findings show 10.5% ($n=9$) either “never” or “always” find transportation a difficulty. Lastly, 19.8% ($n=17$) “rarely” and 18.6% ($n=16$) “frequently” find transportation issues a difficulty when performing community service activities.

Table 12
Transportation Causes Difficulties

Variable ($N=83$, $M=2.99$, $SD=1.132$)	<i>n</i>	%
Never	9	10.5
Rarely	17	19.8
Sometimes	32	37.2
Frequently	16	18.6
Always	9	10.5

(1=never, 2=rarely, 3=sometimes, 4=frequently, 5=always)

Table 13 depicts the findings of access to funding causes difficulty when performing community service activities. The results show that 37.2% ($n=32$) of the respondents “sometimes” find access to funding a difficulty when performing community service. The findings depict that 22.1% ($n=19$) “rarely” and 19.8% ($n=17$) “frequently” find access to funding causes difficulties. Further findings show 9.3% ($n=8$) “never” and 8.1% ($n=7$) “always” find access to funding causes difficulty when performing community service activities.

Table 13
Access to Funding Cause Difficulties

Variable ($N=83$, $M=2.95$, $SD=1.081$)	<i>n</i>	%
Never	8	9.3
Rarely	19	22.1
Sometimes	32	37.2
Frequently	17	19.8
Always	7	8.1

(1=never, 2=rarely, 3=sometimes, 4=frequently, 5=always)

The results in Table 14 illustrate the findings about if community service activities take too much time to perform. The results show that 44.2% ($n=38$) of the respondents “sometimes” find community service activities take too much time to perform. Further findings show 27.9% ($n=24$) “rarely” while 8.1% ($n=7$) “always” find community service activities take too much time to perform.

Table 14
Community Service Takes too Much Time to Perform

Variable ($N=83$, $M=2.46$, $SD=.874$)	<i>n</i>	%
Never	14	16.3
Rarely	24	27.9
Sometimes	38	44.2
Frequently	7	8.1
Always	-	-

(1=never, 2=rarely, 3=sometimes, 4=frequently, 5=always)

The results in Table 15 depict if the respondents feel community service takes too much time to organize. The findings show that 10.5% ($n=9$) “frequently” and 12.8% ($n=11$) “never” find that community service takes too much time to organize. Forty-three percent ($n=37$) “sometimes” feel community service takes too much time to organize while 30.2% ($n=26$) “rarely find community service takes too much time to organize.

Table 15

Community Service Takes too Much Time to Organize

Variable ($N=83$, $M=2.53$, $SD=.860$)	<i>n</i>	%
Never	11	12.8
Rarely	26	30.2
Sometimes	37	43
Frequently	9	10.5
Always	-	-

(1=never, 2=rarely, 3=sometimes, 4=frequently, 5=always)

Respondents were asked if establishing community partnerships take too much time. Table 16 shows that 39.5% ($n=34$) “rarely” and 29.1% ($n=25$) “sometimes” find establishing community partnerships take too much time. The findings reveal that 20.9% ($n=18$) “never” and 7% ($n=6$) “frequently” find establishing community partnerships take too much time.

Table 16

Establishing Community Partnerships

Variable ($N=83$, $M=2.23$, $SD=.874$)	<i>n</i>	%
Never	18	20.9
Rarely	34	39.5
Sometimes	25	29.1
Frequently	6	7.0
Always	-	-

(1=never, 2=rarely, 3=sometimes, 4=frequently, 5=always)

4.5 Summary

Chapter IV presented the findings from the 86 questionnaires that were collected. Findings were classified under three the objectives that led this study: 1) to describe the demographic composition of Agriscience instructors that utilizes community service as an integral part of their agricultural curriculum, 2) to describe the current use of community service by Agriscience instructors in Michigan, and 3) to describe the current

use of service learning model elements (planning, implementation, reflection and evaluation) as practiced by Michigan Agriscience instructors.

Findings indicated that 44.2% ($n=38$) of the respondents were female and 5.5% ($n=46$) were male. There was a total of 77.9% ($n=67$) married respondents and 16.3% ($n=14$) single respondents, with 98.8% ($n=85$) white/Caucasian and 1.2% ($n=1$) Asian/Asian American.

Sixty-four percent ($n=55$) of the respondents felt that the opportunity to impact students was “very much” important in pursuing a career as an Agriscience instructor (Appendix E). The findings depicted that 60.5% ($n=52$) of the respondents spend 1-4 hours per week on community or public service (Appendix E) and 47.4% have taught a course using community service.

The findings revealed that 38.4% ($n=33$) of the respondents “sometimes” use community service as a part of coursework while 36% ($n=31$) either sometimes or frequently implement community service elements in their courses. Further findings revealed that 33.7% ($n=29$) of the respondents aligned the community service with course content.

There was no significance between community service elements and gender, marital status, years teaching, and where the respondent grew up (Appendix F). Chapter 5 will provide the recommendations and conclusions for this study.

CHAPTER 5

CONCLUSIONS

5.1 Chapter Preview

The preceding chapters provided the introduction, literature review, methodology, and findings relative to Michigan Agriscience instructors' use of service learning. In this chapter, conclusions, recommendations, and implications are presented from the findings around the three objectives: 1) to describe the demographic composition of Agriscience instructors that utilizes community service as an integral part of their agricultural curriculum, 2) to describe the current use of community service by Agriscience instructors in Michigan, and 3) to describe the current use of service learning model elements (planning, implementation, reflection and evaluation) as practiced by Michigan Agriscience instructors.

5.2 Objective 1 Conclusions

Michigan Agriscience instructors are composed of nearly half males and females. Most of the respondents were married with the remaining respondents either single or unmarried with a partner. Nearly all of the instructors were white/Caucasian with only one Asian/Asian American. Sixty-four percent of the Agriscience instructors have taught 0-14 years with the remaining teaching 15-34 years.

5.2.1 Teaching Interests

The majority of the respondents would either definitely yes or probably yes choose to teach Agriscience if they were to begin their careers again. According to the National FFA Organization (2002) agricultural education is built upon a triad model consisting of FFA, classroom instruction, and supervised agricultural/occupational experiences (SAE/SOE). The respondents teaching interest lie in two areas: in all three areas, but leaning toward classroom instruction and an equal balance among all three.

Over half of the respondents spend 1-4 hours per week on community service. Fifty percent of the respondents spend 1-4 hours per week consulting with community stakeholders. Nearly half spend 21-34 hours per week in scheduled teaching. An equal distribution of teachers responded that they had or had not taught a course using community service. The majority of the teachers had participated in a teaching enhancement workshop. When asked if they used community service as a part of coursework, most responded either “rarely,” or “sometimes.”

Respondents felt that being a good teacher and a good citizen was “very much” important for the majority of teachers. Helping to promote racial understanding was “a fair amount important” and influencing social values was “much” important in the teachers’ perspectives. The opportunity to impact students was “very much” important in pursuing a career as an Agriscience instructor for over half of the respondents.

Issues that are important to Agriscience instructors are helping students develop personal values, enhancing students’ self understanding, preparing students for responsible citizenship, and enhancing students’ knowledge of diversity.

5.2.2 Recommendations

The findings show that over half of the Agriscience instructors spend 1-4 hours per week on community or public service. Seigel (1997) found that teacher's past experiences with community service and beliefs about teaching played a significant role in the teacher's interest level and implementation of service learning activities in the curriculum. The majority of Agriscience teachers have used community service before in their courses; therefore the findings follow the literature and research.

Service learning is still a fresh idea to many educators across the country. Agriscience educators are unique from some other educators because they already have the ethic of service instilled in much of their teaching. Though service is recognized, it is not fully utilized as shown in the results of this study. Agriscience teachers in Michigan seem to already be using community service components in their teaching or have used community service prior. The next step is to integrate it into their teaching.

The majority of teachers responded that they had participated in a teaching workshop. A workshop including service learning or solely on service learning could be beneficial with those wanting to learn more about it. The Michigan Agriscience teachers have three Professional Development Institutes (PDI) each year. One of these conferences should be devoted entirely to service learning and experiential education. In the author's opinion, service learning is too broad to be understood in a two-hour session; it needs to be focused on for two days. The sessions could include the following example topics: reflection, marketing and promotion, liability, service learning models, school support and outcomes of service learning.

Fifty percent of the Agriscience teachers spend 1-4 hours per week meeting with community stakeholders. Research shows that one of the hindrances of service learning is finding community contacts (Wade, 1997). In the researcher's opinion, service learning should be easier to incorporate since one of the biggest challenges is taken care of, finding community stakeholders. Agriscience teachers need to build strong partnerships with agricultural industries and established entities/constituents such as the Michigan Extension Service, Farm Bureau, Department of Natural Resources, and local cooperatives. These partnerships can help provide assistance in performing service learning projects.

Agriscience teachers feel it is important to be a good teacher along with helping their students develop values for themselves and others. What service learning provides that cannot be taught from a textbook is a real life experience while developing values. Research has shown that students engaged in quality service learning showed increased measures of personal and social responsibility, communication, and a sense of educational competence (Billig, n.d.; Weiler, et al., 1998). Additional research shows that students who were involved in service learning felt more aware of community needs, had an increased self-esteem, and reported a greater acceptance of cultural diversity. (Melchior, 1999; Berkas, 1997; Billig, n.d.; Shaffer, 1993). Therefore, teachers need to know what service learning can provide for students. This can be achieved through workshops on service learning.

Teachers feel it is important to help students evolve into good citizens and to attain social values. Research needs to be distributed either through a workshop or strategic plan that shows service learning can achieve what Agriscience teachers feel is

important. It is difficult to teach social values and greater sense of diversity through a textbook, whereas service learning can teach all of those items in one service project. Again, a workshop devoted entirely to service learning can address student outcomes and convince teachers that this teaching method makes a difference in students' lives.

5.2.3 Agricultural Education/FFA

While FFA has a strong ethic of service, almost half of the FFA chapters are not required to participate in community service. On the other hand, respondents "strongly agreed" that agricultural education should encourage students to be involved in community service. Half of the respondents "somewhat agreed" that FFA programs need to change to reflect new issues in agriculture.

Almost half of the respondents "somewhat agreed" that agricultural education curriculum needs to change to reflect contemporary issues. Additionally, only half "somewhat agreed" that agricultural education curriculum should promote globalization or social diversity issues.

