PERCEPTIONS OF AGRICULTURAL EDUCATION INSTRUCTORS REGARDING PROGRAM CRITERIA OF SUPERVISED AGRICULTURAL EXPERIENCE

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Of the Requirements for the Degree

Master of Science

By

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The undersigned, appointed by the Dean of the Graduate School,
have examined the thesis entitled.

PERCEPTIONS OF AGRICULTURAL EDUCATION INSTRUCTORS

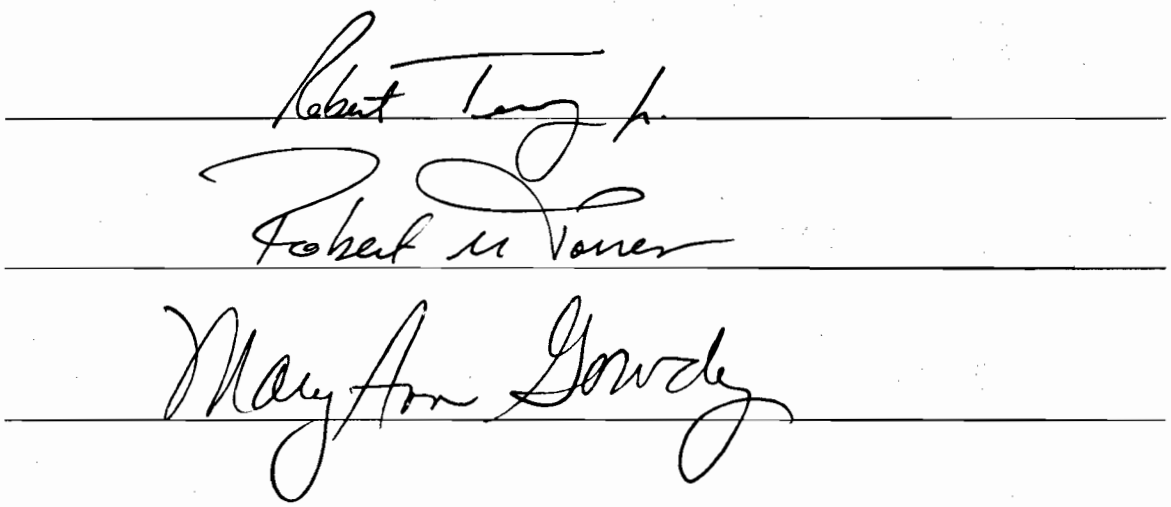
REGARDING PROGRAM CRITERIA OF

SUPERVISED AGRICULTURAL EXPERIENCE

Presented by Deanna Thies

A candidate for the degree of Master of Science

And hereby certify that in their opinion it is worthy of acceptance.



ACKNOWLEDGEMENTS

As a child, growing up in a household with an agricultural education teacher as father, I did not think that would be the path I would follow as an adult. My experiences as a teenager, such as being involved in FFA, changed my mind, and led me to a profession that I love and am very passionate about.

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CHAPTER I

INTRODUCTION

Background and Setting

According to the publication, Agricultural Education in Missouri (2004), agricultural education prepares secondary, postsecondary, and adult students for a variety of careers and for advanced college or technical training. Career opportunities for students range from the traditional entry-level positions in farming to positions in agribusiness, horticulture, and forestry. According to the FFA Student Handbook, nearly one-fifth of our population is employed by agriculture (FFA Student Handbook, 2000).

> Agriculture and the food, fiber and natural resource system is America's most creative, productive and basic industry. Much of this country's success in agriculture can be attributed to sound program of education. To advance a dynamic and efficient agriculture, food, and natural resource system and to assure the continued well-being of our society, first-rate education must continue to be a high priority. A cooperative effort among educational institutions, government agencies and food, fiber and natural resource-related business will help Missouri provide leadership for the future through enhanced education (Agricultural Education in MO, 2004, p. 1).

According to the Missouri Agricultural Education page on the Department of Elementary and Secondary Education website (2004), agriculture/agribusiness provides 540, 268 jobs which is more than 16.8% of the total employment in Missouri. A sample of businesses were asked about the future of agriculture and the food fiber and natural resource system. They were asked to identify five trends that will help shape the industry

over the next 30 years. Their responses were summarized in the publication, Agricultural Education in Missouri. That report stated:

1. Accelerating globalization of markets because economic globalization with increasing population and falling trade barriers is taking us toward a more competitive international marketplace for agricultural products in which more countries will produce a variety of food and market them on an international scale.
2. Growing public demands for environmental protection and safe foods is ever more important as production increases worldwide. Pressures will grow everywhere to protect prime farmland from urban sprawl, conserve soil, safeguard water quality and fisheries, use water more efficiently, protect remaining wildlife habitats, and ensure safe and healthy food supply.
3. Increasing reliance on technology with the advances in computers, communications, information, biotechnology or other areas of technology will greatly affect education, agriculture, and the operation of the food, fiber and natural resource system.
4. Decline of public understanding of agriculture, food, fiber and natural resource systems is an enormous concern because the general population is increasingly cut off from both direct experience and education related to agriculture, which has serious repercussions in terms of ill-informed consumer behavior, public opinion, regulation and political decision-making.
5. A more highly trained and diverse workforce will be needed to manage the development of food, fiber and natural resource systems so that they will be

> competitive in the global marketplace and successful in an industry whose structure is changing (Agriculture Education in MO, 2004, p. 3).

Conroy, Dailey, and Shelley-Tolbert (2004), stated that advancements in technology and increased efficiency in production agriculture, have led to changes in workforce dynamics. They also stated that these factors have changed the infrastructure and the types of workers who are in demand. They went onto say that these changes, in demand have begun to be reflected in high school agricultural education program offerings.

According to the National FFA Organization (2005), a SAE program is the actual hands-on application of concepts and principles learned in the agricultural education classroom and develop skills in agricultural career areas that interest them. Students are supervised by agricultural education teachers in cooperation with parents, employers, and other adults who assist them in developing and achieving their goals.

Prior to 2001, the National FFA Organization (2005) recognized two areas of SAEs: Ownership/Entrepreneurship and Placement, in terms of outstanding recognition, and only recognized Research/Experimentation and Analysis through the Agriscience Fair. The National FFA Organization (2005) currently recognizes four types of Supervised Agricultural Experience Programs:

- Exploratory-enables students to learn about agriculture and its related careers.
- Research/Experimentation and Analysis-students conduct research or analyze information to discover new knowledge.

- Ownership/Entrepreneurship-students plan and operate an agricultural related business.
- Placement-students work for someone else for pay or the experience.

Missouri agricultural education recognizes the same types of SAEs as the National FFA Organization, but also identifies a set of nine criteria that a SAE should meet (Program Planning Handbook, 2003, p. 2). The nine criteria are:

1. Supervised-by parent (guardian), teacher, and/or employer.
2. Agricultural-relate to food, fiber, and natural resources.
3. Experience-includes hands-on, practical opportunities.
4. Program-planned course of action including record keeping and expansion.
5. Instruction-related to classroom instruction.
6. Time-conducted outside of scheduled class.
7. Economic Base-make a contribution to family living now or in the future and be profitable.
8. Evaluated-incorporated grade given.
9. Recognition-potential to be recognized through FFA awards programs.

Statement of the Problem

Supervised Agricultural Experience programs are an integral part of the instructional program in agricultural education and in terms of awards and recognition within the FFA organization. While the definition of acceptable SAE has changed, the standards for quality SAE's in Missouri have remained the same for many years. No

study has been conducted to determine if agricultural educators in Missouri believe that the current standards still apply to agricultural education programs in the State of Missouri.

Statement of Purpose

The purpose of the study was to assess the perceptions of secondary agricultural educators in the state of Missouri concerning the current criteria, definitions and descriptions of supervised agricultural experience (SAE) programs.

Objectives

The following objectives were developed to accomplish the purpose of this study:

1. Assess the perceptions of agricultural educators in Missouri regarding the current types of SAEs as defined by National FFA.
2. Assess the perceptions of agricultural educators in Missouri regarding the Missouri Agricultural Education Supervised Agricultural Experience Program criteria.
3. Assess the perceptions of agricultural educators in Missouri regarding the ranking of the importance of the current Missouri SAE criteria.
4. Assess the perceptions of agricultural educators in Missouri regarding core or essential criteria deemed necessary for a viable SAE.

5. Identify selected demographic characteristics of agricultural educators by divisions of years of teaching, location of teaching, department size, gender, number of students, and collegiate training.
6. Assess relationships between teachers' opinions about SAE's and their selected demographic characteristics.

Definition of Terms

For the purposes of this study, the following terms were defined as follows.

1. Agricultural Education Student: a student enrolled in a state-approved secondary agricultural education program.

2. Agricultural Education Teacher: a licensed teacher educating students in a state approved secondary agricultural education program.

3. Supervised Agricultural Experience Program (SAE): a planned practical agricultural activity which supports skill and competency development, career success and application of specific agricultural and academic skills a student has learned through classroom instruction in agricultural education.

Limitation of the Study

Since this study was a descriptive survey research utilizing accidental sampling, a form of non-probabilistic sampling, regarded as the weakest of all sampling procedures, there is no way to estimate the error introduced by the accidental sampling procedures. According to Ary, Jacobs, and Razavieh (2002), because a non-probabilistic form of

sampling was used, generalizations and inferences cannot be made to the entire population and the reader must be cautious in interpreting the findings.

Assumptions

Basic assumptions about the population, instrument, sample selection process and the subjects include the following:

- This study addresses only secondary agricultural education teachers in Missouri public high schools.

Significance of the Problem

A vision and mission statement for Agricultural Education was developed in 2000 by the Reinventing Agricultural Education for the Year 2020 Task Force (Agricultural Education in MO, 2004). The task force was a cooperative effort of practitioners, students, government, and industry officials who developed these statements that were adopted by the National Council for Agricultural Education to guide future progress (Agricultural Education in MO, 2004). The vision statement was:

"All people value and understand the vital role of agriculture and natural resources in advancing personal and global well-being." (Agricultural Education in MO, 2004).

The mission statement was:

"Prepare students for successful careers and a lifetime of informed choices in the global agriculture and natural resource system" (Agricultural Education in MO, 2004, p. 3).

These statements are exemplified through a complete agricultural program which consists of three areas: classroom/laboratory, FFA, and Supervised Agricultural Experience (Agriculture Education, 2004). According to the DESE website for agricultural education, classroom/laboratory is the time for students to learn information and develop problem-solving techniques, FFA allows students to develop leadership through awards, competitions, and conferences, and SAE allows students to gain hands-on experience, and apply knowledge learned and make informed choices outside of the classroom. The three areas of an agricultural program are represented by three identical interlocking circles, which signifies all three are important aspects that must work together in a successful program. See Figure 1 is an illustration of the complete agricultural program.

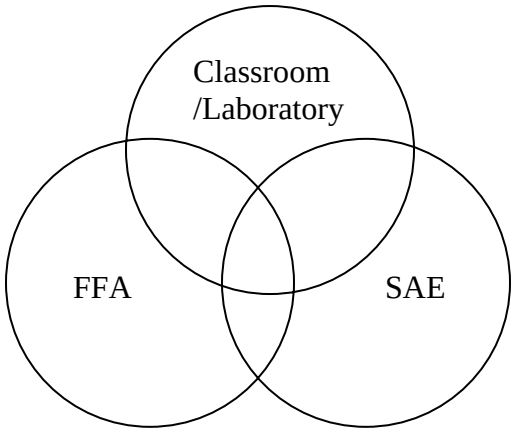

Figure 1. Graphical depiction of the complete, balanced agricultural program.

Dyer and Osborne (1995) stated that over time, each of the three components have undergone immense changes, but none as great as the SAE. In the beginning, programs started out as strictly for farming operations, but then expanded to include placement and now are expanding to include experimental and analytical. Whatever the reason,

participation in SAE programs, both in the quantity of students served and the quality of experiences has dramatically changed (Dyer & Osborne, 1995, p. 6).

According to Dyer and Osborne (1995), historically, students were encouraged to develop a "home project" that was more production based. They stated, that even in the late 1980's, little emphasis was placed on SAEs by urban teachers, but older and rural based teachers had more students in farm-oriented SAEs, and younger teachers had more of their students in land laboratories. They went on to state that, in the late 1980's, participation in specialized programs, such as horticulture and forestry, were not as high as programs in production agriculture, agribusiness, and agricultural mechanics. Since this time, a large change has occurred in the interest in specialized programs versus production programs. According to data from the Missouri Agricultural Education page on the DESE website (2004), the number of horticultural and natural resource programs have doubled while production based programs have declined.

When students develops their SAE, they are assisted by parents and teachers to develop a program that allows them to apply knowledge learned in the classroom/laboratory situations. According to Dyer and Osborne (1995), teachers' attitudes and expectations toward SAE programs are a key factor in student participation. They went on to state that teachers generally support the concept of SAE programs but have difficulty in implementing the concept with students, but felt that SAEs were more important today than in the past.

A major change has occurred in SAE programs, due to the fact that they lack definition, focus, and direction and in parallel with curricular changes. The focus of SAE

programs has moved from production-oriented to programs of widely varying scope and agricultural focus (Dyer & Osborne, 1995, p. 10).

CHAPTER II

REVIEW OF LITERATURE

Introduction

The review of related literature was developed to provide the foundation to build the theoretical base for this study. A basic understanding of the historical background of supervised agricultural experience programs is fundamental in determining the basis of SAEs. It was also necessary to explore the changes which have occurred in SAE programs in relation to overall curricular and program changes in agricultural education. Literature reviewed included papers from conferences, articles from professional magazines and journals, and articles from state educational websites.

Historical Background of Supervised Agricultural Experience Programs

Agricultural Education has changed dramatically since 1917, when the passage of the Smith-Hughes Act led to a formalized structure of vocational agriculture programs in secondary high schools throughout the United States. According to Camp, Clarke, and Fallow (2000), the Smith-Hughes Act required that farm projects be an integral part of all agricultural education programs. Vocational agriculture programs trained the workforce for agriculture and helped the United States become the leader in world food production (Conroy, Dailey, & Shelley-Tolbert, 2000). According to Swortzel (1996), Supervised agricultural experience (SAE) Programs allow agricultural education students to learn by doing whereby they apply agricultural knowledge and skills learned in the classroom and laboratory in an “away from the classroom setting” (p. 47). Swortzel (1996) went on to

state that supervised experience programs “bridge the gap” between classrooms and work places by providing students opportunities for application and transfer.

According to Camp, Clarke, and Fallow (2000), when the farm project approach was conceptualized in the early 1900’s, nearly 20% of the U.S. population resided on farms However, by the mid 1980’s only 2.2% of Americans lived on farms and only half this number reported farming as their main occupation. Yet, as of the late 1980’s nearly 20% of the labor force worked in the agricultural industry in some capacity (Camp, Clarke, & Fallow, 2000). Currently, agriculture employs one out of every 6.6 workers in Missouri and three out of four farms are operated by part-time farmers (Agricultural Education in MO, 2004).