5.2.4 Recommendations

The majority of the respondents somewhat agreed that agricultural education needs to change its curriculum to reflect contemporary issues such as globalization and diversity. The study also found that the respondents somewhat agreed that FFA should also change to reflect new ideas in agriculture. As Bach (1954) stated, vocational agriculture must be more than a process of absorbing and storing acts and figures; it must be the development of specific knowledge and skills necessary for successful

participation in agriculture and the development of understandings, ideals, and attitudes. Agriculture is an industry that is constantly changing to keep up with new trends, products and technology. It is important for agricultural educators to realize that in order to keep up with the industries changes, curriculum must also change with the times.

A committee comprised of students, teachers, MSU CANR faculty, and community stakeholders should be established to review the curriculum. This review should be done every three years in order to keep up with changing trends and technology.

FFA has strong ties to the area of service with the FFA's motto of: *Learning to Do; Doing to Learn; Earning to Live; Living to Serve* (National FFA Organization, 2002). While the ethic of service is strong in FFA, nearly half of the chapters are not required to participate in community service. One of the most prolific programs sponsored by the FFA was the BOAC project. The BOAC project was implemented in high schools across the nation as a way to solve problems communities face (Bachman, 1981). The objectives and steps in the BOAC project closely model steps in service learning. This program was canceled in the 1990's; therefore many FFA chapters were left without a structured community service project to follow. Some states kept the program but changed the name.

In the researcher's opinion, this program was close to a service learning model and should be incorporated back into the FFA curriculum. It is also recommended that awards should be given out to chapters who perform service learning. There is no specific award given on the state or national level that is solely based on community/service learning. Awards should be given to individuals, FFA chapters, and teachers. This incentive could help promote the use of community/service learning.

5.2.5 Lesson Plans

In addition, over 50% of the Agriscience teachers use the Internet to access lesson plans. With this finding, the author knows that the majority of teachers have access to the Internet and use it for lesson plans and use community service. Therefore, a committee should be put together with people with the expertise in agriculture and natural resources and community/service learning to come up with tailored lesson plans and curriculum according to each specific area of agriculture. These lesson plans and curriculum should be distributed as a binder, CD-ROM, or via Internet. Also included in this curriculum should be a section devoted to how to promote and market service learning. Teachers would then have the resources available to plan a service learning project.

The overall recommendations for objective 1 are as follows:

- Develop a workshop/PDI based solely on intensive experiential education, which includes service learning.
- Develop a committee whose sole purpose is to design a curriculum guide (*Beginner's Guide to Service Learning in Agriculture and Natural Resources*) on service learning in agriculture and natural resources.
- Reinstate the BOMC project and make it required by every chapter in the state.
- Recruit more minorities into the Agriscience teacher education program.
- Review agricultural curriculum every three years.
- Further qualitative and longitudinal studies.

5.3 Objective 2 Conclusions

The second objective that led this study was to describe the current use of community service by Agriscience instructors in Michigan. Despite the rapid growth of service learning, the number of schools offering service learning is still limited, and in many of those schools, only few teachers participate (National Commissions on Service-Learning, n.d.) The Michigan Association of Agriscience Educators developed a strategic plan for its agriscience and natural resources educators in Michigan. Many of the expected outcomes of this strategic plan can be associated with service learning elements.

Nearly 75% of the respondents either “sometimes” or “frequently” implement community service elements in their courses. Only 5% responded “never” and nearly 12% answered they “always” implement community service elements in their courses.

None of the respondents “always” use community service as a part of coursework while nearly 10% “never” use community service as a part of coursework. Respondents almost 40% “sometimes” use community service as a part of coursework while 20% “frequently” and 30% “rarely” use community service as a part of coursework.

In the researcher’s opinion, the findings from the requirement of FFA chapters to participate in community service were lower than expected. The FFA’s motto of *Learning to Do; Earning to Live; Living to Serve* is not being upheld. A little over 50% of the respondents said their FFA chapter is not required to participate in community service, with 10% responding that FFA was not applicable to them.

5.3.1 Recommendations

Further qualitative studies need to be performed to understand why there are distinct differences between respondents implementing community service in their courses and the use of community service as a part of coursework. In the author's opinion, these two questions could be the deciding factor in whether respondents use community service or service learning.

FFA is built on service, yet over half of the FFA chapters are not required to perform community service activities. In the researcher's opinion, every FFA chapter in the state of Michigan should be required to complete a service learning project. Awards on community service should be established and given out at the Michigan FFA State Convention annually. These awards should recognize students, chapters, and teachers for their work with community service.

With the new strategic plan outlined for Agriscience teachers, there should be an increase in the use of service learning in the future. It was stressed in this plan that "all ANRE (agriscience and natural resource education) programs need to have three components: defined agriculture and natural resources instruction, quality experiential education and premier leadership training" (p. 4). One method of experiential education is service learning. One of the specific tasks in the component of experiential education was to prepare teachers to implement experiential education, develop teacher's awareness of options for experiential education, and define experiential education (MAAE, n.d.).

This outcome can easily be incorporated in teacher enhancement workshops and in the teacher education program. A class on only experiential learning methods should be created for teachers working on their undergraduate or continuing education. Students

in the teacher education program should also be required to participate in a service learning project. This opportunity gives the teachers a chance to fully understand service learning before they implement it into their courses. Service learning is still a new concept and more is learned everyday of its concept and impact. Again, specific service learning curriculum guides also need to be developed and strategically distributed. The overall recommendations for objective 2 are as follows:

- Students in the teacher education program and continuing education must take a class on experiential learning and participate in a service learning project.
- Community service should be required for all FFA chapters in the state of Michigan.
- Awards should be given out annually at the Michigan FFA State Convention to students, chapters, and teachers.
- Further qualitative studies on teachers use of community service.

5.4 Objective 3 Conclusions

The third objective of this study was to describe the current use of the service learning model elements (planning, implementation, reflection and evaluation) as practiced by Michigan Agriscience instructors. A major set back and deterrence in service learning research is service learning varies widely, it is not always clear about the essence of the pedagogy or whether they are implementing service learning or community service (Billig, 2002)

The author used the term “community service” instead of “service learning” in this study because there is still much confusion over the definition. The questions that

guided objective three were relevant to a service learning model. Billig (2002) expressed that although service learning is not a model, it usually involves 1) meeting authentic community needs, 2) student involvement in planning and implementing service activities, 3) reflection to gain greater insight and learning from the service, and 4) celebration or recognition of the activity.

Nearly half of Michigan Agriscience educators “frequently” align community service with class content, while only four respondents “never” align community service with class content. One of the suggested steps in the service learning model is having the service activity meet community needs. Nearly half of the respondents “frequently” have the activity meet community needs. None of the respondents selected “rarely” with the rest either choosing “sometimes” or “always.” This is another element in the service learning model is where the distinction lies between community service and service learning.

5.4.1 Recommendations

This study shows that Michigan Agriscience instructors do use community service and many align it with course material. The researcher finds that a major step in promoting service learning is accomplished because teachers are already using community service. The next step is to have the teachers integrate the curriculum into the community service project. This can be accomplished through workshops and curriculum designed around service learning.

Many of the respondents frequently meet community needs with their service learning activity. Again, this is an important step in determining if the activity is a

service learning or community service project. Teachers need to be encouraged by Michigan State ANR Education faculty and State FFA staff to meet with their community stakeholders and collaborate on community service projects.

5.4.2 Student Involvement

The next suggested step in the model is student involvement in planning and implementing service activities. Only 8.1% ($n=7$) answered they “rarely” have students have an integral part in planning the community service activity. Nearly half of the respondents either “sometimes” or “always” while the majority “frequently” allow their students to have an integral part in planning the community service activity.

5.4.3 Recommendations

Further qualitative studies need to be done in order to fully understand what role students’ play in planning community service activities. Addressing this topic could be a topic in either a workshop or in the curriculum as suggested earlier. The researcher is aware that each respondent interpreted this question differently, so results can not be generalized.

5.4.4 Reflection

Questions regarding reflection activities were asked. Pre-reflection and post-reflection activities are important in a service learning project. Respondents were asked if time was taken before the community service activity to discuss the project. The

majority either “frequently” or “always” took time before while none of the respondents “rarely” took time to discuss before the project.

There was more distribution for the findings of whether time was taken after community service to discuss the project. Almost half of the respondents “sometimes” or “always” took time after the service while 12.8% ($n=11$) “rarely” took time after the community service to discuss the activity. Respondents also “frequently” (31.4%) took time after the community service to discuss the project.

Respondents were asked if they performed reflection activities. Examples such as journal writing, papers and group discussions were given in the question in case respondents were unclear of how the term reflection was used in the study. There was a larger distribution between the scaled items on this question than the two questions regarding time to discuss the activity. Only 7% of the respondents “always” use reflection activities while 10.5% “never” use reflection. The respondents either “sometimes” or “frequently” performed reflection while 20.9% “rarely” used reflection activities.

5.4.5 Recommendations

Time spent on discussing the community service declined after the service project was complete. In the author’s opinion, this finding distinguishes a high quality service learning project from just a day of doing community service. Conrad and Hedin (1981) found that reflection was the single most necessary element in a service program leading to student learning, though it is typically not a central focus.

The results show that time is taken to discuss the project before but there is a decrease in the time taken after the project for discussion and reflection. In the research's opinion, it is important to not only take time before the project to discuss but also after. A service learning project should not be done in one day and then never discussed again. The real learning from the project comes from the reflection of the activity before, during, and after. In order for a learning experience to occur, the project has to be discussed. Reflection is also important in linking the curriculum to the service. Many service learning projects may end up being just a service project with no learning because time was not taken before, during, and after the activity to discuss how it relates back to the curriculum.

As stated previously, reflection activities should be incorporated in a workshop devoted only to service learning. There should also be a section in the curriculum guide talked about previously that addresses reflection and provides examples of reflection activities.

5.4.6 Hindrances of Service Learning

Nearly 40% of the respondents felt transportation "sometimes" caused difficulties when performing community service. Respondent's felt that transportation caused difficulties either "never" or "always" 10.5% of the time. Access to funding "sometimes" caused difficulties when performing community service while nearly 10% responded it either "never" or "always" caused difficulties.

None of the respondents reported that community service "always" takes too much time to perform and organize. Nearly half of the respondents find that community

service “sometimes” takes too much time to perform and organize, with the majority of the other half responding as “never” or “rarely.”

Respondents answered with 20.5% that establishing community partnerships “never” takes too much time with 39.5% finding it “rarely” takes too much time to establish community partnerships. None of the respondents felt it “always” takes too much time to establish community partnerships.

5.4.7 Recommendations

The results of the hindrances to service learning went against the research and literature. The National Commission on Service Learning (n.d.) found that teachers frequently raise concerns about finding time to fit service-learning into the school day since many high schools typically have 50-minute classes, it can be difficult to fit a service learning project into a single class. As Wade (1997) reported, “since service learning projects must address a school or community need, teachers usually need to develop tailor made plans for the project and seek creative ways to tie the service activity to the academic curriculum” (p. 87). Wade further noted that almost all service learning projects involve collaboration with others; therefore it is challenging to find the time to plan and make contacts with community members. Other factors that hinder teachers from using service learning are funding, transportation and support.

Another outcome from the Michigan Association of Agriscience Educators strategic plan was to expand ANRE in-service opportunities to include other groups with schools and communities (MAAE, n.d.). Two of the tasks that are associated with the outcome are inviting various individuals and groups within the school and county to

existing in-service activities and to provide information on ANR topics and career pathways to community groups and schools (MAAE, n.d.). Since it is known the half of all Agriscience instructors meet with community stakeholders 1-4 hours per week, it is known that this is already happening and could be expanded upon. Teachers and community stakeholders should discuss what needs there are in the community and how they can work together using service learning projects to solve those problems.

Further qualitative and quantitative studies need to be performed to investigate why Agriscience teachers do not have the same hindrances with service learning as educators in other disciplines. Research needs to be focused on service learning effects to students, teachers and communities. While most service learning research has focused on the effects on students, little longitudinal and replicated studies have been performed. Therefore, more longitudinal and replicated studies also need to be performed.

According the strategic plan, it is imperative to include the community the in planning and decisions of agricultural education. If Agriscience teachers abide by the outcomes in the strategic plan by establishing community partnership, then service learning can become easier for teachers to use. The overall recommendations for objective 3 are as follows:

- Encourage teachers to integrate community service in courses
- Encourage teachers to meet with community stakeholders on a regular basis and work with them to establish service learning projects.
- Further qualitative and quantitative studies on the service learning model elements.

5.5 Overall Recommendations

Much of the literature in the discipline of agriculture regarding service learning has been more practitioner based rather than qualitative or quantitative research. This study provided the groundwork for further research to be based. It was found that the majority of Michigan Agriscience instructors have used and/or implemented community service elements in their courses. Reflection activities and discussions take place more at the beginning of the activity than after.

The hindrances that deter other educators from using service learning do not apply to Michigan Agriscience instructors. Further studies should be replicated in other states with this survey instrument. More qualitative studies should be performed due to the obscurity of the instrument to obtain a better understanding of the use of community service.

Service learning in Michigan needs to address several issues in order to be known statewide. Although one set definition has not been determined for service learning, there should be one established that Michigan educators can follow and practice. The term service learning is often misunderstood in theory and practice. Educators need to understand the teaching methods they use. Service learning also needs to be addressed in the state education standards.

Service learning in the context of agricultural education is a relatively new concept, although as shown in the study many instructors do use community service. It is recommended that a committee be united that has Agriscience faculty from MSU, community/service learning professionals, and teachers from around the state to form a

strategic plan around service learning. In this strategic plan the following need to be addressed:

- Increase collaboration with agricultural stakeholders from around the state, such as: Michigan FFA Foundation, Michigan Farm Bureau, Department of Natural Resources, and Michigan State Extension Service
- Require all FFA chapters to participate in at least one community service activity
- Create more media publications on service learning
- Hire professionals with the expertise in service learning to run a workshop based solely on service learning and provide follow-up support.

The overall recommendations for this study have been summarized in five steps. If these five steps are accomplished, then great strides will be made for service learning in agriculture.

- Develop a workshop/PDI based solely on intensive experiential education, which includes service learning. Throughout the workshop, ask teachers what they want to know about service learning and what could be beneficial for them in order to use it.
- Develop a committee whose sole purpose is to design a curriculum guide (*Beginner's Guide to Service Learning in Agriculture and Natural Resources*) on service learning in agriculture and natural resources. This guide would provide lesson plans on each area of agriculture and resources that would be helpful. These guides would be distributed through a binder, CD-ROM, or Internet, at the preference of the teacher.
- Require a course on intensive experiential learning for student teachers and

those doing continuing education through MSU.

- Develop service awards to be given out at the Michigan FFA Convention to individuals, chapters, and advisors who perform exemplary work with community/service learning.
- Require all FFA chapters to perform at least 1 community service per year and reinstate the BOMC project and make it required by every chapter in the state.

Further research questions acquired from this study will provide a broader scope of service learning:

- What kind of community service activities did teachers perform?
- What was the length of the service project?
- How the community service was linked to the curriculum?
- If the teachers were educated on service learning either through their undergraduate program, continuing education, or workshops?
- How did the community service meet community needs?
- What changes did the instructor see in their students before and after the project?
- Was there an increase in student achievement, attitude, attendance, or attention span?
- What challenges the instructor faced before, during, and after the community service project?
- Why did the teacher decide to use service learning?
- Are there any teachers in their school that currently use service learning?
- Did the students have a celebration once the service project was complete?

- Did the teacher receive support from administrators, other faculty, and the community?

The preceding questions need to be answered in order to fully understand Agriscience teachers' use of service learning. The primary reason this study was conducted was to investigate if Michigan Agriscience instructors use community service and how their use follows the service learning model.

5.6 Study Summary

This study found that community service is used by the majority of agricultural educators in Michigan. While the majority of teachers use community service, the elements of service learning are not widely utilized. In order to enhance the use and turn community service into service learning, agricultural educators need to understand the components of service learning. By implementing the recommendations of this study, such as a workshop and curriculum guide, teachers will have resources and knowledge readily available to them.

Although the population size was small, there was no significant difference between instructors demographics and their use of community service elements. Hindrances to implementing community service from literature are not consistent with agricultural education teachers. This study showed that Michigan Agriscience educators rarely or never felt that hindrances such as transportation, funding, or establishing partnerships. Therefore, generalizations about service learning and community service cannot be made across education disciplines.

In order to expand the use of community service into service learning, agriscience instructors need to be informed on how to implement it. Michigan State University faculty from the ANR Education and Communications Systems Department, State FFA staff and teachers need to establish a workshop and curriculum guide devoted to experiential education and service learning. Resources available to teachers can be a first step to the integration of service learning in Michigan Agriscience classrooms.

APPENDIX A

UNIVERSITY COMMITTEE ON RESEARCH INVOLVING HUMAN SUBJECTS

MICHIGAN STATE UNIVERSITY

April 30, 2003

TO: Michael WOODS
408 Ag. Hall

RE: IRB # 02-298 CATEGORY: 1-1, 1-2 EXEMPT
RENEWAL APPROVAL DATE: April 28, 2003
EXPIRATION DATE: March 28, 2004

TITLE: A PROFILE OF SERVICE LEARNING IN MICHIGAN SECONDARY AGRICULTURAL
EDUCATION AND FFA PROGRAMS

The University Committee on Research Involving Human Subjects' (UCRIHS) review of this project is complete and I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and methods to obtain informed consent are appropriate. Therefore, the UCRIHS APPROVED THIS PROJECT'S RENEWAL.

This letter notes approval for the changes made in investigators, title, and instrument.

RENEWALS: UCRIHS approval is valid until the expiration date listed above. Projects continuing beyond this date must be renewed with the renewal form. A maximum of four such expedited renewals are possible. Investigators wishing to continue a project beyond that time need to submit a 5-year renewal application for complete review.

REVISIONS: UCRIHS must review any changes in procedures involving human subjects, prior to initiation of the change. If this is done at the time of renewal, please include a revision form with the renewal. To revise an approved protocol at any other time during the year, send your written request with an attached revision cover sheet to the UCRIHS Chair, requesting revised approval and referencing the project's IRB# and title. Include in your request a description of the change and any revised instruments, consent forms or advertisements that are applicable.

PROBLEMS/CHANGES: Should either of the following arise during the course of the work, notify UCRIHS promptly: 1) problems (unexpected side effects, complaints, etc.) involving human subjects or 2) changes in the research environment or new information indicating greater risk to the human subjects than existed when the protocol was previously reviewed and approved.



OFFICE OF
**RESEARCH
ETHICS AND
STANDARDS**

University Committee on
Research Involving
Human Subjects

Michigan State University
202 Olds Hall
East Lansing, MI
48824

517/355-2180
FAX: 517/432-4503

Web: www.msu.edu/user/ucrhs

E-Mail: ucrhs@msu.edu AK rt

Sincerely,

Ashir Kumar, M.D.
UCRIHS Chair

cc: Courtney Stewart
410 Agriculture Hall

APPENDIX B

SURVEY INSTRUMENT

For additional information or comments, please contact:

Michael Woods
Assistant Professor
ANR Education & Communication Systems
Michigan State University
408 Agriculture Hall
East Lansing, MI 48824.1039

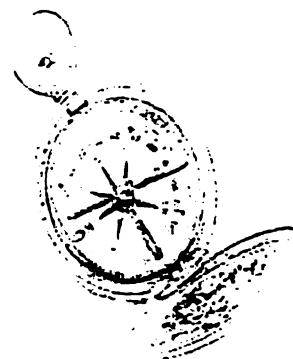
517.355.6580 x 202
mwoods@msu.edu

or

Courtney Stewart
Graduate Assistant
ANR Education & Communications Systems
Michigan State University
406 Agriculture Hall
East Lansing, MI 48824.1039

517.355.6580 x 234

**AgriScience
Teacher
Survey**



Exploring the AgriScience experience.

ANR Education and Communication Systems
Michigan State University
408 Agriculture Hall
East Lansing, MI 48824.1039

515.355.6580
anrecs@canr.msu.edu

Dear Agriscience Instructor:

The recent release of the Strategic Plan for Agriscience and Natural Resource Education in Michigan outlines six main objectives: quality programming; teacher recruitment, preparation and retention; greater diversity; ANR career cluster expansion and support; promotion and marketing; and expanding personal and financial resources. In order to achieve these objectives, it is important to have your insights. Therefore, we would appreciate your input with this survey. The anticipated time to complete the survey is 15 minutes. If you have any questions about the survey, please email either Michael Woods (mwoods@msu.edu) or Courtney Stewart (stewa280@msu.edu).