Clearly, agricultural education is no longer primarily in the business of teaching about farming. Students learn about biotechnology, computers, animal science, environmental science, crop science, forestry, wildlife science and many other facets of a growing food and fiber sector. If the program is to remain viable into the new century, agricultural education, including its practical experience component, SAE, must reflect the current reality and trends in agriculture (Camp, Clarke, & Fallow, 2000).

Changes in Supervised Agricultural Experience Programs

As early as 1908, agriculture teacher Rufus Stimson was encouraging students to utilize experiences gained in projects at home as a basis for study in school (Dyer & Osborne, 1995). Thus, the concept of the “home project,” or supervised agricultural experience programs, was originated. They also went onto state, that many teachers soon realized, however, that education in agriculture must encompass more than only one

home project, so SAE programs which were carried to the "doing level" (p. 6). Since the passage of the Vocational Education Act of 1963, the use of SAE programs in agriculture has declined (Dyer & Osborne, 1995, p. 10). Dyer and Osborne stated that while the intent of the act was to validate off-farm SAE's, its actual wording may have been interpreted to many to de-emphasize the need for SAE programs. Whatever the reason, participation in SAE programs, both in the quantity of students served and the quality of experiences has dramatically changed (Dyer & Osborne, 1995, p. 10).

Arrington, Carter, Cheek, and Randall stated that supervised agricultural experiences in agricultural education programs incorporate experiential learning and direct application of knowledge into the student's curriculum to enhance learning. The SAE program is an essential part of the agricultural education program, which consists of three integral components: classroom instruction, supervised agricultural experiences, and participation in the FFA (Agriculture Education, 2004). Agricultural education has always emphasized the "learning by doing" theory, which is exemplified in the SAE program which allows students to utilize principles learned in class and apply them to real life situations (Arrington, Carter, Cheek, & Randell, 1994).

The supervised experience concept has expanded along with agriculture programs to embrace a more diverse clientele and a changing agricultural industry. According to Missouri Agricultural Education section of the DESE website, high school agriculture course enrollment has increased steadily since 1985 and is currently at an all time high of 294 programs with 23,827 students enrolled, which reversed a trend of declining enrollment that began in 1977. With changes in enrollment, technology, and the agriculture, food, fiber, and natural resource system, changes within course offerings of

programs have also been made. Some of the older standard classes such as Crop Science, Ag Power I and II, and Agricultural Management/Economics have actually seen decline or little change in the number of classes and enrollment in the state of Missouri (Agricultural Education in Missouri, 2004). For example in 1995-1996, 509 students were enrolled in 46 classes of crop science versus 2003-2004 when 408 students were enrolled in 34 classes of crop science (Agriculture Education in Missouri, 2004).

With the decline in standard production classes, there have been increases in "non-traditional" areas of agriculture such as Greenhouse Operation/Management, Floriculture, Nursery Operation & Management, Turf Management, Landscaping, Conservation, Agricultural Literacy, and Food Science and Technology (Agricultural Education in Missouri, 2004). For example in 1995-1996, 1645 students were enrolled in 99 classes of Greenhouse Operation/Management versus 2003-2004, 2,620 students was enrolled in 170 classes (Agricultural Education in Missouri, 2004).

Along with the changes in course offerings, the types of SAE's students are participating in are also changing. According to the Missouri Agricultural Education website (2004), there have been increases in non-traditional ownership production such as small animals (dogs, rabbits, goats, fish, bees and poultry) and crops (sunflowers, berries/grapes, and plants. These facts compare to the decline, in some areas by half, of traditional crops and livestock such as beef, corn, and wheat, and the same changes are also represented within the placement areas with agribusiness doubling it numbers form 1994 (5,655) to 2003 (10,193) and school laboratory projects also increasing from 1994 to 2003 (Agriculture Education in Missouri, 2004).

According to Lucero and Whaley (1993), high school agricultural education programs today have a significantly expanded mission and diversified clientele. They also stated that curricular content in agricultural education is as likely to include horticulture, aquaculture, and rural recreation as well as the traditional areas of crop and animal production. The expansion of programs has begun to reach urban areas and this has also helped with the modification and changes seen in SAE's. Traditional supervised experiences in urban areas include things such as production of fur animals to the more non-traditional like alfalfa sprout production and marketing or goat milk production (Lucero & Whaley, 1993). Students in cooperative projects produce and sell roses to the student body and in community neighborhoods. Students could also participate in planned work experience through local florists, feed stores, and pet care businesses (Lucero & Whaley, 1993).

The National FFA Organization identifies four basic types of SAEs:

1. Exploratory in which students learn about the 'big picture' of agriculture enables students to become literate in agriculture and its many related careers.
2. Research/Experimentation and Analysis in which students plan and conduct an agricultural experiment utilizing the scientific process so they can research or analyze information to discover new knowledge and/or gather and evaluate data to compile a scientific paper.
3. Ownership/Entrepreneurship in which students plan, own, and operate/manage an agriculture-enterprise, such as a crop, livestock or an agricultural business
4. Placement in which students work for someone else either for pay or for the experience. (National FFA Organization, 2004, p.1-2)

The Missouri Joint Staff in Agricultural Education established criteria for SAEs that identified what should be included within a program and were published with in the Program Planning Handbook (2003). These criteria are:

1. SUPERVISED - Does the project plan include supervision by the teacher, parent (guardian), and/or employer?
2. AGRICULTURAL - Is the project in an area related to agriculture, food, fiber and natural resources?
3. EXPERIENCE - Does the planned experience include hands-on, practical opportunities for students?
4. PROGRAM - Is there a planned course of action including record keeping and expansion?
5. INSTRUCTION - Will related instruction be provided?
6. TIME - Will a portion of the planned experience be conducted outside of scheduled class time?
7. ECONOMIC BASE - Does the activity have the potential to make a contribution to family living now or in the future and will it be profitable?
8. EVALUATED - Is there a planned evaluation, summary, and incorporated grade given?
9. RECOGNITION - Does the project have the potential to be recognized through the FFA awards program? (p.2)

The criteria are used to help agricultural teachers assist students in establishing SAE programs, and are also used to evaluate individual agricultural programs (Program Planning Handbook, 2003). Eight standards identify the importance of SAE programs in the experience of students enrolled in secondary agricultural programs, which are reflected in *Standards and Quality Indicators for Agricultural Program Improvement* under Standard Eight.-Experiential Learning (Program Planning Handbook, 2003). The

standards included in the *Standards and Quality Indicators for Agricultural Program Improvement* are also identified in the Program Planning Handbook (2003), and they are:

1. Each student enrolled in a 9th through 12th grade agriculture class will have a SAE program.
2. Four regularly scheduled observations are made of each student's supervised agricultural experience program or at least 180 observations made each year by each instructor.
3. Records will be kept to indicate that the teacher has conducted on-site observations to each student at least twice per year.
4. Each student maintains financial record book in which regular entries are maintained.
5. Student' supervised agricultural experience programs and record books are utilized in determining course grades.
6. Students are given an opportunity to fulfill supervised agricultural experience requirements through a variety of SAE types (ownership/entrepreneurship, placement, exploratory, research/experimental and analytical).
7. A business agreement/education plan, signed by the appropriate parties, is kept on file for each student.
8. A supervision period for agricultural experience programs is recognized as part of the teaching load. (p. 1-2)

To be successful in agriculture workplace and life, students need SAEs that are planned and supervised workplace applications of skills and competencies learned in

secondary agricultural programs that following established criteria and standards for establishment and evaluation (Program Planning Handbook, 2003).

Summary of Review of Literature

Agriculture and agricultural education are very strong within the state of Missouri. However, over the years there has been a decline in the traditional areas of agriculture and more people are turning towards alternative and non-traditional means to survive. These changes are also evident within the agricultural program course offerings and diversification of SAE opportunities for students. Some changes were made in 2003 to Missouri SAE criteria and standards to better align it to the National FFA Organization, but no more changes have been made since then (Terry Heiman, personal conversation, October 19, 2005).

CHAPTER III

METHODOLOGY

Introduction

This chapter describes the methodology used to achieve the purposes of this study, including the design of the research and procedure of determining the selected population. In addition, this chapter describes the research, instrumentation, establishment of validity and reliability, collection of data, and analysis of the data obtained.

Research Design

The design used for this study was descriptive survey research. According to Ary, Jacobs, & Razaveith (2002), research asks questions about the nature, incidence, or distribution of variables; it involves describing but not manipulating variables. The study used a target population of secondary agricultural education teachers in Missouri. A survey instrument used to determine teachers' perceptions regarding SAE's in Missouri and the criterion related to them.

Subject Selection

Population

The target population was secondary agricultural education teachers in Missouri. The population consisted of 401 secondary agricultural teachers (N=401). Accidental sampling, a form of non-probabilistic sampling was used.

Sample

The accidental sample consisted of agricultural education teachers attending their respective summer district meeting. Even though all 401 agricultural teachers did not attend the meeting, the sample of 320 was still representative of the state population.

Sampling Error

Sampling Error could not be avoided because accidental sampling was used, which is a form of non-probabilistic sampling. According to Dr. Terry Heiman (personal conversation, October 19, 2005), the demographic characteristics obtained were rationally proportionate to the statewide characteristics.

Selection Error

Selection error was avoided by obtaining the current, up-to-date agricultural education teachers directory for the current year. This was a reliable frame, as it is updated annually by the Missouri Department of Elementary and Secondary Education. This accurate frame was purged of duplicates, should there be any.

Frame Error

Frame error was avoided by obtaining the current, up-to-date agricultural education teachers directory for the current year. This was a reliable frame, as it is updated annually by the Missouri Department of Elementary and Secondary Education.

Institutional Review Board

According to federal regulations and the University of Missouri-Columbia policy requires a proper review and approval of all research studies that involved human subjects in order for the researcher to conduct this study. This review was required by the University of Missouri-Columbia so as to protect the rights of those participating in the experiment. In compliance with the above-mentioned policy, this study received the proper review and was granted permission to continue and was assigned the following project number 1052317.

Instrumentation

The instrument used in the study was a researcher designed questionnaire constructed to meet the purpose of the study and provide answers to the objectives of this study. The booklet style questionnaire (Appendix A) used to collect data for this study consisted of five sections and was developed in March of 2005. The first two sections contained thirteen five-point, Likert-type questions so subjects could determine their level of agreeability for national and Missouri SAE criteria. The next two sections contained ranking questions where subjects were able to rank from one to nine, their order of importance of the Missouri SAE Criteria. A section also contained a listing of

the criteria in which subjects were able to identify the core/essential Missouri SAE Criteria. The final section of the instrument contained six questions related to demographic characteristics of the secondary agricultural education teachers.

Validity and Reliability Procedures

Validity was determined through utilizing the knowledge of individuals who have expertise or a knowledge base in the subject of SAE. The individuals consisted of University of Missouri-Columbia faculty who examined the questionnaire for determination of valid content, instrumentation and insight on the subject. The method of sampling was also examined for correct statistical producers in determination of construct and criterion-related validity.

Reliability was determined through utilizing a pilot study, conducted in Mid-June 2005, of eight secondary agricultural education teachers not involved in the study. They were selected from a group of Missouri agricultural education teachers who were not attending the summer conferences of who had retired recently. Those selected for the pilot study filled out the questionnaire and the reliability of the instrument was determined.

Collection of Data

Data were collected on July 26, 2005. During the summer of 2005 at all six district agricultural teacher meetings during the Missouri Vocational Agricultural Teachers Association Conference held in Springfield, Missouri. Permission to do so was granted by district supervisors, Missouri Vocational Agriculture Teachers Association (MVATA) executive committee and Missouri state staff.

Questionnaires were administered and collected with the assistance of district supervisors and district presidents. All secondary agricultural educators present at the meetings were given a questionnaire. An incentive drawing for a gift certificate was conducted to entice teachers to fill out and turn in the questionnaire and then to also thank them for their time to participate in the study.

Response rates in each district were as follows: 48 out of 61 in Northwest, 56 out of 68 in Northeast, 68 out of 68 in Central, 78 out of 99 in Southwest, 45 out of 55 in South Central, and 25 out of 32 in Southeast. Overall, there were data collected from 320 out of 383 subjects, yielding an 83.6% response rate.

Analysis of Data

In the first stage of data analysis, the data were organized into tables based upon summated rating scales from the Likert-type scales, ranking factors, and core/essential choices. All data, once complied, were sorted based upon the demographic factors. From this point, the measures of central tendency were used to determine the points of distribution, which represents the average or typical values. Frequency of values for the first three sections were also determined to see if there was a skew in the mean caused by values chosen at opposite ends of the scale.

All data sorted by demographic factors were analyzed and placed into charts and tables to determine if any correlation or extreme differences existed among questionnaire answers and demographic data. Data were analyzed using MS Excel for Windows.

CHAPTER IV

FINDINGS AND DISCUSSION

Introduction

The purpose of this chapter was to describe the findings from the data collected in this study. To facilitate analysis and interpretation of the information, data were grouped and arranged in progression based on the objectives of the study, with the exception of objective five. The correlation to demographic characteristics were woven into objectives one through four, so data relating to objective five is seen with the other objectives.

Statement of Purpose

The purpose of the study was to assess the perceptions of secondary agricultural educators in the state of Missouri concerning the current criteria, definitions and descriptions of supervised agricultural experience (SAE) programs.

Objectives

The following objectives were developed to accomplish the purpose of this study:

1. Assess the perceptions of agricultural educators in Missouri regarding the current types of SAEs as defined by National FFA.
2. Assess the perceptions of agricultural educators in Missouri regarding the Missouri Agricultural Education Supervised Agricultural Experience Program criteria.

3. Assess the perceptions of agricultural educators in Missouri regarding the ranking of the importance of the current Missouri SAE criteria.
4. Assess the perceptions of agricultural educators in Missouri regarding core or essential criteria deemed necessary for a viable SAE.
5. Identify selected demographic characteristics of agricultural educators by divisions of years of teaching, location of teaching, department size, gender, number of students, and collegiate training.
6. Assess relationships between teachers' opinions about SAE's and their selected demographic characteristics.

Findings Related to Objective 1

Objective 1 was to identify agricultural educators' perceptions regarding the types of SAE currently defined by the National FFA in relation to demographic data of agricultural educators in the state of Missouri. Specific characteristics investigated were years of teaching, location of teaching, department size, gender, number of students, and collegiate training.

The mean score of participants, based upon districts, for question 1: I encourage students in Missouri to have exploratory SAE, was 3.40, with a range of 3.00 to 3.73. For question 2: I encourage students in Missouri to have a research/experimentation and analysis SAE, the mean was 3.11 with a range of 2.80 to 3.44. Question 3: I encourage students in Missouri to have an ownership/entrepreneurship SAE, had a mean of, 4.40 with a range of 4.16 to 4.62. In regards to question 4: I encourage students in Missouri to have a placement SAE, scores with a mean of 4.40 with a range of 4.18 to 4.51. Data

relating to the average scores based upon districts are summarized in Table 1. Graph of Data can be seen in Appendix B.