1. Gender: (circle one)	Male	Female
-------------------------	------	--------

2. Are you currently: (Circle one)	
a. Married	1
c. Unmarried with partner	2
d. Single	3

3. Racial/Ethnic group: (Circle one)	
a. White/Caucasian	1
b. African American/Black	2
c. American Indian	3
d. Asian American/Asian	4
e. Latino/Chicano	5
h. Other (please specify):	6

4. Please circle the highest degree earned and/or degree pursuing.	Degree Earned	Currently Working On
a. Bachelor's (B.A., B.S., etc.)	1	2
b. Master's (M.A., M.S., etc.)	1	2
c. Ed.D.	1	2
d. Ph.D	1	2
e. Other (please specify):	1	2

5. Which of the following best describes the type of place where you grew up? (Circle one)	
a. Major metropolitan area (over one million people)	1
b. Large city (100,000 to one million people)	2
c. Medium sized city (25,000 to 99,999 people)	3
d. Smaller city (5,000 to 24,999 people)	4
e. Town or village (2,500 to 4,999 people)	5
f. Country or a very small town (under 2,500 people)	6
g. No choice describes where I live, because I have moved often	7
h. Other (please specify):	8

6. How many years have you taught agricultural education at the secondary level?	
--	--

7. Is the school you teach in a ... (Circle all that apply)	
a. Middle School	1
b. High School	2
c. Career/Tech Center	3
d. Other (please specify):	4

22. How often do you use the following evaluation methods in your agricultural education course(s)?					
	Never	Rarely	Sometimes	Frequently	Always
(Circle the number that best reflects your answer for each item.)					
a. Multiple-choice exams	1	2	3	4	5
b. True-false exams	1	2	3	4	5
c. Essay exams	1	2	3	4	5
d. Short-answer exams	1	2	3	4	5
e. Quizzes	1	2	3	4	5
f. Weekly assignments	1	2	3	4	5
g. Student presentations	1	2	3	4	5
h. Research papers	1	2	3	4	5
i. Journals	1	2	3	4	5
j. Student evaluations of each others' work	1	2	3	4	5
k. Grading on a curve	1	2	3	4	5
l. Competency-based grading	1	2	3	4	5
m. Take home homework	1	2	3	4	5

23. How often do you use the following instructional techniques/methods in your agricultural education course(s)?					
	Never	Rarely	Sometimes	Frequently	Always
(Circle the number that best reflects your answer for each item.)					
a. Class discussions	1	2	3	4	5
b. Computer-aided instruction	1	2	3	4	5
c. Cooperative learning (small groups)	1	2	3	4	5
d. Field trips	1	2	3	4	5
e. Demonstrations	1	2	3	4	5
f. Group projects	1	2	3	4	5
g. Independent projects	1	2	3	4	5
h. Extensive lecturing	1	2	3	4	5
i. Multiple drafts of written work	1	2	3	4	5
j. Community service as part of coursework	1	2	3	4	5
k. Student SAE projects	1	2	3	4	5
l. Integration of FFA events	1	2	3	4	5

Comments: Please provide any additional comments you believe are important to advancing the Agriscience curriculum within Michigan, or skills areas needed by future Agriscience Instructors not identified.

Thank you for your time and assistance with the survey.

13. During the present term, how many hours per week on the average do you spend on each of the following activities?

(Circle a number for each item)	None	1-4	5-8	9-12	13-16	17-20	21-24	25+
a. Advising students	1	2	3	4	5	6	7	8
b. After school programs	1	2	3	4	5	6	7	8
c. Committee work	1	2	3	4	5	6	7	8
d. Committee meetings	1	2	3	4	5	6	7	8
e. Community or public service	1	2	3	4	5	6	7	8
f. Consultation with community stakeholders	1	2	3	4	5	6	7	8
g. FFA programming	1	2	3	4	5	6	7	8
h. Household/childcare duties	1	2	3	4	5	6	7	8
i. Other administration	1	2	3	4	5	6	7	8
j. Part time job	1	2	3	4	5	6	7	8
k. Preparing an FFA team for a contest	1	2	3	4	5	6	7	8
l. Preparing for teaching	1	2	3	4	5	6	7	8
m. Scheduled teaching	1	2	3	4	5	6	7	8
n. Supervising SAE projects	1	2	3	4	5	6	7	8

14. Agricultural education has had a long history surrounding community service. Please circle the number that best reflects your answer for each item

	Never	Rarely	Sometimes	Frequently	Always
a. Implemented community service elements into your agricultural education course(s)?	1	2	3	4	5
b. The community service activities aligned with class content	1	2	3	4	5
c. The students had an integral part in planning the community service activity	1	2	3	4	5
d. The community service activities met community needs	1	2	3	4	5
e. Time was taken before the community service activities to discuss the project	1	2	3	4	5
f. Time was taken after the community service activities to discuss the project	1	2	3	4	5
g. Reflection activities, such as journal writing, papers, group discussions, were performed	1	2	3	4	5
h. Transportation issues causes difficulty to perform community service activities	1	2	3	4	5
i. Access to funding causes difficulty when performing community service activities	1	2	3	4	5
j. Community service activities take too much time to perform	1	2	3	4	5
k. Community service activities take too much time to organize	1	2	3	4	5
l. Establishing community partnerships takes too much time	1	2	3	4	5

15. Are you engaged in any of the following activities?

(Circle an answer for each item)	Yes	No
a. Held an administrative position	1	2
b. Participated in a teaching enhancement workshop	1	2
c. Placed assignments on the Internet	1	2
d. Collected assignments on the Internet	1	2
e. Taught a course exclusively through the Internet	1	2
f. Taught a course using community service	1	2
g. Team-taught a course with a non ag ed teacher	1	2
h. Traveled outside the United States	1	2
i. Used the Internet to assess lesson plans	1	2

16. How important are each of the following items to you?

(circle the number that best reflects your answer for each item)	Not at all	A little	A fair amount	Much	Very much
a. Influencing social values of my students	1	2	3	4	5
b. Raising a family	1	2	3	4	5
c. Being well-off financially	1	2	3	4	5
d. Becoming involved in programs to clean up the environment	1	2	3	4	5
e. Helping to promote racial understanding	1	2	3	4	5
f. Obtaining recognition from my colleagues for contributions to agricultural education	1	2	3	4	5
g. Being a good colleague	1	2	3	4	5
h. Being a good citizen	1	2	3	4	5
i. Being a good teacher	1	2	3	4	5

17. Do any of the following statements describe you, please circle either Yes, No or NA (not applicable):

	Yes	No	NA
a. Have you ever received an award for teaching?	1	2	3
b. Have any of your agricultural education courses addressed diversity?	1	2	3
c. Have you ever experienced sexual harassment as an agricultural teacher?	1	2	3
d. Considered leaving your current position for a non-teaching job?	1	2	3
e. Does your FFA chapter require all members to participate in community service?	1	2	3

18. How important are each of the following items to you as an agricultural education instructor?

(circle the number that best reflects your answer for each item)	Not at all	A little	A fair amount	Much	Very much
a. Develop student's ability to think clearly	1	2	3	4	5
b. Prepare students for employment	1	2	3	4	5
c. Prepare students for higher education	1	2	3	4	5
d. Help students develop personal values	1	2	3	4	5
e. Enhance students' self understanding	1	2	3	4	5
f. Prepare students for responsible citizenship	1	2	3	4	5
g. Enhance students' knowledge of diversity	1	2	3	4	5
h. Prepare students to understand the impact of globalization	1	2	3	4	5
i. Other (specify):	1	2	3	4	5
j. Other (specify):	1	2	3	4	5
k. Other (specify):	1	2	3	4	5

Comments:

19. Please indicate the extent to which each of the following has been a source of stress. (circle the number that best reflects your answer for each item)	Never	Rarely	Sometimes	Frequently	Always
a. Managing household responsibilities	1	2	3	4	5
b. Review/promotion process	1	2	3	4	5
c. Subtle discrimination	1	2	3	4	5
d. Personal finances	1	2	3	4	5
e. Committee work	1	2	3	4	5
f. Faculty meetings	1	2	3	4	5
g. Colleagues	1	2	3	4	5
h. Students	1	2	3	4	5
i. FFA demands	1	2	3	4	5
j. Institutional procedures/"red tape"	1	2	3	4	5
k. Teaching load	1	2	3	4	5
l. Marital/spousal friction	1	2	3	4	5
m. Lack of personal time	1	2	3	4	5
n. Keeping up with technology	1	2	3	4	5
o. Keeping up with agriculture industry	1	2	3	4	5
p. Keeping up with natural resource issues	1	2	3	4	5
q. Other (please specify):	1	2	3	4	5
r. Other (please specify):	1	2	3	4	5
s. Other (please specify):	1	2	3	4	5

20. Please indicate your agreement with each statement. (circle the number that best reflects your answer for each item)	Strongly disagree	Somewhat disagree	No opinion	Somewhat agree	Strongly Agree
a. Agricultural education curriculum should promote globalization.	1	2	3	4	5
b. Agricultural education curriculum should address social diversity issues.	1	2	3	4	5
c. Agricultural education should encourage students to be involved in community service	1	2	3	4	5
d. Pressure to prepare for FFA activities often prevents me from being completely effective in my teaching.	1	2	3	4	5
e. Agricultural education curriculum needs to change to reflect contemporary issues.	1	2	3	4	5
f. FFA programs need to change to reflect new issues in agriculture.	1	2	3	4	5
g. Agricultural education in public schools is prepared to meet future needs.	1	2	3	4	5

21. Standardized testing influences my... (circle the number that best reflects your answer for each item)	Very negatively	Somewhat negatively	No influence	Somewhat positively	Very positively
a. Teaching methods	1	2	3	4	5
b. Curriculum objectives	1	2	3	4	5
c. FFA programming	1	2	3	4	5
d. Use of SAE projects	1	2	3	4	5
e. Use of community service	1	2	3	4	5
f. Other: (specify)	1	2	3	4	5

8. Do you have a... (Circle one)	
a. Nine-month teaching contract	1
b. Nine-month teaching contract with summer option	2
c. Twelve month teaching contract	3
d. Other (please specify):	4

9. How important were each of the following in your decision to pursue a career as an Agriscience instructor? (circle the number that best reflects your answer for each item)	Not at all	A little	A fair amount	Much	Very much
a. Opportunity to work with the FFA	1	2	3	4	5
b. Independence	1	2	3	4	5
c. Flexible schedule	1	2	3	4	5
d. Opportunities for teaching	1	2	3	4	5
e. Opportunity to influence social change	1	2	3	4	5
f. Opportunity to impact students	1	2	3	4	5
g. Opportunity to impact agriculture industry	1	2	3	4	5
h. Other (specify):	1	2	3	4	5
i. Other (specify):	1	2	3	4	5
j. Other (specify):	1	2	3	4	5

10. How many of the following courses have you taught in the past year? (Circle a number for each item)	0	1	2	3	4	5+
a. Agriscience related	0	1	2	3	4	5+
b. Natural Resources related	0	1	2	3	4	5+
c. Non-Agriscience	0	1	2	3	4	5+
d. Adult community course	0	1	2	3	4	5+
e. Other (specify):	0	1	2	3	4	5+
f. Other (specify):	0	1	2	3	4	5+
g. Other (specify):	0	1	2	3	4	5+

11. If you were to begin your career again, would you still want to be an Agriscience Teacher? (Circle one)	
a. Definitely yes	1
b. Probably yes	2
c. Not sure	3
d. Probably no	4
e. Definitely no	5

12. Which of the three components (FFA, SAE, classroom) of agricultural education do your interests most reside? (circle one)	
a. Very heavily in FFA	1
b. Very heavily in SAE	2
c. Very heavily in classroom instruction	3
d. In all, but leaning toward FFA	4
e. In all, but leaning toward SAE	5
f. In all, but leaning toward classroom instruction	6
g. Equal balance between FFA, SAE, and classroom instruction	7

Comments: _____

APPENDIX C
INITIAL COVER LETTER

MICHIGAN STATE
UNIVERSITY

July 24, 2003

Dear <name of AgriScience Instructor>,

The recent release of the Strategic Plan for Agriscience and Natural Resource Education in Michigan outlines six objectives: 1) quality programming; 2) teacher recruitment and retention; 3) greater diversity; 4) ANR career cluster expansion and support; 5) promotion and marketing; and 6) expanding personal and financial resources. What you and other AgriScience Instructors say on the enclosed survey will help achieve these objectives, hence, it is important to have your insights. A self addressed stamped envelope has been enclosed for your ease in returning the survey. The anticipated time to complete the survey is 15 minutes.

In order to eliminate redundant mailings, please put your name on the envelope when returning the survey. Your name will not be linked to the survey; it will only be used to ensure that your name is removed from future mailings requesting participation. Please note that on the backside of this letter, you will find all human subject confidentiality information. Your assistance is greatly appreciated in advancing AgriScience education in Michigan.

Should you have questions, please contact me at 517.355.6580 x202 or mwoods@msu.edu. Thank you for your time and assistance with this study.

Best regards,

Michael D. Woods, Ph.D.
Assistant Professor
ANRECS



DEPARTMENT OF
**ANR EDUCATION &
COMMUNICATION
SYSTEMS**

**College of Agriculture
and Natural Resources**

Michigan State University
408 Agriculture Hall
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48824-1039

517/355-6580
FAX 517/353-4981

e-mail: anraee@msu.edu
web: www.canr.msu.edu/raee/

*The Michigan State University
IDEA is Institutional Diversity
Excellence in Action*

*MSU is an affirmative-action,
equal-opportunity institution*

**MICHIGAN STATE
UNIVERSITY**

Respondent Confidentiality

We respect your confidentiality and the survey will be viewed only by Dr. Michael Woods and Courtney Stewart. Your participation in this study is voluntary and you may withdraw at any time. Your answers will be kept confidential. Your privacy will be protected to the maximum extent allowable by law.

If you have questions or would like more information you may contact:

Dr. Michael Woods
408 Agriculture Hall
ANRECS
Michigan State University
East Lansing, MI 48824.1039
(517) 355-6580 x 202

If you have any questions about your rights you may contact:

Michigan State University
Ashir Kumar, MD
Chair of the University Committee on Research Involving Human Subjects
202 Olds Hall, East Lansing, MI 48824
(517) 355-2180
(517) 432-4503 fax
e-mail: ucrhrs@msu.edu



**DEPARTMENT OF
ANR EDUCATION &
COMMUNICATION
SYSTEMS**

**College of Agriculture
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FAX: 517/353-4981

e-mail: anraee@msu.edu

web: www.canr.msu.edu/ae/

Thank you for your time and assistance with this survey.

Note: By completing and submitting the survey you agree to participate in this study and support the methods by which Dr. Woods and Courtney Stewart are protecting all respondents' confidentiality.

*The Michigan State University
IDEA is Institutional Diversity:
Excellence in Action*

*MSU is an affirmative-action,
equal-opportunity institution.*

APPENDIX D

FOLLOW-UP E-MAIL

To: miagscience@msue.msue.msu.edu
From: "Michael D. Woods" <mwoods@msu.edu>
Date: 11 Jul 2003, 12:59:43 PM
Subject: Assistance needed

Dear Teachers,

For those of you that attended the recent PDI, you were invited to participate in a survey looking into the life of an ANR instructor. We were very pleased to receive 38 completed surveys. However in order to insure that we have the best picture of the activities that Michigan AgriScience teachers take part in, we really need to get the rest of your responses. If you did not complete the survey at the PDI, could you please check your registration packet for the survey, complete and return to me at the address listed on the back of the survey. In order to eliminate redundant mailings, please put your name on the envelope. Your name will not be linked to the survey, it will only be used to ensure that your name is removed from future mailings requesting participation.

In light of the current issues taking place here at MSU regarding the future of the ANRECS department and the unveiling of the MAAE strategic plan, your insights will be very helpful in providing the best academic program and recruitment efforts for future agriscience teachers.

Your assistance is greatly appreciated. Should you have questions or need further information, please contact me via email (mwoods@msu.edu) or phone (517.355.6580 x 202). Again, thank you for your time and assistance with this study.

Best regards,
Michael Woods

Michael D. Woods, Ph.D.
Assistant Professor

ANR Education & Communication Systems
408 Agriculture Hall
Michigan State University
East Lansing, MI 48824-1039

Office: 517.355.6580 x202
Fax: 517.353.4981
E-mail: mwoods@msu.edu

APPENDIX E

DEMOGOGRAPHIC QUESTIONS

This appendix shows the findings from further demographic questions in the study.

Table 17
Teaching Contract

Variable (N=86)	<i>n</i>	%
Nine month	29	33.7
Nine month with summer option	34	39.5
Twelve month	17	19.8
Other	6	7

Table 18
Importance in Pursuing Career as an Agriscience Instructor

Variable	Not at all	A little	A fair amount	Much	Very much
	<i>n</i> %	<i>n</i> %	<i>n</i> %	<i>n</i> %	<i>n</i> %
Opportunity to work with FFA (<i>N</i> =85, <i>M</i> =3.38, <i>SD</i> =1.573)	18 20.9	10 11.6	9 10.5	18 20.9	30 34.9
Independence (<i>N</i> =81, <i>M</i> =3.31, <i>SD</i> =1.251)	13 15.1	5 5.8	17 19.8	36 41.9	10 11.6
Flexible schedule (<i>N</i> =83, <i>M</i> =3.10, <i>SD</i> =1.275)	16 18.6	6 7.0	24 27.9	28 32.6	9 10.5
Opportunity for teaching (<i>N</i> =85, <i>M</i> =4.13, <i>SD</i> =1.009)	3 3.5	4 4.7	8 9.3	34 39.5	36 41.9
Opportunity to influence social change (<i>N</i> =83, <i>M</i> =3.27, <i>SD</i> =1.353)	13 15.1	9 10.5	23 26.7	19 22.1	19 22.1
Opportunity to impact students (<i>N</i> =85, <i>M</i> =4.58, <i>SD</i> =.697)	1 1.2	1 1.2	1 1.2	27 31.4	55 64.0
Opportunity to impact agriculture industry (<i>N</i> =85, <i>M</i> =3.68, <i>SD</i> =1.126)	5 5.8	7 8.1	20 23.3	31 36.0	22 25.6
Other (<i>N</i> =6, <i>M</i> =5.00)	- -	- -	- -	- -	6 7.0

(1=not at all, 2=a little, 3=a fair amount, 4=much, 5=very much)

Table 19
Number and Type of Courses Taught

	0	1	2	3	4	5+
Variable	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>
	%	%	%	%	%	%
Agriscience (<i>N</i> =84, <i>M</i> =4.36, <i>SD</i> =1.445)	3 3.5	8 9.3	12 14	17 19.8	21 24.4	23 26.7
Natural resources (<i>N</i> =60, <i>M</i> =2.48, <i>SD</i> =1.455)	16 18.6	22 25.6	11 12.8	3 3.5	4 4.7	4 4.7
Non-agriscience (<i>N</i> =46, <i>M</i> =2.91, <i>SD</i> =1.671)	12 14.0	10 11.6	8 9.3	7 8.1	4 4.7	5 5.8
Adult community course (<i>N</i> =33, <i>M</i> =1.58, <i>SD</i> =1.2)	23 26.7	7 8.1	- -	1 1.2	1 1.2	1 1.2
Other (<i>N</i> =7, <i>M</i> =2.14, <i>SD</i> =1.676)	4 4.7	1 1.2	- -	1 1.2	1 1.2	- -
Other (<i>N</i> =5, <i>M</i> =2.0, <i>SD</i> =2.236)	4 4.7	- -	- -	- -	- -	1 1.2
Other (<i>N</i> =4, <i>M</i> =1.0)	4 4.7	- -	- -	- -	- -	- -

(respondents could choose between 0,1,2,3,4,5+)

Table 20
Begin Career Again

Variable (<i>N</i> =85, <i>M</i> =1.79, <i>SD</i> =.965)	<i>n</i>	%
Definitely yes	42	48.8
Probably yes	27	31.4
Not sure	8	9.3
Probably no	8	9.3
Definitely no	-	-