Table 1

Distribution of National Criteria Likert Scores Based Upon Districts

Item	Districts						Total
	NW (n=48)	**NE (n=56)**	**C (n=68)**	**SW (n=78)**	**SC (n=45)**	**SE (n=25)**	
I encourage students in Missouri to have exploratory SAE?	3.31	3.46	3.32	3.00	3.73	3.60	3.40
I encourage students in Missouri to have a research/experimentation and analysis SAE?	3.20	3.17	3.04	2.79	3.00	3.44	3.11
I encourage students in Missouri to have an ownership/entrepreneurship SAE?	4.16	4.62	4.47	4.35	4.35	4.44	4.40
I encourage students in Missouri to have a placement SAE	4.18	4.51	4.47	4.37	4.48	4.40	4.40

Subjects were asked if they encourage their students to have exploratory type SAE's. The mean for this item was 3.34 with a range of 3.27 to 3.47. For question 2: I encourage students in Missouri to have a research/experimentation and analysis SAE, the mean was 3.10 with a range of 3.04 to 3.20. Question 3: I encourage students in Missouri to have an ownership/entrepreneurship SAE, with a mean of, 4.34 with a range of 4.13 to 4.51. In regards to question 4: I encourage students in Missouri to have a placement SAE, scores had a mean of 4.29 with a range of 4.00 to 4.52. Data relating to the average scores based upon districts are summarized in Table 2. Graph of data can be seen in Appendix C.

Table 2

Distribution of National Criteria Likert Scores Based Upon Department Size

	Department Size			
Question	**1 Teacher (n=163)**	**2 Teachers (n=136)**	**3+ Teachers (n=15)**	**Total**
I encourage students in Missouri to have exploratory SAE?	3.28	3.45	3.26	3.33
I encourage students in Missouri to have a research/experimentation and analysis SAE?	3.04	3.07	3.20	3.10
I encourage students in Missouri to have an ownership/entrepreneurship SAE?	4.39	4.51	4.13	4.34
I encourage students in Missouri to have a placement SAE	4.36	4.52	4.00	4.29

The mean score of participants, based upon number of teachers years teaching varied between questions one to four. Respondents were asked to put themselves into one of 6 categories. The categories were zero to four years which contained ninety-one individuals (28.4%), seventy-eight individuals (24.4%) have been teaching five to nine years, ten to fourteen years included fifty-three individuals (16.6%), twenty-nine individuals (9.1%) were in the fifteen to nineteen year category, in the twenty to twenty-four years teaching included thirty-two individuals (10%), twenty-eight individuals (8.8%) were in the twenty-five to twenty-nine year category, and in the thirty plus years teaching were five individuals (1.6%). A graph of data can be seen in Appendix D.

Table 3

Distribution of National Criteria Likert Scores Based Upon Years Teaching

	Years Teaching			
Item	**0-9 Years (n=169)**	**10-19 Years (n=83)**	**20-29 Years (n=60)**	**30+ Years (n=5)**
I encourage students in Missouri to have exploratory SAE?	3.48	3.27	3.28	2.60
I encourage students in Missouri to have a research/experimentation and analysis SAE?	3.18	2.80	3.10	2.80
I encourage students in Missouri to have an ownership/entrepreneurship SAE?	4.53	4.21	4.51	3.60
I encourage students in Missouri to have a placement SAE	4.49	4.22	4.49	3.80

In the study, sixty-two females (21.6%) and two hundred and twenty-five males (78.4%) participated in the study.

Table 4

Distribution of National Criteria Likert Scores Based Upon Gender

Item	Gender	
	Female (n=62)	**Male (N=225)**
I encourage students in Missouri to have exploratory SAE?	3.30	3.24
I encourage students in Missouri to have a research/experimentation and analysis SAE?	3.00	3.04
I encourage students in Missouri to have an ownership/entrepreneurship SAE?	4.30	4.32
I encourage students in Missouri to have a placement SAE	4.33	4.29

Respondents identified the total of number of students enrolled in their program. Student numbers were broken down into increments of twenty-five. Programs containing one to twenty-five students were represented by eight respondents (2.6%), forty-eight respondents (15.3%) have programs with twenty-six to fifty students, programs with fifty-one to seventy-five students were represented by seventy-three respondents (23.3%), fifty-seven respondents (18.2%) have programs with seventy-six to one hundred students, one hundred and one to one hundred and twenty-five student programs were represented by forty-five respondents (14.4%), thirty-four respondents (10.9%) have programs with one hundred and twenty-six to one hundred and fifty students, programs with one hundred and fifty-one to one hundred and seventy-five students were represented by six respondents (1.9%), nineteen respondents (6.1%) represented programs with one hundred and seventy-six to two hundred students, and programs with more than two hundred students were represented by twenty-three respondents (7.3%).

Table 5

Distribution of National Criteria Likert Scores Based Upon Number of Students

	Number of Students								
Item	**1 to 25 (n=8)**	**26 to 50 (n=48)**	**51 to 75 (n=73)**	**76 to 100 (n=57)**	**101 to 125 (n=45)**	**126 to 150 (n=34)**	**151 to 175 (n=6)**	**176 to 250 (n=19)**	**250+ (n=23)**
I encourage students in Missouri to have exploratory SAE?	3.00	3.43	3.37	3.17	3.31	3.47	3.66	3.63	3.43
I encourage students in Missouri to have a research/experimentation and analysis SAE?	3.00	3.27	3.01	2.87	2.95	3.05	3.66	3.47	3.04
I encourage students in Missouri to have an ownership/ entrepreneurship SAE?	4.87	4.33	4.45	4.47	4.31	4.47	5.00	4.47	4.34
I encourage students in Missouri to have a placement SAE	4.75	4.27	4.43	4.43	4.31	4.50	4.83	4.36	4.47

Respondents identified the college of their collegiate training. Five Missouri universities who offer agricultural education training were the options for respondents, or they could identify other colleges where they received training. Other universities that were identified by respondents included Arkansas State University, Kansas State, Oklahoma State, and Iowa State. Twenty-three respondents (7.1%) stated that they attended Central Missouri State University, College of the Ozarks had five respondents (1.5%) attend their campus, thirty-five respondents (10.8%) attended Northwest Missouri State University, eighty (24.8%) attended Southwest Missouri State University, the University of Missouri-Columbia had one hundred and forty-two respondents (44%) and thirty-eight respondents (11.8%) attended other universities.

Table 6

Distribution of National Criteria Likert Scores Based Upon Collegiate Training

	Collegiate Training					
Item	**CMSU (n=23)**	**C of O (n=5)**	**NWMSU (n=35)**	**SMSU (n=80)**	**UMC (n=142)**	**Other (n=38)**
I encourage students in Missouri to have exploratory SAE?	3.21	3.60	3.08	3.36	3.35	3.15
I encourage students in Missouri to have a research/experimentation and analysis SAE?	3.08	3.20	3.22	2.95	2.99	2.94
I encourage students in Missouri to have an ownership/entrepreneurship SAE?	4.69	4.00	4.22	4.55	4.32	4.05
I encourage students in Missouri to have a placement SAE	4.65	3.80	4.17	4.56	4.26	4.18

Findings Related to Objective 2

Objective 2 were to identify agricultural educators' perceptions regarding the criteria/standards of SAE currently defined by Missouri in relation to demographic data of agricultural educators in the state of Missouri. Specific characteristics investigated were: years of teaching, location of teaching, department size, gender, number of students, and collegiate training.

As shown in Table 1, the respondents' scores based upon their responses to the Likert score were averaged. The mean for question 1: To what importance do you believe that a project should be supervised, was 4.54, with a range of 4.40 to 4.65. For question 2: To what importance do you believe that a project should be agricultural related, the mean was 4.25 with a range of 4.02 to 4.33. Question 3: To what importance do you believe that a project should include hand-on practical opportunities, had a mean of, 4.54 with a range of 4.33 to 4.68. In regards to question 4: To what importance do you believe that a project should be planned which includes record keeping and expansion, scores had a mean of 4.54 with a range of 4.41 to 4.85. Question 5: To what importance do you believe that a project should be related to instruction, with a mean of 4.06 with a range of 3.95 to 4.29. The average for question 6: To what importance do you believe that an experience should be conducted outside of scheduled class time, was 4.28 with a range of 4.07 to 4.41. In question 7: To what importance do you believe that a project should make a contribution to family living now or in the future, the mean was 3.85 with a range of 3.61 to 4.03. Question 8: To what importance do you believe that a project should be evaluated, had a mean of 4.20 and ranged 4.02 to 4.37. In regards to question 9: To what importance do you believe that a project should be recognized through the FFA awards

program, the mean was 4.40 and the range was 4.16 to 4.54. Data relating to the average scores based upon districts are summarized in Table 6. A graph of Data can be seen in Appendix B.

Table 7

Distribution of Missouri Criteria Likert Scores Based Upon Districts

	Districts						
Item	**NW (n=48)**	**NE (n=56)**	**C (n=68)**	**SW (n=78)**	**SC (n=45)**	**SE (n=25)**	**Total**
To what importance do you believe that a project should be supervised?	4.64	4.58	4.41	4.65	4.57	4.40	4.54
To what importance do you believe that a project should be agricultural related?	4.33	4.33	4.02	4.46	4.22	4.16	4.25
To what importance do you believe that a project should include hand-on practical opportunities?	4.68	4.66	4.33	4.61	4.46	4.48	4.54
To what importance do you believe that a project should be planned which includes record keeping and expansion?	4.85	4.57	4.41	4.64	4.60	4.20	4.54
To what importance do you believe that a project should be related to instruction?	4.25	4.08	3.79	4.29	3.95	4.00	4.06
To what importance do you believe that an experience should be conducted outside of scheduled class time?	4.35	4.41	4.07	4.39	4.33	4.12	4.28
To what importance do you believe that a project should make a contribution to family living now or in the future?	4.00	3.69	3.61	4.03	3.80	3.96	3.85
To what importance do you believe that a project should be evaluated?	4.37	4.19	4.04	4.34	4.02	4.24	4.20
To what importance do you believe that a project should be recognized through the FFA awards program?	4.54	4.41	4.16	4.53	4.31	4.48	4.40

The mean for the Missouri SAE Criteria based upon department size of respondents is contained within Table 8. A graph of data can be seen in Appendix C.

Table 8

Distribution of Missouri Likert Scores Based Upon Department Size

	Department Size			
Item	**1 Teacher (n=163)**	**2 Teachers (n=136)**	**3+ Teachers (n=15)**	**Total**
To what importance do you believe that a project should be supervised?	4.56	4.58	4.60	4.58
To what importance do you believe that a project should be agricultural related?	4.30	4.27	4.40	4.32
To what importance do you believe that a project should include hand-on practical opportunities?	4.54	4.58	4.73	4.62
To what importance do you believe that a project should be planned which includes record keeping and expansion?	4.57	4.65	4.46	4.56
To what importance do you believe that a project should be related to instruction?	4.06	4.14	4.06	4.09
To what importance do you believe that an experience should be conducted outside of scheduled class time?	4.30	4.36	4.20	4.28
To what importance do you believe that a project should make a contribution to family living now or in the future?	3.89	3.83	4.06	3.92
To what importance do you believe that a project should be evaluated?	4.21	4.25	4.20	4.22
To what importance do you believe that a project should be recognized through the FFA awards program?	4.42	4.44	4.40	4.42

The mean for the Missouri SAE Criteria based upon number of years teaching of respondents is contained within Table 9. Graph of data can be seen in Appendix D. Respondents surveyed had teaching years, which ranged from starting their first year teaching to teaching more than thirty years. The largest group of respondents fell into the category of teaching zero to nine years.

Table 9

Distribution of Missouri Likert Scores Based Upon Number of Years Teaching

	Years Teaching			
Item	**0-9 Years (n=169)**	**10-19 Years (n=83)**	**20-29 Years (n=60)**	**30+ Years (n=5)**
To what importance do you believe that a project should be supervised?	4.58	4.54	4.63	4.40
To what importance do you believe that a project should be agricultural related?	4.28	4.32	4.28	4.20
To what importance do you believe that a project should include hand-on practical opportunities?	4.61	4.42	4.68	4.60
To what importance do you believe that a project should be planned which includes record keeping and expansion?	4.63	4.55	4.66	4.20
To what importance do you believe that a project should be related to instruction?	4.13	3.95	4.20	4.00
To what importance do you believe that an experience should be conducted outside of scheduled class time?	4.34	4.21	4.33	4.20
To what importance do you believe that a project should make a contribution to family living now or in the future?	3.87	3.83	3.90	4.00
To what importance do you believe that a project should be evaluated?	4.28	4.07	4.31	4.00
To what importance do you believe that a project should be recognized through the FFA awards program?	4.44	4.41	4.36	4.40

Table 10 represents the distribution of means based upon gender of respondents. Sixty-two females (21.6%) and two hundred and twenty-five males (78.4%) responded to the survey. A graph of the data can be seen in Appendix E.

Table 10

Distribution of Missouri Likert Scores Based Upon Gender

Item	Gender	
	Female (n=62)	**Male (n=225)**
To what importance do you believe that a project should be supervised?	4.27	4.53
To what importance do you believe that a project should be agricultural related?	4.04	4.25
To what importance do you believe that a project should include hand-on practical opportunities?	4.41	4.50
To what importance do you believe that a project should be planned which includes record keeping and expansion?	4.38	4.53
To what importance do you believe that a project should be related to instruction?	3.71	4.11
To what importance do you believe that an experience should be conducted outside of scheduled class time?	4.09	4.24
To what importance do you believe that a project should make a contribution to family living now or in the future?	3.48	3.89
To what importance do you believe that a project should be evaluated?	3.96	4.22
To what importance do you believe that a project should be recognized through the FFA awards program?	4.24	4.36

Table 11 represents the distribution of means based upon the number of students in respondents programs. Categories that respondents could classify themselves into were broken into twenty-five student divisions. Eight respondents (2.6%) have programs with one to twenty-five students, forty-eight respondents (15.3%) have programs with twenty-six to fifty students, seventy-three respondents (23.3%) have programs with fifty-one to seventy-five students, fifty-three respondents (16.9%) have programs with seventy-six to one hundred students, forty-five respondents (14.4%) have programs with one hundred and one to one hundred and twenty-five students, thirty-four respondents (10.9%) have programs with one hundred and twenty-six to one hundred and fifty students, six respondents (2.0%) have programs with one hundred and fifty-one to one hundred and seventy-five students, nineteen respondents (6.1%) have programs with one hundred and seventy-six to two hundred students, and programs with two hundred or more students are taught by twenty-three respondents (7.3%). A graph of the data can be seen in Appendix F.