Table 21
Teaching Interest

Variable (N=83)	<i>n</i>	%
Very heavily in FFA	1	1.2
Very heavily in SAE	2	2.3
Very heavily in classroom instruction	11	12.8
In all, but leaning toward FFA	17	19.8
In all, but leaning toward SAE	2	2.3
In all, but learning toward classroom instruction	28	32.6
Equal balance between FFA, SAE, and classroom instruction	22	25.6

Table 22
Hours Spent on Activities Per Week

	None	1-4	5-8	9-12	13-16	17-20	21-34	35+
Variable	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Advising students (<i>N</i> =81, <i>M</i> =2.73, <i>SD</i> =1.194)	2 2.3	45 52.3	19 22.1	8 9.3	4 4.7	2 2.3	-	1 1.2
After school programs (<i>N</i> =80, <i>M</i> =2.56, <i>SD</i> =1.123)	11 12.8	33 38.4	22 25.6	11 12.8	-	3 3.5	-	-
Committee work (<i>N</i> =80, <i>M</i> =1.94, <i>SD</i> =.536)	13 15.1	60 69.8	6 7.0	1 1.2	-	-	-	-
Committee meetings (<i>N</i> =78, <i>M</i> =1.94, <i>SD</i> =.543)	13 15.1	58 67.4	6 7.0	1 1.2	-	-	-	-
Community or public service (<i>N</i> =82, <i>M</i> =2.04, <i>SD</i> =.637)	14 16.3	52 60.5	15 17.4	1 1.2	-	-	-	-
Consultation with community stakeholders (<i>N</i> =80, <i>M</i> =1.91, <i>SD</i> =.640)	18 20.9	53 61.6	7 8.1	2 2.3	-	-	-	-
FFA programming (<i>N</i> =83, <i>M</i> =2.76, <i>SD</i> =1.535)	14 16.3	28 32.6	27 31.4	3 3.5	5 5.8	2 2.3	3 3.5	1 1.2
Household/childcare duties (<i>N</i> =80, <i>M</i> =4.72, <i>SD</i> =2.176)	5 5.8	11 12.8	9 10.5	14 16.3	10 11.6	11 12.8	8 9.3	12 14
Other administration (<i>N</i> =78, <i>M</i> =1.76, <i>SD</i> =.856)	35 40.7	32 37.2	6 7.0	5 5.8	-	-	-	-
Part time job (<i>N</i> =81, <i>M</i> =1.74, <i>SD</i> =1.456)	55 64.0	13 15.1	4 4.7	3 3.5	3 3.5	1 1.2	1 1.2	1 1.2
Preparing an FFA team for a contest (<i>N</i> =83, <i>M</i> =2.52, <i>SD</i> =1.426)	18 20.9	33 38.4	18 20.9	6 7.0	4 4.7	2 2.3	1 1.2	1 1.2
Preparing for teaching (<i>N</i> =83, <i>M</i> =3.41, <i>SD</i> =1.23)	1 1.2	20 23.3	27 31.4	21 24.4	8 9.3	5 5.8	1 1.2	-
Scheduled teaching (<i>N</i> =82, <i>M</i> =6.09, <i>SD</i> =1.874)	2 2.3	3 3.5	8 9.3	4 4.7	6 7.0	5 5.8	41 47.7	13 15.1
Supervising SAE projects (<i>N</i> =82, <i>M</i> =2.17 <i>SD</i> =1.063)	21 24.4	39 45.3	14 16.3	4 4.7	3 3.5	1 1.2	-	-

(1=None, 2=1-4, 3=5-8, 4=9-12, 5=13-16, 6=17-20, 7=21-34, 8=35+)

Table 23
Activities

Variable	Yes		No	
	<i>n</i>	%	<i>n</i>	%
Held an administrative position (<i>N</i> =83)	8	9.3	75	87.2
Participated in a teaching enhancement workshop (<i>N</i> =84)	71	82.6	13	15.1
Placed assignments on the Internet (<i>N</i> =84)	15	17.4	69	80.2
Collected assignments on the Internet (<i>N</i> =83)	19	22.1	64	74.4
Taught a course exclusively through the Internet (<i>N</i> =83)	2	2.3	81	94.2
Taught a course using community service (<i>N</i> =82)	41	47.7	41	47.7
Team-taught a course with a non ag ed teacher (<i>N</i> =84)	42	48.8	42	48.8
Traveled outside the United States (<i>N</i> =83)	49	57.0	34	39.5
Used the Internet to access lesson plans (<i>N</i> =84)	63	73.3	21	24.4

Table 24
Issues of Importance

	Not at all	A little	A fair amount	Much	Very much
Variable	<i>n</i> %	<i>n</i> %	<i>n</i> %	<i>n</i> %	<i>n</i> %
Influencing social values of my students (<i>N</i> =84, <i>M</i> =4.01, <i>SD</i> =.885)	- -	5 5.8	17 19.8	34 39.5	28 32.6
Raising a family (<i>N</i> =84, <i>M</i> =4.38, <i>SD</i> =1.086)	4 4.7	4 4.7	3 3.5	18 20.9	55 64.0
Being well-off financially (<i>N</i> =84, <i>M</i> =3.70, <i>SD</i> =1.039)	4 4.7	5 5.8	22 25.6	34 39.5	19 22.1
Becoming involved in programs to clean up the environment (<i>N</i> =84, <i>M</i> =3.08, <i>SD</i> =1.020)	2 2.3	24 27.9	33 38.4	15 17.4	10 11.6
Helping to promote racial understanding (<i>N</i> =84, <i>M</i> =3.27, <i>SD</i> =1.010)	2 2.3	16 18.6	35 40.7	19 22.1	12 14
Obtaining recognition from my colleagues for contributions to agricultural education (<i>N</i> =84, <i>M</i> =2.52, <i>SD</i> =1.197)	16 18.6	34 39.5	15 17.4	12 14.0	7 8.1
Being a good colleague (<i>N</i> =84, <i>M</i> =4.27, <i>SD</i> =.734)	- -	1 1.2	11 12.8	36 41.9	36 41.9
Being a good citizen (<i>N</i> =84, <i>M</i> =4.63, <i>SD</i> =.597)	- -	1 1.2	2 2.3	24 27.9	57 66.3
Being a good teacher (<i>N</i> =84, <i>M</i> =4.74, <i>SD</i> =.469)	- -	- -	1 1.2	20 23.3	63 73.3

(1=not at all, 2=a little, 3=a fair amount, 4=much, 5=very much)

Table 25
Description of Respondent

Variable	Yes		No		NA	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Have you ever received an award for teaching (N=84)	58	67.4	26	30.2	-	-
Have any of your agricultural education courses addressed diversity (N=83)	55	64	23	26.7	5	5.8
Have you ever experienced sexual harassment as an agricultural teacher (N=84)	17	19.8	65	75.6	2	2.3
Considered leaving your current position for a non-teaching job (N=84)	43	50	39	45.3	2	2.3
Does your FFA chapter require all members to participate in community service (N=84)	29	33.7	46	53.5	9	10.5

Table 26
Importance of Issues as an Agriscience Instructor

	Not at all	A little	A fair amount	Much	Very much
Variable	<i>n</i> %	<i>n</i> %	<i>n</i> %	<i>n</i> %	<i>n</i> %
Develop student's ability to think clearly (<i>N</i> =84, <i>M</i> =4.49, <i>SD</i> =.570)	- -	- -	3 3.5	37 43	44 51.2
Prepare students for employment (<i>N</i> =84, <i>M</i> =4.36, <i>SD</i> =.688)	- -	1 1.2	7 8.1	37 43	39 45.3
Prepare students for higher education (<i>N</i> =83, <i>M</i> =4.10, <i>SD</i> =.775)	- -	1 1.2	18 20.9	36 41.9	28 32.6
Help students develop personal values (<i>N</i> =84, <i>M</i> =4.31, <i>SD</i> =.760)	- -	3 3.5	6 7	37 43	38 44.2
Enhance students' self understanding (<i>N</i> =84, <i>M</i> =4.25, <i>SD</i> =.674)	- -	1 1.2	8 9.3	44 51.2	31 36
Prepare students for responsible citizenship (<i>N</i> =84, <i>M</i> =4.44, <i>SD</i> =.628)	- -	- -	6 7	35 40.7	43 50
Enhance students' knowledge of diversity (<i>N</i> =82, <i>M</i> =3.66, <i>SD</i> =.933)	1 1.2	6 7	30 34.9	28 32.6	17 19.8
Prepare students to understand the impact of globalization (<i>N</i> =84, <i>M</i> =3.48, <i>SD</i> =.911)	1 1.2	9 10.5	35 40.7	27 31.4	12 14
Other (<i>N</i> =2, <i>M</i> =4.50, <i>SD</i> =.707)	- -	- -	- -	1 1.2	1 1.2

(1=not at all, 2=a little, 3=a fair amount, 4=much, 5=very much)

Table 27
Sources of Stress

Variable	Never		Rarely		Sometimes		Frequently		Always	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Managing household responsibilities ($M=3.5$, $SD=.871$, $N=84$)	1	1.2	8	9.3	33	38.4	32	37.2	10	11.6
Review/promotion process ($M=2.46$, $SD=.911$, $N=84$)	11	12.8	35	40.7	27	31.4	10	11.6	1	1.2
Subtle discrimination ($M=2.21$, $SD=.952$, $N=85$)	20	23.3	36	41.9	22	25.6	5	5.8	2	2.3
Personal finances ($M=3.24$, $SD=.868$, $N=85$)	2	2.3	11	12.8	44	51.2	21	24.4	7	8.1
Committee work ($M=2.74$, $SD=.915$, $N=85$)	6	7.0	30	34.9	30	34.9	18	20.9	1	1.2
Faculty meetings ($M=2.61$, $SD=.952$, $N=85$)	11	12.8	26	30.2	35	40.7	11	12.8	2	2.3
Colleagues ($M=2.73$, $SD=.766$, $N=84$)	2	2.3	32	37.2	38	44.2	11	12.8	1	1.2
Students ($M=3.25$, $SD=.785$, $N=85$)	-	-	13	15.1	43	50.0	24	27.9	5	5.8
FFA demands ($M=3.33$, $SD=1.123$, $N=84$)	8	9.3	9	10.5	24	27.9	33	38.4	10	11.6
Institutional procedures/ "red tape" ($M=3.65$, $SD=.751$, $N=85$)	-	-	5	5.8	29	33.7	42	48.8	9	10.5
Teaching load ($M=3.42$, $SD=.850$, $N=85$)	-	-	11	12.8	36	41.9	29	33.7	9	10.5
Marital/spousal friction ($M=2.32$, $SD=.915$, $N=82$)	15	17.4	35	40.7	24	27.9	7	8.1	1	1.2
Lack of personal time ($M=3.38$, $SD=.976$, $N=85$)	3	3.5	10	11.6	35	40.7	26	30.2	11	12.8
Keeping up with technology ($M=2.79$, $SD=.940$, $N=85$)	7	8.1	25	29.1	34	39.5	17	19.8	2	2.3
Keeping up with agriculture industry ($M=2.65$, $SD=.869$, $N=85$)	6	7.0	34	39.5	29	33.7	16	18.6	-	-
Keeping up with natural resource issues ($M=2.53$, $SD=.839$, $N=85$)	8	9.3	35	40.7	31	36.0	11	12.8	-	-
Other ($M=4.0$, $SD=.816$, $N=4$)	-	-	-	-	1	1.2	2	2.3	1	1.2
Other ($M=4.33$, $SD=.577$, $N=3$)	-	-	-	-	-	-	2	2.3	1	1.2
Other ($M=5.0$, $SD=0$, $N=1$)	-	-	-	-	-	-	-	-	1	1.2