Table 11

Distribution of Missouri Likert Scores Based Upon Number of Students

Item	Number of Students								
	1-25 (n=8)	**26-50 (n=48)**	**51-75 (n=73)**	**76-100 (n=57)**	**101-125 (n=45)**	**126-150 (n=34)**	**151-175 (n=6)**	**176-250 (n=19)**	**250+ (n=23)**
To what importance do you believe that a project should be supervised?	4.62	4.56	4.58	4.57	4.51	4.70	4.33	4.57	4.56
To what importance do you believe that a project should be agricultural related?	4.37	4.31	4.37	4.26	4.26	4.38	4.00	4.26	4.13
To what importance do you believe that a project should include hand-on practical opportunities?	4.87	4.60	4.47	4.54	4.60	4.70	4.50	4.68	4.43
To what importance do you believe that a project should be planned which includes record keeping and expansion?	4.62	4.60	4.68	4.54	4.57	4.70	4.66	4.68	4.39
To what importance do you believe that a project should be related to instruction?	4.25	4.16	4.08	4.03	4.02	4.29	4.50	4.00	4.00
To what importance do you believe that an experience should be conducted outside of scheduled class time?	4.00	4.39	4.45	4.14	4.33	4.38	4.66	4.52	3.95
To what importance do you believe that a project should make a contribution to family living now or in the future?	3.75	3.93	3.95	3.77	3.62	4.05	4.00	4.05	3.69
To what importance do you believe that a project should be evaluated?	4.50	4.33	4.11	4.22	4.20	4.38	4.50	4.26	4.08
To what importance do you believe that a project should be recognized through the FFA awards program?	4.75	4.50	4.43	4.22	4.33	4.58	4.66	4.63	4.43

Table 12 represents the distribution of means based upon collegiate training. Respondents identified the college of their collegiate training. Five Missouri universities who offer agricultural education training were the options for respondents, or they could identify other colleges where they received training. Other universities that were identified by respondents included Arkansas State University, Kansas State, Oklahoma State, and Iowa State. Twenty-three respondents (7.1%) stated that they attended Central Missouri State University, College of the Ozarks had five respondents (1.5%) attend their campus, thirty-five respondents (10.8%) attended Northwest Missouri State University, eighty (24.8%) attended Southwest Missouri State University, the University of Missouri-Columbia had one hundred and forty-two respondents (44%) and thirty-eight respondents (11.8%) attended other universities. A graph of the data can be seen in Appendix G.

Table 12

Distribution of Missouri Likert Scores Based Upon Collegiate Training

Item	Collegiate Training					
	CMSU (n=23)	**C of O (n=5)**	**NWMSU (n=35)**	**SMSU (n=80)**	**UMC (n=142)**	**Other (n=38)**
To what importance do you believe that a project should be supervised?	4.47	4.40	4.51	4.65	4.41	4.44
To what importance do you believe that a project should be agricultural related?	4.08	3.80	4.28	4.53	4.07	4.15
To what importance do you believe that a project should include hand-on practical opportunities?	4.30	4.60	4.54	4.70	4.45	4.21
To what importance do you believe that a project should be planned which includes record keeping and expansion?	4.39	4.80	4.74	4.67	4.46	4.23
To what importance do you believe that a project should be related to instruction?	3.87	3.80	4.25	4.35	3.85	3.89
To what importance do you believe that an experience should be conducted outside of scheduled class time?	4.04	4.60	4.42	4.43	4.13	4.13
To what importance do you believe that a project should make a contribution to family living now or in the future?	3.73	4.60	3.97	4.11	3.57	3.73
To what importance do you believe that a project should be evaluated?	4.30	4.60	4.20	4.30	4.03	4.10
To what importance do you believe that a project should be recognized through the FFA awards program?	4.34	4.60	4.31	4.65	4.20	4.23

Findings Related to Objective 3

Objective 3 were to identify how agricultural educators' rank the importance of the current Missouri SAE criteria in relation to demographic data of agricultural educators in the state of Missouri in terms of years of teaching, location of teaching, department size, gender, number of students, and collegiate training.

Respondents ranked the nine Missouri SAE Criteria standards based upon their perceived value from one to nine in one being most and nine least important. Table 13 shows the distribution of ranking choices based upon districts. The distribution of choices within the table were ranked with scores closest to one, being the most important, and towards nine, being the least important. A graph of data can be seen in Appendix B.

Table 13

Distribution of Ranking Choices Based Upon Districts

Item	Districts						Total
	NW (n=48)	NE (n=56)	C (n=68)	SW (n=78)	SC (n=45)	SE (n=25)	
Supervised	2.64	2.48	2.77	2.66	2.71	2.80	2.29
Agricultural	3.20	3.01	3.57	3.09	3.73	3.04	2.80
Experience	2.60	2.42	1.92	2.66	2.08	2.20	1.98
Program	4.75	4.57	4.73	4.76	4.57	4.52	3.98
Instruction	4.52	5.32	4.48	4.43	4.33	4.52	3.94
Time	7.14	6.83	6.13	6.76	6.55	6.56	5.71
Economic Base	6.91	7.12	6.60	6.83	6.77	7.00	5.89
Evaluated	6.58	6.25	6.04	5.94	5.88	7.08	5.39
Recognition	6.58	6.07	6.20	6.64	4.71	7.20	5.34

Table 14 shows how each of the six districts ranked criteria based upon the median value of respondents choices. All six districts ranked Supervised Agricultural, and Experience, in a variety of orders, in the top three slots with Instruction and Program filling slots four and five, in various orders. Recognition, Evaluated, Economic Base, and Time finished out the ranking of the criteria in various orders.

Table 14 shows the comparison of ranking choices by district.

Table 14

Comparison of Ranking Choices By District

	Districts					
Item	**NW**	**NE**	**C**	**SW**	**SC**	**SE**
Experience	1	1	1	2	1	1
Supervised	2	2	2	1	2	2
Agricultural	3	3	3	3	3	3
Instruction	4	5	4	4	4	4
Program	5	4	5	5	5	5
Evaluated	6	7	6	6	7	8
Recognition	7	6	8	7	6	9
Economic Base	8	9	9	9	9	7
Time	9	8	7	8	8	6

Table 15 shows the distribution of ranking choices based upon department size. Graphs of the data can be seen in Appendix C.

Table 15

Distribution of Ranking Choices Based Upon Department Size

	Department Size			
Item	**1 Teacher (n=163)**	**2 Teachers (n=136)**	**3+ Teachers (n=15)**	**Total**
Supervised	2.85	2.49	2.93	2.76
Agricultural	3.23	3.44	3.26	3.31
Experience	2.35	2.30	2.80	2.48
Program	4.51	4.85	5.46	4.94
Instruction	4.49	4.83	4.53	4.61
Time	6.73	6.74	6.66	6.71
Economic Base	6.92	6.98	6.13	6.68
Evaluated	6.23	6.30	6.13	6.22
Recognition	6.55	6.49	6.93	6.65

Table 16 shows the distribution of ranking choices based upon department size. Graphs of the data can be seen in Appendix D.

Table 16

Distribution of Ranking Choices Based Upon Number of Years Teaching

	Number of Years Teaching			
Item	**0-9 Years (n=169)**	**10-19 Years (n=83)**	**20-29 Years (n=60)**	**30+ Years (n=5)**
Supervised	2.71	2.65	2.67	2.80
Agricultural	3.31	3.19	3.51	3.00
Experience	2.33	2.36	2.52	2.60
Program	4.67	4.86	4.60	4.60
Instruction	4.64	4.79	4.77	4.20
Time	6.82	6.59	6.65	6.40
Economic Base	7.28	6.49	6.42	8.00
Evaluated	6.13	6.33	6.40	6.20
Recognition	6.51	6.52	6.81	7.00

Tables 17 shows the individual ranking of criteria for each division based upon respondents' choices and the number of years they have been teaching.

Table 17

Ranking of SAE Criteria According to Number of Years Teaching

	Number of Years Teaching			
Item	**0-9 Years**	**10-19 Year**	**20-29 Years**	**30+ Years**
Experience	1	1	1	1
Supervised	2	2	2	2
Agricultural	3	3	3	3
Instruction	4	4	5	4
Program	5	5	4	5
Evaluated	6	6	6	6
Recognition	7	8	9	8
Economic Base	9	7	7	9
Time	8	9	8	7

Table 18 shows the comparison between female and male respondents choices and how they ranked the SAE criteria. Graphs of data can be seen in Appendix E.

Table 18

Distribution of Ranking Choices Based Upon Gender

	Gender	
Item	**Female (n=62)**	**Male (n=225)**
Supervised	2.645	2.667
Agricultural	3.306	3.151
Experience	2.065	2.418
Program	4.452	6.636
Instruction	4.613	4.538
Time	6.242	6.627
Economic Base	7.016	6.658
Evaluated	5.452	6.382
Recognition	5.919	6.502

Table 19 shows the ranking of criteria according to gender.

Table 19

Ranking of SAE Criteria According to Gender

	Gender	
Criteria	**Female**	**Male**
Experience	1	1
Supervised	2	2
Agricultural	3	3
Instruction	5	4
Program	4	8
Evaluated	6	5
Recognition	7	6
Economic Base	9	9
Time	8	7

Table 20 shows the distribution of respondents ranking choices based upon how many students they have in their program. Graphs of data can be seen in Appendix F.

Table 20

Distribution of Ranking Choices Based Upon Number of Students

	Number of Students in Programs								
Criteria	**1 to 25 (n=8)**	**26 to 50 (n=48)**	**51 to 75 (n=73)**	**76 to 100 (n=57)**	**101 to 125 (n=45)**	**126 to 150 (n=34)**	**151 to 175 (n=6)**	**176 to 250 (n=19)**	**250+ (n=23)**
Supervised	2.00	2.66	3.00	2.82	2.53	2.35	3.50	2.26	2.43
Agricultural	4.00	3.39	3.05	3.08	3.24	3.67	3.66	3.31	4.13
Experience	3.25	2.25	2.57	2.19	1.88	2.61	3.00	2.42	2.21
Program	4.75	4.62	4.74	4.73	4.55	4.47	4.50	4.52	5.47
Instruction	3.25	4.64	4.49	4.71	4.97	4.88	4.16	5.47	4.08
Time	7.25	7.18	6.38	6.77	6.55	6.94	7.50	6.31	6.65
Economic Base	8.37	6.97	6.93	6.40	7.08	6.97	6.33	7.10	7.00
Evaluated	5.75	6.18	6.42	6.29	6.48	5.73	6.00	6.42	6.17
Recognition	6.12	6.97	6.39	6.22	6.64	6.50	6.33	7.05	6.82

Table 21 shows the distribution of respondents ranking choices based upon how their collegiate training. Graphs of data can be seen in Appendix G.

Table 21

Distribution of Ranking Choices Based Upon Collegiate Training

	Collegiate Training					
Item	**CMSU (n=23)**	**C of O (n=5)**	**NWMSU (n=35)**	**SMSU (n=80)**	**UMC (n=142)**	**Other (n=38)**
Supervised	2.957	3.000	2.629	2.638	2.641	2.474
Agricultural	3.609	3.800	3.057	2.963	3.415	3.158
Experience	2.304	1.600	2.343	2.650	2.127	2.421
Program	4.652	5.000	4.371	4.988	4.430	4.842
Instruction	4.696	4.200	4.829	4.400	4.676	6.868
Time	6.652	7.800	6.686	6.838	6.310	7.079
Economic Base	7.130	8.600	6.457	7.025	6.540	5.816
Evaluated	6.043	5.400	6.857	6.263	6.021	6.474
Recognition	6.652	5.600	6.429	6.763	6.232	6.605

Table 22 show how respondents with various collegiate training ranked the nine SAE criteria.

Table 22

Ranking of Choices Based Upon Collegiate Training

	Collegiate Training					
Item	**CMSU**	**C of O**	**NWMSU**	**SMSU**	**UMC**	**Other**
Experience	1	1	1	2	1	1
Supervised	2	2	2	1	2	2
Agricultural	3	3	3	3	3	3
Instruction	5	4	5	4	5	4
Program	4	5	4	5	4	8
Evaluated	6	6	9	6	6	6
Recognition	8	7	6	7	7	7
Economic Base	9	9	7	9	9	5
Time	7	8	8	8	8	9

Findings Related to Objective 4

Objective 4 was to identify what components agricultural educators' deem as core or essential for having a viable SAE in relation to demographic data of agricultural educators in the state of Missouri. Specific characteristics investigated were: years of teaching, location of teaching, department size, gender, number of students, and collegiate training.

Respondents were asked to identify core/essential criteria, they felt were need for a SAE program. They were able to mark one to nine choices. Table 23 show how many times criteria were selected as core/essential in regards to district break down. A graph of data can be seen in Appendix B.

Table 23

Identification of Core/Essential Criteria Based Upon Districts

Item	Districts					
	NW (n=48)	**NE (n=56)**	**C (n=68)**	**SW (n=78)**	**SC (n=45)**	**SE (n=25)**
Supervised	39.00	49.00	52.00	67.00	38.00	19.00
Agricultural	31.00	45.00	43.00	67.00	30.00	18.00
Experience	38.00	42.00	58.00	61.00	27.00	23.00
Program	17.00	17.00	35.00	30.00	14.00	8.00
Instruction	25.00	29.00	37.00	44.00	27.00	10.00
Time	5.00	7.00	14.00	12.00	7.00	3.00
Economic Base	6.00	15.00	15.00	17.00	5.00	5.00
Evaluated	12.00	15.00	25.00	29.00	14.00	6.00
Recognition	18.00	17.00	32.00	25.00	15.00	8.00

Table 24 shows how many times respondents identified one of the Missouri SAE Criteria as a core/essential standard. Information is sorted by department size. A graph of data can be seen in Appendix C.

Table 24

Identification of Core/Essential Criteria Based Upon Department Size

	Number of Teachers		
Item	**1 Teacher (n=163)**	**2 Teachers (n=136)**	**3+ Teachers (N=15)**
Supervised	140.00	110.00	11.00
Agricultural	118.00	99.00	14.00
Experience	132.00	113.00	12.00
Program	58.00	48.00	4.00
Instruction	90.00	73.00	8.00
Time	26.00	18.00	3.00
Economic Base	36.00	24.00	2.00
Evaluated	55.00	40.00	4.00
Recognition	63.00	48.00	3.00

Table 25 shows how many times respondents identified one of the Missouri SAE Criteria as a core/essential standard. Information was sorted by the number of years respondents have been teaching. A graph of data can be seen in Appendix D.

Table 25

Identification of Core/Essential Criteria Based Upon Number of Years Teaching

	Years Teaching			
Item	**0-9 Years (n=169)**	**10-19 Years (n=83)**	**20-29 Years (n=60)**	**30+ Years (n=5)**
Supervised	73.00	32.00	24.00	4.00
Agricultural	61.00	33.00	21.00	3.00
Experience	71.00	33.00	23.00	2.00
Program	30.00	12.00	11.00	1.00
Instruction	49.00	18.00	16.00	4.00
Time	14.00	4.00	5.00	0.00
Economic Base	15.00	8.00	8.00	0.00
Evaluated	31.00	10.00	8.00	2.00
Recognition	30.00	17.00	8.00	2.00

Table 26 shows how many times respondents identified one of the Missouri SAE Criteria as a core/essential standard. Information is sorted based upon gender of respondents. A graph of data can be seen in Appendix E.

Table 26

Identification of Core/Essential Criteria Based Upon Gender

	Gender	
Item	**Female (n=62)**	**Male (n=225)**
Supervised	48.00	182.00
Agricultural	41.00	165.00
Experience	50.00	179.00
Program	19.00	80.00
Instruction	31.00	119.00
Time	10.00	33.00
Economic Base	12.00	46.00
Evaluated	23.00	65.00
Recognition	24.00	77.00

Table 27 shows how many times respondents identified one of the Missouri SAE Criteria as a core/essential standard. Information is sorted by how many students respondents have enrolled in their program. A graph of data can be seen in Appendix F.

Table 27

Identification of Core/Essential Criteria Based Upon Number of Students

	Number of Students/Program								
Item	**1 to 25 (n=8)**	**26 to 50 (n=48)**	**51 to 75 (n=73)**	**76 to 100 (n=57)**	**101 to 125 (n=45)**	**126 to 150 (n=34)**	**151 to 175 (n=6)**	**176 to 250 (n=19)**	**250+ (n=23)**
Supervised	7.00	43.00	62.00	47.00	36.00	30.00	5.00	15.00	16.00
Agricultural	5.00	30.00	57.00	44.00	34.00	25.00	5.00	14.00	16.00
Experience	6.00	39.00	60.00	48.00	39.00	26.00	6.00	13.00	19.00
Program	1.00	16.00	28.00	19.00	14.00	15.00	2.00	9.00	6.00
Instruction	6.00	23.00	39.00	31.00	22.00	24.00	3.00	11.00	11.00
Time	0.00	4.00	14.00	9.00	5.00	5.00	1.00	4.00	5.00
Economic Base	1.00	8.00	20.00	13.00	6.00	7.00	2.00	2.00	2.00
Evaluated	2.00	18.00	28.00	15.00	8.00	12.00	3.00	7.00	7.00
Recognition	1.00	18.00	29.00	26.00	10.00	13.00	5.00	8.00	4.00

Table 28 show how many times respondents identified one of the Missouri SAE Criteria as a core/essential standard. Information is sorted by the collegiate training of respondents. A graph of data can be seen in Appendix G.

Table 28

Identification of Core/Essential Criteria Based Upon Collegiate Training

	Collegiate Training					
Item	**CMSU (n=23)**	**C of O (n=5)**	**NWMSU (n=35)**	**SMSU (n=80)**	**UMC (n=142)**	**Other (n=38)**
Supervised	20.00	4.00	24.00	70.00	116.00	32.00
Agricultural	16.00	4.00	22.00	69.00	9.00	26.00
Experience	22.00	4.00	27.00	66.00	114.00	28.00
Program	11.00	2.00	13.00	24.00	48.00	12.00
Instruction	10.00	3.00	18.00	47.00	75.00	21.00
Time	3.00	0.00	5.00	15.00	21.00	4.00
Economic Base	6.00	0.00	4.00	18.00	32.00	3.00
Evaluated	12.00	3.00	8.00	26.00	37.00	15.00
Recognition	13.00	3.00	11.00	28.00	48.00	12.00

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

The purpose of this chapter is to provide a summary of the research problem and its environment, the design, and conduct of the study, and the major findings. Also presented in this chapter are the conclusions and recommendations, which were based upon analysis and brief summation of data collection and upon observation of the researcher as a result of the conducted study.

Purpose of the Study

The purpose of the study was to assess the perceptions of secondary agricultural educators in the state of Missouri concerning the current criteria, definitions and descriptions of supervised agricultural experience (SAE) programs.

Objectives

The objectives were developed to accomplish this purpose:

1. Assess the perceptions of agricultural educators in Missouri regarding the current types of SAEs as defined by National FFA.
2. Assess the perceptions of agricultural educators in Missouri regarding the Missouri Agricultural Education Supervised Agricultural Experience Program criteria.

3. Assess the perceptions of agricultural educators in Missouri regarding the ranking of the importance of the current Missouri SAE criteria.
4. Assess the perceptions of agricultural educators in Missouri regarding core or essential criteria deemed necessary for a viable SAE.
5. Identify selected demographic characteristics of agricultural educators by divisions of years of teaching, location of teaching, department size, gender, number of students, and collegiate training.
6. Assess relationships between teachers' opinions about SAE's and their selected demographic characteristics.

Significance of Study

Results, conclusions, and recommendations of this study will be useful to the Missouri Department of Elementary and Secondary Education-Agricultural Education Division to determine future recommendations, pose questions, and change the criteria or requirements for Supervised Agricultural Experience Programs.

Study Population

The target population was secondary agricultural education teachers in Missouri. The population consisted of 401 secondary agricultural teachers (N=401). Purposive sampling, a form of non-probabilistic sampling was used. The study sample consisted of 320 out of 383 (83.6%) agricultural educators was attended the Summer 2005 District meetings during the Missouri Vocational Agricultural Teachers Association Conference.

Instrumentation

The instrument used in the study was a researcher-designed questionnaire constructed to meet the purpose of the study and provide answers to the objectives of this study. The booklet questionnaire (Appendix A) used to collect data for this study consisted of five sections. The first two sections contained thirteen five-point Likert-type questions so subjects could determine their level of agreeability for National and Missouri SAE criteria. The next two sections contained ranking questions, in which, subjects were able to rank from one to nine, their order of importance of the Missouri SAE Criteria. In the next section subjects were able to identify the core/essential Missouri SAE Criteria. The final section of the instrument contained six demographic characteristic questions for the respondents to answer.

Data Collection

Data were collected during the summer of 2005 at all six district agricultural teacher meetings, during the Missouri Vocational Agricultural Teachers Association Conference. Prior to the district meetings, an e-mail, phone call, or face-to-face conservation was conducted with the district supervisors, MVATA executive committee and Missouri state staff. Collection was made with the assistance of district supervisors and district presidents. All secondary agricultural educators present at the meetings were given a questionnaire. Response rate, by District, was as follows: 48 out of 61 in Northwest, 56 out of 68 in Northeast, 68 out of 68 in Central, 78 out of 99 in Southwest, 45 out of 55 in South Central, and 25 out of 32 in Southeast. Overall, 320 out of 383 responded, giving an 83.6% response rate. An incentive drawing for a gift certificate was

conducted to entice respondents to fill out and turn in the questionnaire and then to also thank them for their time to participate in the study.

Analysis of Data

In the first stage of data analysis, data were organized into tables based upon summated rating scales from the Likert-type scales, ranking factors, and core/essential choices. All data, once complied, were sorted based upon the demographic factors. From this point, the measures of central tendency were used to determine the points of distribution, which represents the average or typical values. The frequency of values for the first three sections were also determined to see if there was a skew in the mean caused by values chosen at opposite ends of the scale, and none was found.

All data sorted by demographic factors were analyzed and placed into charts and tables to determine if any correlation or extreme differences existed among questionnaire answers and demographic data. Data were analyzed using MS Excel for Windows.

Limitations of Study

Since this study is a descriptive survey research utilizing accidental sampling, a form of non-probabilistic sampling, it is regarded as the weakest of all sampling procedures. There is no way of estimating the error introduced by the accidental sampling procedures.

Major Findings of the Study

Perceptions Regarding National SAE Types

Respondents to the study included 320 participants who attended their 2005 Summer District meeting during the Missouri Vocational Agricultural Teachers Association Conference. Data were sorted based upon demographic data of respondents. Values were entered and the average for each category was determined and then used to determine an overall average. Regarding all demographic characteristics, little difference was seen between each characteristic.

The first demographic characteristic was the district of respondents. The State of Missouri is divided into six districts: Northwest, Northeast, Central, Southwest, South Central, and Southeast. In regards to question 1: I encourage students in Missouri to have exploratory SAE, the mean was 3.46; question 2: I encourage students in Missouri to have a research/experimentation and analysis SAE, was 3.11; question 3: I encourage students in Missouri to have an ownership/entrepreneurship SAE, was 4.40; and question 4: I encourage students in Missouri to have a placement SAE, was 4.40.

The second demographic characteristic was the department size of respondents. Respondents were asked to classify themselves into one of three categories: A (1 teacher), B (2 teacher), or C (3 + teachers). In regards to question 1: I encourage students in Missouri to have exploratory SAE, the mean was 3.33; question 2: I encourage students in Missouri to have a research/experimentation and analysis SAE, was 3.10; question 3: I encourage students in Missouri to have an ownership/entrepreneurship SAE, was 4.34; and question 4: I encourage students in Missouri to have a placement SAE, was 4.29.

The third demographic characteristic was the number of years a respondent has been teaching. Respondents were asked to classify themselves into one of seven categories: 0-4, 5-9, 10-14, 15-19, 20-24, 25-29, or 30+ years. In regards to question 1: I encourage students in Missouri to have exploratory SAE, the mean was 3.27; question 2: I encourage students in Missouri to have a research/experimentation and analysis SAE, was 3.01; question 3: I encourage students in Missouri to have an ownership/entrepreneurship SAE, was 4.33; and question 4: I encourage students in Missouri to have a placement SAE, was 4.34.

The fourth demographic characteristic was gender of respondents. Respondents were asked to classify themselves into one of two categories: female or male. In regards to question 1: I encourage students in Missouri to have exploratory SAE, the mean was 3.27; question 2: I encourage students in Missouri to have a research/experimentation and analysis SAE, was 3.02; question 3: I encourage students in Missouri to have an ownership/entrepreneurship SAE, was 4.31; and question 4: I encourage students in Missouri to have a placement SAE, was 4.31.

The fifth demographic characteristic was the number of students a respondent has in their program. Respondents were asked to classify themselves into one of ten categories: 1-25, 26-50, 51-75, 76-100, 101-125, 126-150, 151-175, 176-200, 201-250, 250+ students. In regards to question 1: I encourage students in Missouri to have exploratory SAE, the mean was 3.27; question 2: I encourage students in Missouri to have a research/experimentation and analysis SAE, was 3.01; question 3: I encourage students in Missouri to have an ownership/entrepreneurship SAE, was 4.33; and question 4: I encourage students in Missouri to have a placement SAE, was 4.34.

The sixth demographic characteristic was the collegiate training of respondents. Respondents were asked to classify themselves into one of six categories: Central Missouri State University, College of the Ozarks, Northwest Missouri State University, Southwest Missouri State University, University of Missouri-Columbia, or Other College/University. In regards to question 1: I encourage students in Missouri to have exploratory SAE, the mean was 3.29; question 2: I encourage students in Missouri to have a research/experimentation and analysis SAE, was 3.06; question 3: I encourage students in Missouri to have an ownership/entrepreneurship SAE, was 4.30; and question 4: I encourage students in Missouri to have a placement SAE, was 4.27.

Based upon all the areas of demographic characteristics, little differences were seen in respondents' answers. On average, respondents were neutral, with a value around three, in regards to questions 1 and 2 and were between neutral and strongly agree, with a value around four, in regards to questions 3 and 4.

Perceptions Regarding Missouri SAE Criteria

Data were sorted based upon demographic characteristics of respondents, values were entered and the average for each category was determined and then used to determine an overall average. For all of the various areas within each demographic, little differences were seen between the various categories.

In regard to question 1: To what importance do you believe that a project should be supervised, the mean was 4.54; question 2: To what importance do you believe that a project should be agricultural related, was 4.28; question 3: To what importance do you believe that a project should include hand-on practical opportunities, was 4.54; question

4: To what importance do you believe that a project should be planned which includes record keeping and expansion, was 4.54; question 5: To what importance do you believe that a project should be related to instruction, was 4.06; question 6: To what importance do you believe that an experience should be conducted outside of scheduled class time, was 4.28; question 7: To what importance do you believe that a project should make a contribution to family living now or in the future, was 3.85; question 8: To what importance do you believe that a project should be evaluated, was 4.20; and question 9: To what importance do you believe that a project should be recognized through the FFA awards program, was 4.40.

The second demographic characteristic was the department size of respondents. Respondents were asked to classify themselves into one of three categories: A (1 teacher), B (2 teacher), or C (3 + teachers). In regards to question 1: To what importance do you believe that a project should be supervised, the average was 4.58; question 2: To what importance do you believe that a project should be agricultural related, was 4.32; question 3: To what importance do you believe that a project should include hand-on practical opportunities, was 4.62; question 4: To what importance do you believe that a project should be planned which includes record keeping and expansion, was 4.56; question 5: To what importance do you believe that a project should be related to instruction, was 4.09; question 6: To what importance do you believe that an experience should be conducted outside of scheduled class time, was 4.28; question 7: To what importance do you believe that a project should make a contribution to family living now or in the future, was 3.92; question 8: To what importance do you believe that a project

should be evaluated, was 4.22; and question 9: To what importance do you believe that a project should be recognized through the FFA awards program, was 4.42.

The third demographic characteristic was the number of years a respondent has been teaching. Respondents were asked to classify themselves into one of seven categories: 0-4, 5-9, 10-14, 15-19, 20-24, 25-29, or 30+ years. In regards to question 1: To what importance do you believe that a project should be supervised, the mean was 4.57; question 2: To what importance do you believe that a project should be agricultural related, was 4.20; question 3: To what importance do you believe that a project should include hand-on practical opportunities, was 4.57; question 4: To what importance do you believe that a project should be planned which includes record keeping and expansion, was 4.56; question 5: To what importance do you believe that a project should be related to instruction, was 4.08; question 6: To what importance do you believe that an experience should be conducted outside of scheduled class time, was 4.28; question 7: To what importance do you believe that a project should make a contribution to family living now or in the future, was 3.88; question 8: To what importance do you believe that a project should be evaluated, was 4.20; and question 9: To what importance do you believe that a project should be recognized through the FFA awards program, was 4.40.

The fourth demographic characteristic was gender of a respondent. Respondents were asked to classify themselves into one of two categories: female or male. In regards to question 1: To what importance do you believe that a project should be supervised, the mean was 4.40; question 2: To what importance do you believe that a project should be agricultural related, was 4.15; question 3: To what importance do you believe that a project should include hand-on practical opportunities, was 4.46; question 4: To what

importance do you believe that a project should be planned which includes record keeping and expansion, was 4.46; question 5: To what importance do you believe that a project should be related to instruction, was 3.91; question 6: To what importance do you believe that an experience should be conducted outside of scheduled class time, was 4.17; question 7: To what importance do you believe that a project should make a contribution to family living now or in the future, was 3.69; question 8: To what importance do you believe that a project should be evaluated, was 4.09; and question 9: To what importance do you believe that a project should be recognized through the FFA awards program, was 4.30.

The fifth demographic characteristic was the number of students a respondent has in their program. Respondents were asked to classify themselves into one of ten categories: 1-25, 26-50, 51-75, 76-100, 101-125, 126-150, 151-175, 176-200, 201-250, 250+ students. In regards to question 1: To what importance do you believe that a project should be supervised, the mean was 4.56; question 2: To what importance do you believe that a project should be agricultural related, was 4.26; question 3: To what importance do you believe that a project should include hand-on practical opportunities, was 4.60; question 4: To what importance do you believe that a project should be planned which includes record keeping and expansion, was 4.60; question 5: To what importance do you believe that a project should be related to instruction, was 4.15; question 6: To what importance do you believe that an experience should be conducted outside of scheduled class time, was 4.31,; question 7: To what importance do you believe that a project should make a contribution to family living now or in the future, was 3.87; question 8: To what importance do you believe that a project should be evaluated, was 4.28; and

question 9: To what importance do you believe that a project should be recognized through the FFA awards program, was 4.50.