(1=never, 2=rarely, 3=sometimes, 4=frequently, 5=always)

Table 28
Agree with Issues

Variable	Strongly disagree		Somewhat disagree		No opinion		Somewhat agree		Strongly agree	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Agricultural education curriculum should promote globalization (<i>N</i> =85, <i>M</i> =3.89, <i>SD</i> =.817)	2	2.3	3	3.5	12	14	53	61.6	15	17.4
Agricultural education curriculum should address social diversity issues (<i>N</i> =85, <i>M</i> =3.87, <i>SD</i> =.870)	2	2.3	5	5.8	11	12.8	51	59.3	16	8.6
Agricultural education should encourage students to be involved in community service (<i>N</i> =85, <i>M</i> =4.46, <i>SD</i> =.646)	-	-	1	1.2	4	4.7	35	40.7	45	52.3
Pressure to prepare for FFA activities often prevents me from being completely effective in my teaching (<i>N</i> =84, <i>M</i> =3.56, <i>SD</i> =1.155)	7	8.1	9	10.5	13	15.1	40	46.5	15	7.4
Agricultural education curriculum needs to change to reflect contemporary issues (<i>N</i> =85, <i>M</i> =3.92, <i>SD</i> =.941)	2	2.3	4	4.7	17	19.8	38	44.2	24	27.9
FFA programs need to change to reflect new issues in agriculture (<i>N</i> =83, <i>M</i> =4.02, <i>SD</i> =.855)	1	1.2	4	4.7	11	12.8	43	50	24	7.9
Agricultural education in public schools is prepared to meet future needs (<i>N</i> =85, <i>M</i> =3.45, <i>SD</i> =1.160)	3	3.5	23	26.7	6	7	39	45.3	14	16.3

(1=strongly disagree, 2=somewhat disagree, 3=no opinion, 4=somewhat agree, 5=strongly agree)

Table 29
Standardized Testing

Variable	Very negatively		Somewhat negatively		No influence		Somewhat positively		Very Positively	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Teaching methods ($M=3.14$, $SD=.915$, $N=85$)	1	1.2	25	29.1	22	25.6	35	40.7	2	2.3
Curriculum objectives ($M=3.51$, $SD=.921$, $N=85$)	1	1.2	16	18.6	13	15.1	49	57.0	6	7.0
FFA programming ($M=2.98$, $SD=.771$, $N=85$)	3	3.5	15	17.4	50	58.1	15	17.4	2	2.3
Use of SAE projects ($M=3.05$, $SD=.815$, $N=85$)	2	2.3	16	18.6	47	54.7	16	18.6	4	4.7
Use of community service ($M=3.01$, $SD=.715$, $N=85$)	2	2.3	13	15.1	54	62.8	14	16.3	2	2.3
Other ($M=3.0$, $SD=0$, $N=4$)	-	-	-	-	4	4.7	-	-	-	-

(1=very negatively, 2=somewhat negatively, 3=no influence, 4=somewhat positively, 5=very positively)

Table 30
Evaluation Methods

Variable	Never		Rarely		Sometimes		Frequently		Always	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Multiple choice exams (<i>N</i> =85, <i>M</i> =3.42, <i>SD</i> =.905)	3	3.5	9	10.5	28	32.6	39	45.3	6	7
True-false exams (<i>N</i> =85, <i>M</i> =3.24, <i>SD</i> =.972)	5	5.8	13	15.1	28	32.6	35	40.7	4	4.7
Essay exams (<i>N</i> =84, <i>M</i> =3.29, <i>SD</i> =.926)	3	3.5	12	14.0	33	38.4	30	34.9	6	7
Short-answer exams (<i>N</i> =85, <i>M</i> =3.71, <i>SD</i> =.721)	-	-	4	4.7	26	30.2	46	53.5	9	10.5
Quizzes (<i>N</i> =84, <i>M</i> =3.85, <i>SD</i> =.720)	-	-	3	3.5	20	23.3	48	55.8	13	15.1
Weekly assignments (<i>N</i> =85, <i>M</i> =3.99, <i>SD</i> =.866)	1	1.2	2	2.3	20	23.3	36	41.9	26	30.2
Student presentations (<i>N</i> =84, <i>M</i> =3.68, <i>SD</i> =.697)	-	-	2	2.3	32	37.2	41	47.7	9	10.5
Research papers (<i>N</i> =84, <i>M</i> =3.13, <i>SD</i> =.954)	3	3.5	19	22.1	31	36	26	30.2	5	5.8
Journals (<i>N</i> =84, <i>M</i> =2.82, <i>SD</i> =1.214)	12	14.0	26	30.2	19	22.1	19	22.1	8	9.3
Students evaluations of each others' work (<i>N</i> =85, <i>M</i> =2.72, <i>SD</i> =.959)	8	9.3	27	31.4	34	39.5	13	15.1	3	3.5
Grading on a curve (<i>N</i> =85, <i>M</i> =2.14, <i>SD</i> =1.167)	32	37.2	24	27.9	19	22.1	5	5.8	5	5.8
Competency-based grading (<i>N</i> =84, <i>M</i> =3.07, <i>SD</i> =1.170)	11	12.8	10	11.6	36	41.9	16	18.6	11	12.8
Take home homework (<i>N</i> =85, <i>M</i> =3.08, <i>SD</i> =1.003)	5	5.8	18	20.9	33	38.4	23	26.7	6	7

(1=Never, 2=Rarely, 3=Sometimes, 4=Frequently, 5=Always)

Table 31
Instructional Techniques/Methods

Variable	Never		Rarely		Sometimes		Frequently		Always	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Class discussions (<i>N</i> =85, <i>M</i> =3.89, <i>SD</i> =.690)	-	-	2	2.3	19	22.1	50	58.1	14	16.3
Computer-aided instruction (<i>N</i> =85, <i>M</i> =3.35, <i>SD</i> =.827)	3	3.5	5	5.8	41	47.7	31	36	5	5.8
Cooperative learning (<i>N</i> =85, <i>M</i> =3.67, <i>SD</i> =.605)	-	-	2	2.3	28	32.6	51	59.3	4	4.7
Field trips (<i>N</i> =85, <i>M</i> =3.09, <i>SD</i> =.734)	2	2.3	11	12.8	51	59.3	19	22.1	2	2.3
Demonstrations (<i>N</i> =85, <i>M</i> =3.55, <i>SD</i> =.779)	-	-	6	7	35	40.7	35	40.7	9	10.5
Group projects (<i>N</i> =85, <i>M</i> =3.64, <i>SD</i> =.652)	-	-	2	2.3	33	38.4	44	51.2	6	7
Independent projects (<i>N</i> =85, <i>M</i> =3.55, <i>SD</i> =.748)	-	-	5	5.8	36	41.9	36	41.9	8	9.3
Extensive lecturing (<i>N</i> =85, <i>M</i> =2.69, <i>SD</i> =.817)	4	4.7	32	37.2	36	41.9	12	14	1	1.2
Multiple drafts of written work (<i>N</i> =84, <i>M</i> =2.51, <i>SD</i> =.703)	4	4.7	39	45.3	35	40.7	6	7	-	-
Community service as part of coursework (<i>N</i> =85, <i>M</i> =2.72, <i>SD</i> =.908)	8	9.3	26	30.2	33	38.4	18	20.9	-	-
Student SAE projects (<i>N</i> =85, <i>M</i> =3.02, <i>SD</i> =1.175)	12	14	14	16.3	26	30.2	26	30.2	7	8.1
Integration of FFA events (<i>N</i> =85, <i>M</i> =2.96, <i>SD</i> =1.2)	15	17.4	10	11.6	30	34.9	23	26.7	7	8.1

(1=never, 2=rarely, 3=sometimes, 4=frequently, 5=always)

APPENDIX F

DEMOGRAPHIC CROSS TABULATIONS

This appendix shows the findings from cross tabulating use of community service with demographics. As shown in section 4.2.2, there were no significant differences between community service related questions and demographics.