The sixth demographic characteristic was the collegiate training of respondents. Respondents were asked to classify themselves into one of six categories: Central Missouri State University, College of the Ozarks, Northwest Missouri State University, Southwest Missouri State University, University of Missouri-Columbia, or Other College/University. In regards to question 1: To what importance do you believe that a project should be supervised, the mean was 4.48; question 2: To what importance do you believe that a project should be agricultural related, was 4.15; question 3: To what importance do you believe that a project should include hand-on practical opportunities, was 4.46; question 4: To what importance do you believe that a project should be planned which includes record keeping and expansion, was 4.55; question 5: To what importance do you believe that a project should be related to instruction, was 4.00; question 6: To what importance do you believe that an experience should be conducted outside of scheduled class time, was 4.29; question 7: To what importance do you believe that a project should make a contribution to family living now or in the future, was 3.95; question 8: To what importance do you believe that a project should be evaluated, was 4.25; and question 9: To what importance do you believe that a project should be recognized through the FFA awards program, was 4.39.

Based upon all the areas of demographic data, little differences were seen in respondents' answers. On average, respondents valued questions 1(Supervised), 2 (Agricultural), 3 (Experience), 4 (Program) and 9 (Recognition) more towards the value

of very important, question 5 (Instruction), 6 (Time), and 8 (Evaluation) were valued as important, and question 7 (Economic Base) was more towards neutral.

Ranking of Missouri SAE Criteria

Data were sorted based upon demographic characteristics of respondents, ranking of criteria were entered and sorted to determine what Missouri criteria respondents deem important for SAEs. The rankings of criteria based upon demographic characteristics, only slightly varied.

The first demographic characteristic was the district of respondents. The State of Missouri is divided into six districts: Northwest, Northeast, Central, Southwest, South Central, and Southeast. Respondents ranked criteria, based upon what they deemed most important or felt was essential to a SAE, in the following order: Experience, Supervised, Agriculture, Instruction, Program, Recognition, Evaluated, Time, and Economic Base.

The second demographic characteristic was the department size of respondents. Respondents were asked to classify themselves into one of three categories: A (1 teacher), B (2 teacher), or C (3 + teachers). Respondents ranked criteria, based upon what they deemed most important or felt was essential to a SAE, in the following order: Experience, Supervised, Agriculture, Instruction, Program, Evaluated, Recognition, Economic Base, and Time.

The third demographic characteristic was the number of years a respondent has been teaching. Respondents were asked to classify themselves into one of seven categories: 0-4, 5-9, 10-14, 15-19, 20-24, 25-29, or 30+ years. Respondents ranked criteria, based upon what they deemed most important or felt was essential to a SAE, in

the following order: Experience, Supervised, Agriculture, Instruction, Program, Evaluated, Recognition, Time and Economic Base.

The fourth demographic characteristic was gender of respondents. Respondents were asked to classify themselves into one of two categories: female or male. Respondents ranked criteria, based upon what they deemed most important or felt was essential to a SAE, in the following order: Experience, Supervised, Agriculture, Instruction, Program, Evaluated, Recognition, Time and Economic Base.

The fifth demographic characteristic was the number of students a respondent has in their program. Respondents were asked to classify themselves into one of ten categories: 1-25, 26-50, 51-75, 76-100, 101-125, 126-150, 151-175, 176-200, 201-250, 250+ students. Respondents ranked criteria, based upon what they deemed most important or felt was essential to a SAE, in the following order: Experience, Supervised, Agriculture, Instruction, Program, Recognition, Evaluated, Time and Economic Base.

The sixth demographic characteristic was the collegiate training of respondents. Respondents were asked to classify themselves into one of six categories: Central Missouri State University, College of the Ozarks, Northwest Missouri State University, Southwest Missouri State University, University of Missouri-Columbia, or Other College/University. Respondents ranked criteria, based upon what they deemed most important or felt was essential to a SAE, in the following order: Experience, Supervised, Agriculture, Program, Instruction, Evaluated, Recognition, Time and Economic Base.

Based upon all the areas of demographic characteristics, little differences were seen in respondents' answers. All demographic areas, based upon average of each characteristic, ranked Experience, Supervised, and Agriculture, as the three most essential

criteria for a SAE. Instruction and Program were classified as the fourth and fifth most essential criteria. All demographic areas classified instruction more important than program, except when data were sorted by collegiate training. Recognition and evaluated changed back and forth, depending on demographic characteristic, as the next most essential criteria, to fill the sixth and seventh ranking slots, and economic base and time finished out the ranking of the criteria in various orders.

Core/Essential SAE Criteria

Data were sorted based upon demographic characteristics of respondents, values were entered and then added to determine the frequency of the number of times respondents chose each criteria that they deemed essential for a SAE. For all the demographic characteristics, little difference was seen between the various categories.

All demographic characteristics selected the criteria of Supervised, Experience, and Agricultural and the three core/essential areas needed for a SAE. The respondents selected Instruction, Program, Evaluated and Recognition as the next most important areas needed for a viable SAE. These criteria were selected in a variety of orders by each demographic characteristic. All characteristics selected Economic Base and Time and the lease essential areas need for a SAE.

Conclusions

Conclusions were determined based upon major findings from the data collected and analyzed during the research of this study.

1. Respondents are encouraged students to develop SAE's that focus on ownership/entrepreneurship and placement compared to those that focused on exploration and research/experimentation and analysis.
2. Respondents considered each of the Missouri SAE criteria as important; however, they placed less value on criteria that state the project should contribute to family living now and in the future.
3. Supervised, Agricultural, and Experience were classified as the most important criteria needed in a SAE program.
4. Respondents indicated that less emphasis should be given to Time and Economic Base and more should be give to Evaluation and Recognition.
5. Demographic characteristics of gender, years teaching, location of teaching, number of students, and department size, do not influence teacher's perceptions about SAE criteria.

Recommendations/Implications

The ensuing recommendations were based on the results, inferences, and insight in conducting the study.

1. Students who develop exploratory or research/experimentation and analysis SAEs are unable to receive recognition because the current Missouri criteria do not satisfy these types.
2. Even though teachers agree that all criteria are important, some criteria contradict each other.
3. It was apparent as a result of the findings that the current criteria are supportive of the overall foundation of a SAE, but some revisions need to be made.
4. Even though all teachers agree about the ranking and importance of the criteria, some were classified more important than others, so those need to be given more emphasis or examination.
5. The Joint State Staff in Agricultural Education needs to take the recommendations and information found in this study to work on revising the current criteria in terms of their definitions, content and ranking.
6. In order to have better alignment and representation to the National SAE types, the current criteria need to be modified.
7. The results reflect teachers' attitudes and willingness to utilize and support "traditional" SAEs.

Recommendations for Further Research

1. Research should be conducted to determine criteria modifications so that all criteria satisfy the needs to teachers and students.
2. Criteria for SAEs in various states should be compared.
3. Additional research should be conducted to determine if the current criteria are satisfactorily meeting the needs of agricultural students in Missouri. Research that is based around students' perceptions will provide a well-rounded view of the current criteria.
4. It would be beneficial to specifically examine criteria individually to determine how they impact selection and approval of students' SAEs.
5. Research should be conducted to see if current areas of recognition and record keeping are appropriate for exploratory, experimental, and analysis types of SAEs.

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APPENDIXES

APPENDIX A

QUESTIONNAIRE

Perceptions of Agricultural Education Instructors Regarding Supervised Agricultural Experience Program Criteria

Missouri Vocational Agricultural Teachers Associations

Dear Missouri Agricultural Educators:

The vision in Missouri is for all students enrolled in a secondary agriculture program to develop a Supervised Agricultural Experience Program that is a planned agricultural activity, supporting skill and competency development, career success, and application of agriculture and academic skills. This survey is designed to investigate the perceptions of agricultural education teachers in the State of Missouri concerning the current definitions and descriptions of Supervised Agricultural Experience Program Criterion defined in the handbook. We appreciate your involvement in this study.

Terry Heiman

Directions: On page two are descriptions of the current National FFA basic SAE types and Missouri Supervised Agricultural Experience Program Criterion. Before beginning the questionnaire, please read over this page and if needed refer back to it while answering the questionnaire.

National FFA-Four Basic Types of SAE

As defined on www.ffa.org, National FFA defines the following as the four basic types of SAE Programs.

1. **Exploratory-**Learn about the 'big picture' of agriculture and its many related careers.
2. **Research/Experimentation and Analysis-**Conduct research or analyze information to discover new knowledge.
3. **Ownership/Entrepreneurship-**Plan and operate an agriculture-related business.
4. **Placement-**Work for someone else either for pay or for the experience.

Missouri Supervised Agricultural Experience Program Criterion

As defined in the Program Planning Handbook, the SAE program should consist of one or more projects that meet the following criteria:

1. **SUPERVISED** - Does the project plan include supervision by the teacher, parent (guardian), and/or employer?
2. **AGRICULTURAL** - Is the project in an area related to agriculture, food, fiber and natural resources?
3. **EXPERIENCE** - Does the planned experience include hands-on, practical opportunities for students?
4. **PROGRAM** - Is there a planned course of action including record keeping and expansion?
5. **INSTRUCTION** - Will related instruction be provided?
6. **TIME** - Will a portion of the planned experience be conducted outside of scheduled class time?
7. **ECONOMIC BASE** - Does the activity have the potential to make a contribution to family living now or in the future and will it be profitable?
8. **EVALUATED** - Is there a planned evaluation, summary, and incorporated grade given?
9. **RECOGNITION** - Does the project have the potential to be recognized through the FFA awards program?

National FFA SAE Types

Instructions: Please read the following questions concerning the four basic types of defined SAE's and response to each statement by circling your response.

	Agreement				
	Strongly Disagree		Neutral		Strongly Agree
1. I encourage students in Missouri to have an exploratory SAE?	1	2	3	4	5
2. I encourage students in Missouri to have a research/experimentation and analysis SAE?	1	2	3	4	5
3. I encourage students in Missouri to have an ownership/entrepreneurship SAE?					
4. I encourage students in Missouri to have a placement SAE?	1	2	3	4	5
	1	2	3	4	5

Missouri SAE Criterion

Instructions: Please read the following questions concerning the nine criterion of SAE's and response to each statement by circling your response.

	Importance				
	Not Important				Very Important
1. To what importance do you believe that a project should be supervised?	1	2	3	4	5
2. To what importance do you believe that a project should be agricultural related?	1	2	3	4	5
3. To what importance do you believe that a project should include hands-on practical opportunities?	1	2	3	4	5
4. To what importance do you believe that a project should be planned which includes record keeping and expansion?	1	2	3	4	5
5. To what importance do you believe that a project should be related to instruction?	1	2	3	4	5
6. To what importance do you believe that an experience should be conducted outside of scheduled class time?	1	2	3	4	5
7. To what importance do you believe that a project should make a contribution to family living now or in the future?	1	2	3	4	5
8. To what importance do you believe that a project should be evaluated?	1	2	3	4	5
9. To what importance do you believe that a project should be recognized through the FFA awards program?	1	2	3	4	5

Missouri SAE Criterion Ranking

Instructions: Please rank the following criterion from 1 to 9 by placing a 1on the line next to the most important and 9 next to the least.

A. Supervised _____

B. Agricultural _____

C. Experience _____

D. Program _____

E. Instruction _____

F. Time _____

G. Economic Base _____

H. Evaluated _____

I. Recognition _____

Sample:

A. Supervised ___

B. Agricultural ___

C. Experience ___

D. Program ___

E. Instruction ___

F. Time ___

G. Economic Base ___

H. Evaluated ___

I. Recognition ___

Missouri SAE Criterion Core/Essentials

Instructions: Please place an 'X' on the line next to the criterion you feel are core or essential criteria for having a viable SAE Program.

A. Supervised _____

B. Agricultural _____

C. Experience _____

D. Program _____

E. Instruction _____

F. Time _____

G. Economic Base _____

H. Evaluated _____

I. Recognition _____

Sample:

A. Supervised ___

B. Agricultural ___

C. Experience ___

D. Program ___

E. Instruction ___

F. Time ___

G. Economic Base ___

H. Evaluated ___

I. Recognition ___

Demographic Information

Instructions: Please circle the answer that corresponds to your information.

1. I have been teaching _____ years:
   a. 0-4 b. 5-9
   c. 10-14 d. 15-19
   e. 20-24 f. 25-30
   g. 30 +

2. I am located in Area: _____

3. I teach in a _____ teacher department:
   a. Single b. Two
   c. Three +

4. I am:
   a. Female b. Male

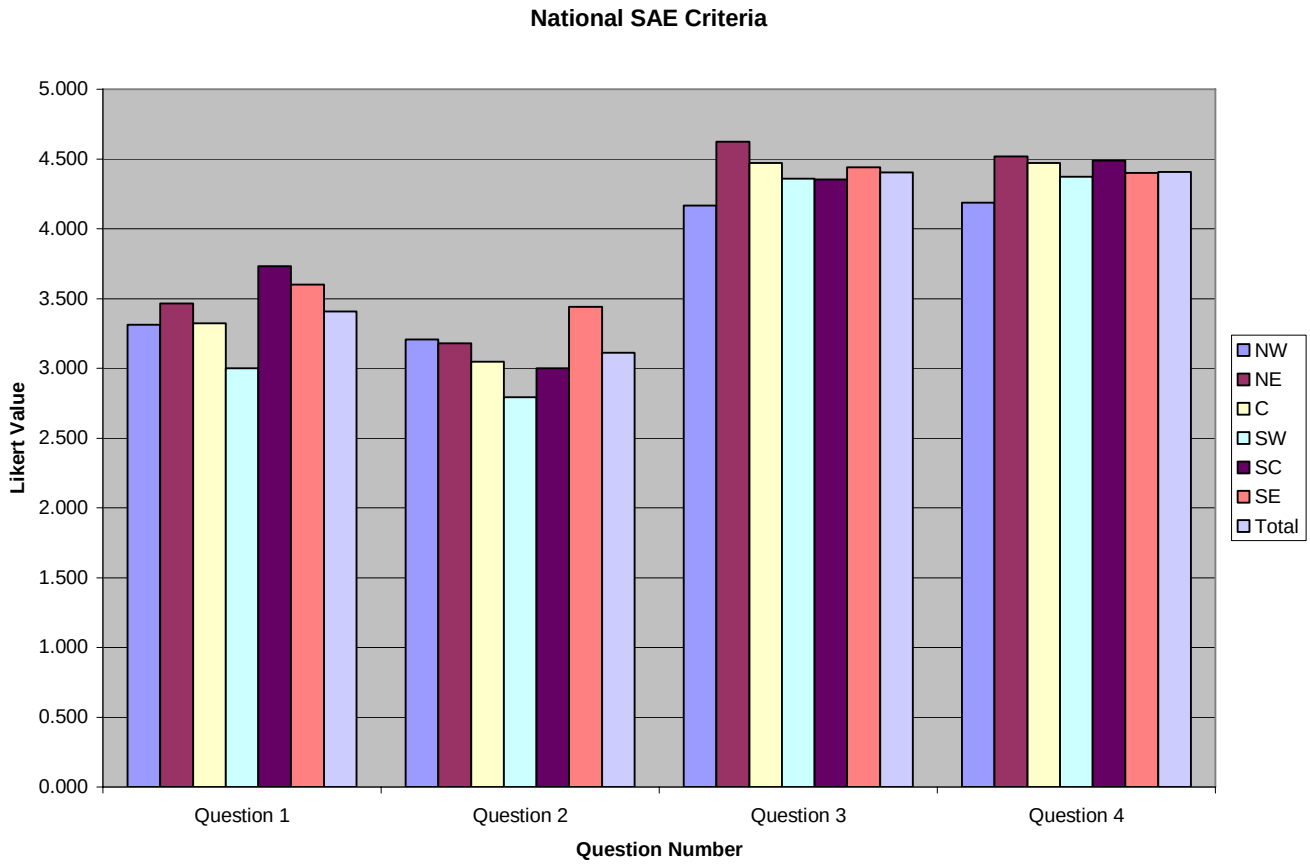
5. My program contains _____ number of students:
   a. 1-25 b. 26-50
   c. 51-75 d. 76-100
   e. 101-125 f. 126-150
   g. 151-175 h. 176-200
   i. 201-250 j. 250+

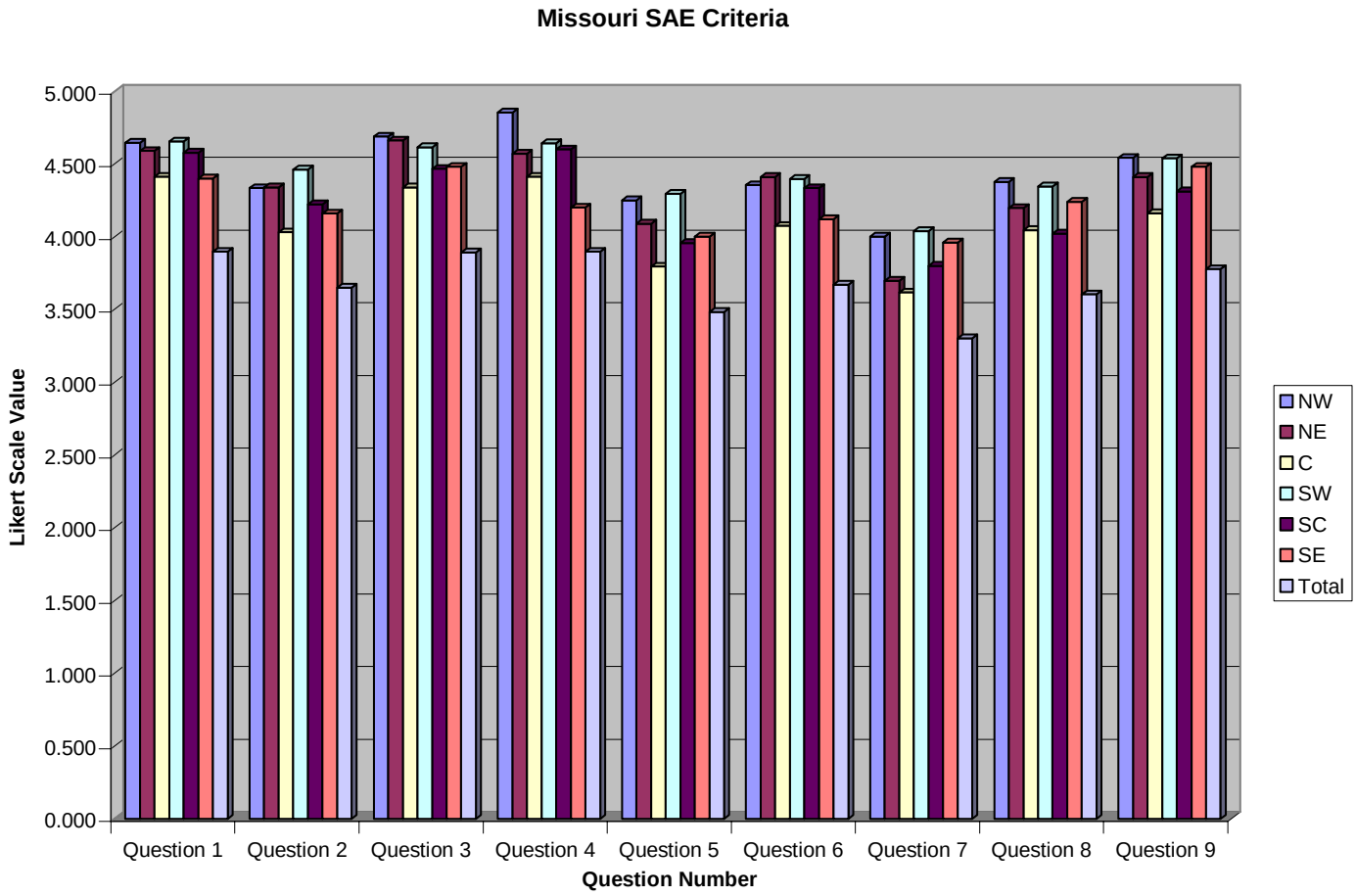
6. I received my teacher training from:
   a. Central Missouri State University
   b. College of the Ozarks
   c. Northwest Missouri State University
   d. Southwest Missouri State University
   e. University of Missouri-Columbia
   f. Other: _____

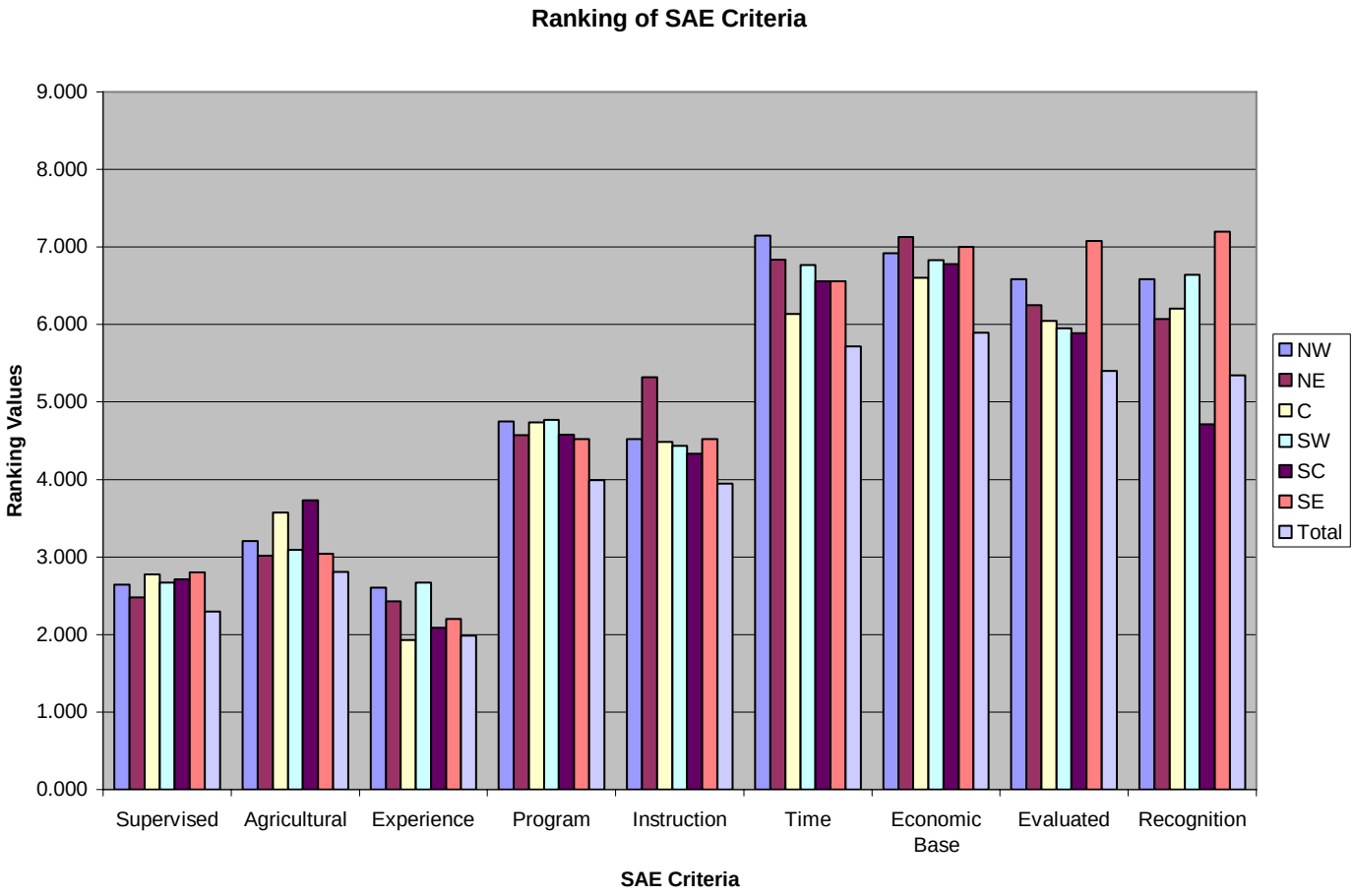
APPENDIX B

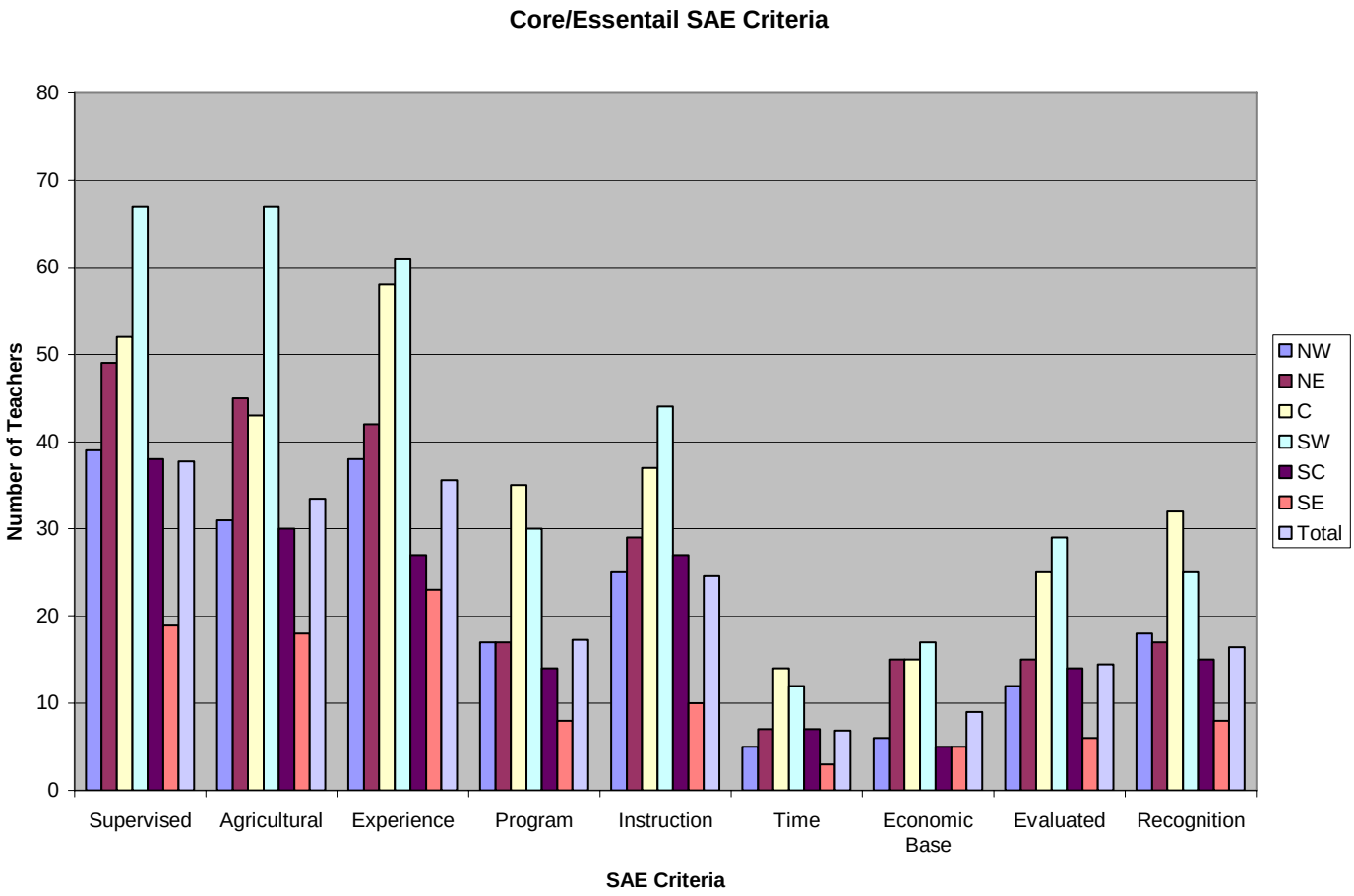
RESEARCH COMPILATION CHARTS

SORTED BY DISTRICTS


National SAE Criteria
5.000
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Likert Value
Question 1
Question 2
Question 3
Question 4
Question Number
NW
NE
C
SW
SC
SE
Total


Missouri SAE Criteria
Likert Scale Value
5.000
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Question 1
Question 2
Question 3
Question 4
Question 5
Question 6
Question 7
Question 8
Question 9
Question Number
NW
NE
C
SW
SC
SE
Total