Table 32

Cross Tabulation- Implement Community Service Elements by Gender, Marital Status, Years Teaching, Grew Up

	Implement Community Service Elements in Courses				
	Never	Rarely	Sometimes	Frequently	Always
Gender* (N=81)					
Female	2	2	11	16	6
Male	2	5	18	15	4
Marital					
Status** (N=83)					
Married	4	5	25	23	7
Unmarried	-	2	1	2	-
w/partner					
Single	-	-	5	6	3
Year Teaching*** (N=82)					
0-14	3	4	19	21	6
15-34	1	3	11	10	4
Grew Up**** (N=83)					
Urban	1	1	6	7	3
Rural	3	6	25	24	7

* $\chi^2 = 2.824$, $df=4$, $p=.588$, ** $\chi^2 = 10.616$, $df=8$, $p=.224$, *** $\chi^2 = .607$, $df=4$, $p=.962$, **** $\chi^2 = .772$, $df=4$, $p=.942$

Table 33

Cross Tabulation- Community Service Aligned with Class Content by Gender, Marital Status, Years Teaching, Grew Up

	Community Service Aligned with Class Content				
	Never	Rarely	Sometimes	Frequently	Always
Gender*(N=81)					
Female	2	2	10	17	6
Male	2	2	17	20	3
Marital Status**(N=83)					
Married	4	3	23	28	6
Unmarried w/partner	-	1	2	1	1
Single	-	-	4	8	2
Years Teaching*** (N=82)					
0-14	3	2	22	20	6
15-34	1	2	6	17	3
Grew Up**** (N=83)					
Urban	2	-	6	6	4
Rural	2	4	23	31	5

* $\chi^2=2.472$, $df=4$, $p=.650$ ** $\chi^2=6.323$, $df=8$, $p=.611$, *** $\chi^2=4.770$, $df=4$, $p=.312$ **** $\chi^2=6.409$, $df=4$, $p=.171$

Table 34

Cross Tabulation- Students had Integral Part in Planning Community Service by Gender, Marital Status, Years Teaching, Grew Up

	Students Had Integral Part in Planning Community Service				
	Never	Rarely	Sometimes	Frequently	Always
Gender*(N=81)					
Female	1	2	11	13	10
Male	3	4	10	16	11
Marital Status** (N=83)					
Married	3	7	15	24	15
Unmarried w/partner	1	-	3	1	-
Single	-	-	3	5	6
Years Teaching*** (N=82)					
0-14	3	3	14	20	13
15-34	1	4	6	10	8
Grew Up**** (N=83)					
Urban	1	-	5	8	4
Rural	3	7	16	22	17

* $\chi^2=1.478$, $df=4$, $p=.830$ ** $\chi^2=11.148$, $df=8$, $p=.193$ *** $\chi^2=2.015$, $df=4$, $p=.733$ **** $\chi^2=2.544$, $df=4$, $p=.637$

Table 35
*Cross Tabulation- Community Service Activities Met Community Needs by
Gender, Marital Status, Years Teaching, Grew Up*

Variable	Community Service Activities Met Community Needs				
	Never	Rarely	Sometimes	Frequently	Always
Gender* (N=81)					
Female	1	-	5	19	12
Male	3	-	10	18	13
Marital Status** (N=83)					
Married	3	-	12	30	19
Unmarried w/partner	1	-	1	2	1
Single	-	-	3	6	5
Years Teaching*** (N=82)					
0-14	3	-	8	26	16
15-34	1	-	7	12	9
Grew Up**** (N=83)					
Urban	1	-	3	8	6
Rural	3	-	13	30	19

* $\chi^2=2.145$, $df=3$, $p=.543$ ** $\chi^2=3.511$, $df=6$, $p=.743$ *** $\chi^2=1.269$, $df=3$, $p=.737$, **** $\chi^2=.195$, $df=3$, $p=.978$

Table 36

Cross Tabulation- Time Taken Before Community Service to Discuss by Gender, Marital Status, Years Teaching, Grew Up

Variable	Time Taken Before the Community Service to Discuss				
	Never	Rarely	Sometimes	Frequently	Always
Gender*(N=81)					
Female	1	-	9	15	12
Male	2	-	7	19	16
Marital Status** (N=83)					
Married	3	-	13	25	23
Unmarried w/partner	-	-	2	3	-
Single	-	-	2	6	6
Years Teaching*** (N=82)					
0-14	2	-	9	20	22
15-34	1	-	7	14	7
Grew Up**** (N=83)					
Urban	1	-	2	9	6
Rural	2	-	15	25	23

* $\chi^2=1.028$, $df=3$, $p=.794$ ** $\chi^2=4.611$, $df=6$, $p=.595$ *** $\chi^2=2.599$, $df=3$, $p=.458$ **** $\chi^2=1.7$, $df=3$, $p=.637$

Table 37

Cross Tabulation- Time Taken After Community Service to Discuss by Gender, Marital Status, Years Teaching, Grew Up

Variable	Time Taken After the Community Service to Discuss				
	Never	Rarely	Sometimes	Frequently	Always
Gender*(N=81)					
Female	1	3	12	12	9
Male	2	7	10	15	10
Marital Status** (N=83)					
Married	3	8	14	22	17
Unmarried w/partner	-	2	2	1	-
Single	-	1	6	4	3
Years Teaching*** (N=82)					
0-14	2	8	13	17	13
15-34	1	3	8	10	7
Grew Up**** (N=83)					
Urban	1	1	4	7	5
Rural	2	10	18	20	15

* $\chi^2=1.910$, $df=4$, $p=.752$ ** $\chi^2=8.068$, $df=8$, $p=.427$ *** $\chi^2=.423$, $df=4$, $p=.981$ **** $\chi^2=1.841$, $df=4$, $p=.765$

Table 38
Cross Tabulation- Reflection Activities Performed by Gender, Marital Status, Years Teaching, Grew Up

Variable	Reflection Activities Were Performed				
	Never	Rarely	Sometimes	Frequently	Always
Gender*(N=81)					
Female	3	7	10	12	5
Male	5	11	16	11	1
Marital Status** (N=83)					
Married	7	15	20	18	4
Unmarried w/partner	1	-	2	1	1
Single	1	3	4	5	1
Years Teaching*** (N=82)					
0-14	6	14	13	16	4
15-34	3	4	12	8	2
Grew Up**** (N=83)					
Urban	1	3	5	7	2
Rural	8	15	21	17	4

* $\chi^2=4.915$, $df=4$, $p=.296$ ** $\chi^2=3.481$, $df=8$, $p=.901$ *** $\chi^2=3.177$, $df=4$, $p=.529$ **** $\chi^2=2.222$, $df=4$, $p=.695$

Table 39
Cross Tabulation- Transportation Difficulties by Gender, Marital Status, Years Teaching, Grew Up

Variable	Transportation Causes Difficulty				
	Never	Rarely	Sometimes	Frequently	Always
Gender*(N=81)					
Female	5	8	14	6	4
Male	4	9	17	10	4
Marital Status** (N=83)					
Married	8	11	25	13	7
Unmarried w/partner	-	2	2	-	1
Single	1	4	5	3	1
Years Teaching*** (N=82)					
0-14	6	12	19	9	7
15-34	2	5	13	7	2
Grew Up**** (N=83)					
Urban	3	3	7	2	3
Rural	6	14	25	14	6

* $\chi^2=.862$, $df=4$, $p=.930$ ** $\chi^2=4.231$, $df=8$, $p=.836$ *** $\chi^2=2.199$, $df=4$, $p=.699$ **** $\chi^2=2.397$, $df=4$, $p=.663$

Table 40

Cross Tabulation- Funding Difficulties by Gender, Marital Status, Years Teaching, Grew Up

Variable	Funding Causes Difficulty				
	Never	Rarely	Sometimes	Frequently	Always
Gender* (N=81)					
Female	5	9	13	6	4
Male	3	10	18	11	2
Marital Status** (N=83)					
Married	7	14	24	13	6
Unmarried w/ partner	-	1	2	1	1
Single	1	4	6	3	-
Years Teaching*** (N=82)					
0-14	6	15	18	9	5
15-34	1	4	14	8	2
Grew Up**** (N=83)					
Urban	3	3	7	2	3
Rural	5	16	25	15	4

* $\chi^2=2.913$, $df=4$, $p=.572$ ** $\chi^2=3.066$, $df=8$, $p=.930$ *** $\chi^2=5.206$, $df=4$, $p=.267$ **** $\chi^2=4.4$, $df=4$, $p=.355$

Table 41

Cross Tabulation- Too Much Time to Perform by Gender, Marital Status, Years Teaching, Grew Up

Variable	Community Service Takes too Much Time to Perform				
	Never	Rarely	Sometimes	Frequently	Always
Gender*(N=81)					
Female	9	10	15	3	-
Male	5	14	21	4	-
Marital Status** (N=83)					
Married	11	18	30	5	-
Unmarried w/ partner	-	2	2	1	-
Single	3	4	6	1	-
Years Teaching*** (N=82)					
0-14	9	15	26	3	-
15-34	4	9	12	4	-
Grew Up**** (N=83)					
Urban	4	5	8	1	-
Rural	10	19	30	6	-

* $\chi^2=2.365$, $df=3$, $p=.500$ ** $\chi^2=2.176$, $df=6$, $p=.903$ *** $\chi^2=1.859$, $df=3$, $p=.602$ **** $\chi^2=.636$, $df=3$, $p=.888$

Table 42

Cross Tabulation- Too Much Time to Organize by Gender, Marital Status, Years Teaching, Grew Up

Variable	Community Service Takes too Much Time to Organize				
	Never	Rarely	Sometimes	Frequently	Always
Gender*(N=81)					
Female	7	12	15	3	-
Male	4	13	22	5	-
Marital Status**(N=83)					
Married	8	20	28	8	-
Unmarried	-	2	3	-	-
w/partner					
Single	3	4	6	1	-
Years Teaching*** (N=82)					
0-14	8	18	22	5	-
15-34	3	7	15	4	-
Grew Up**** (N=83)					
Urban	3	5	8	2	-
Rural	8	21	29	7	-

* $\chi^2=2.093$, $df=3$, $p=.553$ ** $\chi^2=2.717$, $df=6$, $p=.843$ *** $\chi^2=1.667$, $df=3$, $p=.644$ **** $\chi^2=.296$, $df=3$, $p=.961$

Table 43

Cross Tabulation- Establishing Community Partnerships Take too Much Time by Gender, Marital Status, Years Teaching, Grew Up

Variable	Establishing Community Partnerships Takes too Much Time				
	Never	Rarely	Sometimes	Frequently	Always
Gender*(N=81)					
Female	12	11	11	3	-
Male	6	23	12	3	-
Marital Status**(N=83)					
Married	13	26	19	6	-
Unmarried w/partner	1	2	2	-	-
Single	4	6	4	-	-
Years Teaching*** (N=82)					
0-14	13	22	17	1	-
15-34	4	12	8	5	-
Grew Up**** (N=83)					
Urban	6	5	5	2	-
Rural	12	29	20	4	-

* $\chi^2=5.717$, $df=3$, $p=.126$ ** $\chi^2=2.342$, $df=6$, $p=.886$ *** $\chi^2=7.205$, $df=3$, $p=.066$ **** $\chi^2=2.934$, $df=3$, $p=.402$

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