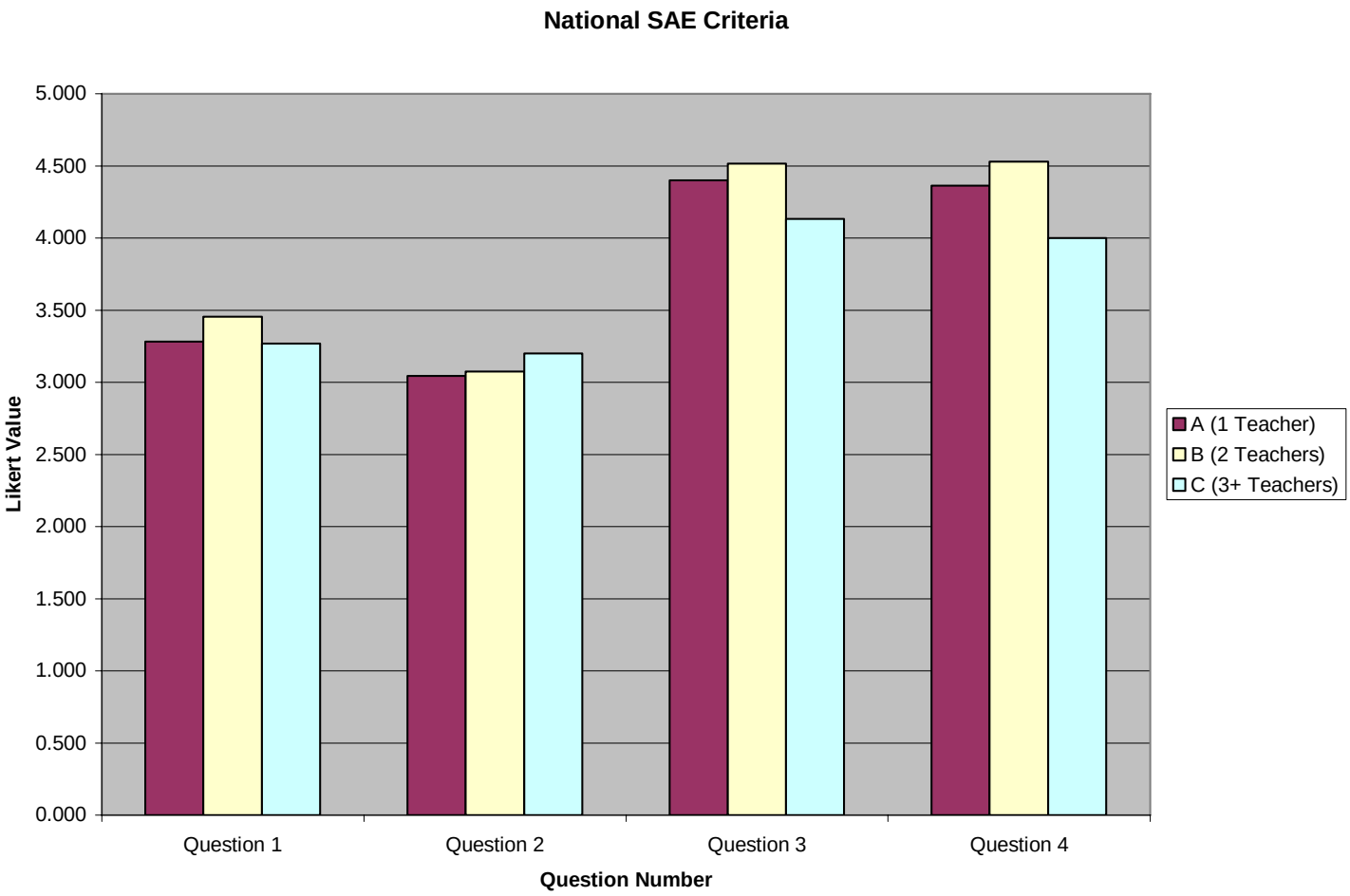

Ranking of SAE Criteria
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
Ranking Values
Supervised
Agricultural
Experience
Program
Instruction
Time
Economic Base
Evaluated
Recognition
SAE Criteria
NW
NE
C
SW
SC
SE
Total

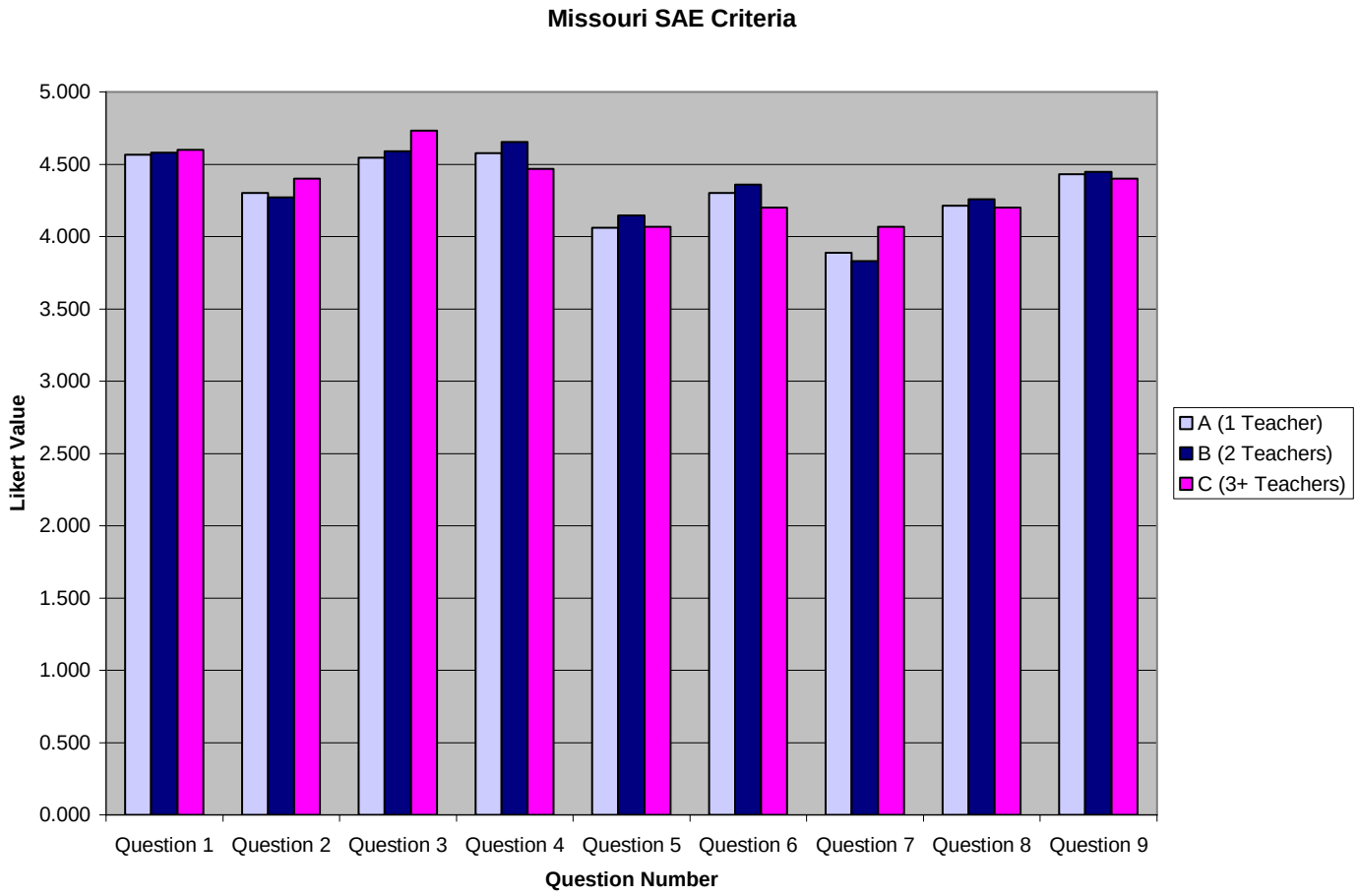

Core/Essentail SAE Criteria
Number of Teachers
0
10
20
30
40
50
60
70
80
Supervised
Agricultural
Experience
Program
Instruction
Time
Economic Base
Evaluated
Recognition
SAE Criteria
NW
NE
C
SW
SC
SE
Total

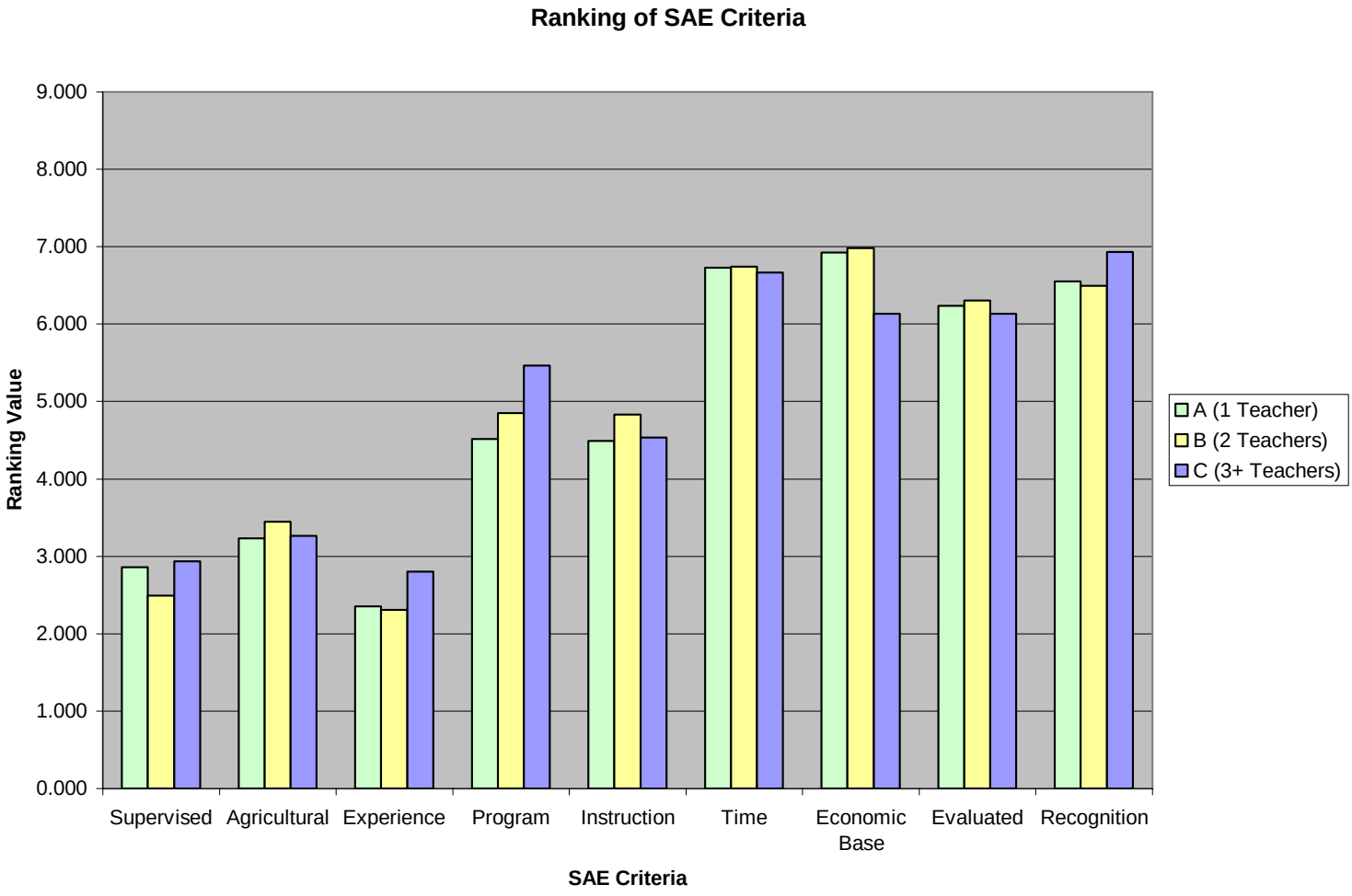
APPENDIX C

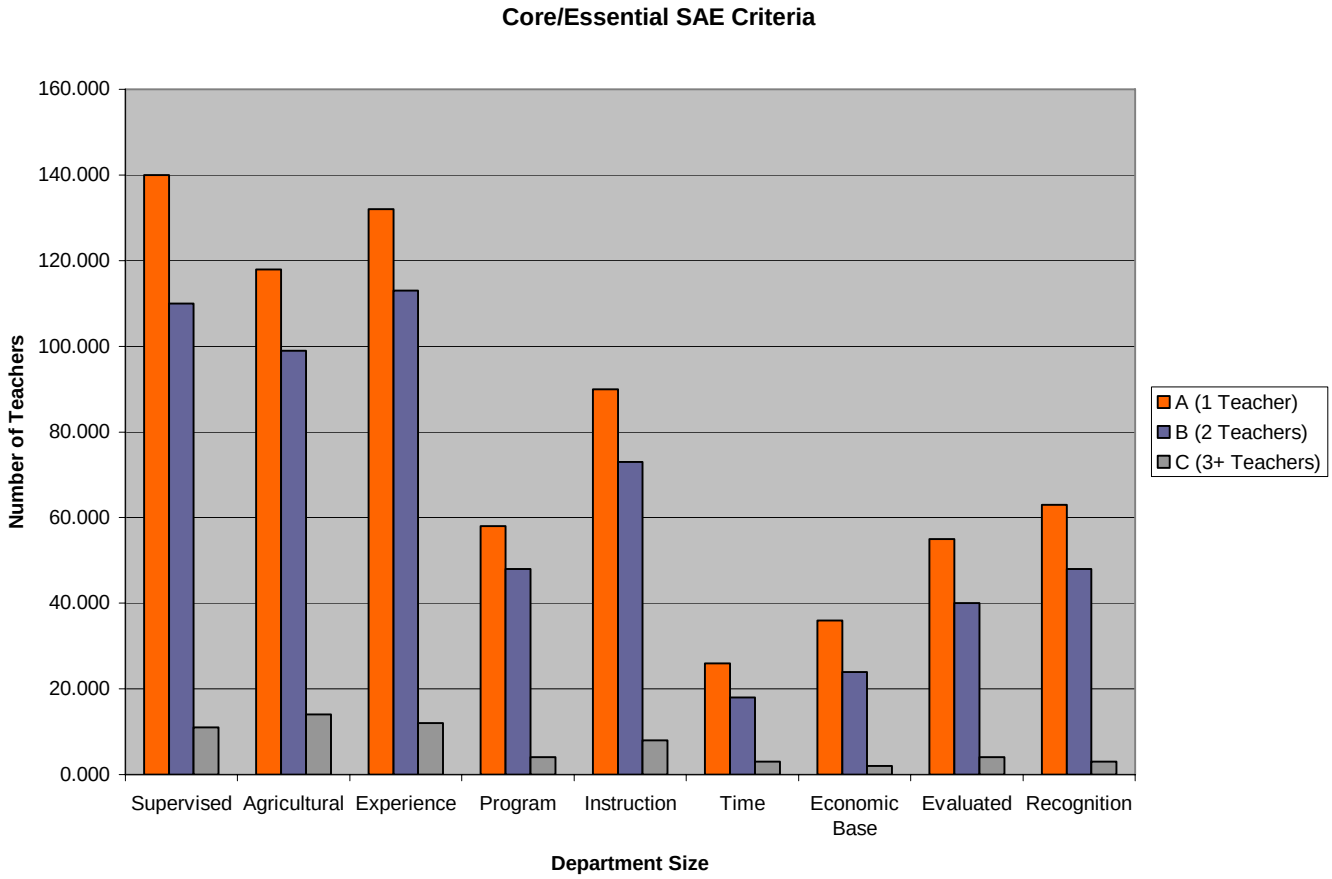
RESEARCH COMPILATION CHARTS

SORTED BY DEPARTMENT SIZE


National SAE Criteria
5.000
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Likert Value
Question 1
Question 2
Question 3
Question 4
Question Number
A (1 Teacher)
B (2 Teachers)
C (3+ Teachers)


Missouri SAE Criteria
5.000
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Likert Value
Question 1
Question 2
Question 3
Question 4
Question 5
Question 6
Question 7
Question 8
Question 9
Question Number
A (1 Teacher)
B (2 Teachers)
C (3+ Teachers)


Ranking of SAE Criteria
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
Ranking Value
Supervised
Agricultural
Experience
Program
Instruction
Time
Economic Base
Evaluated
Recognition
SAE Criteria
A (1 Teacher)
B (2 Teachers)
C (3+ Teachers)

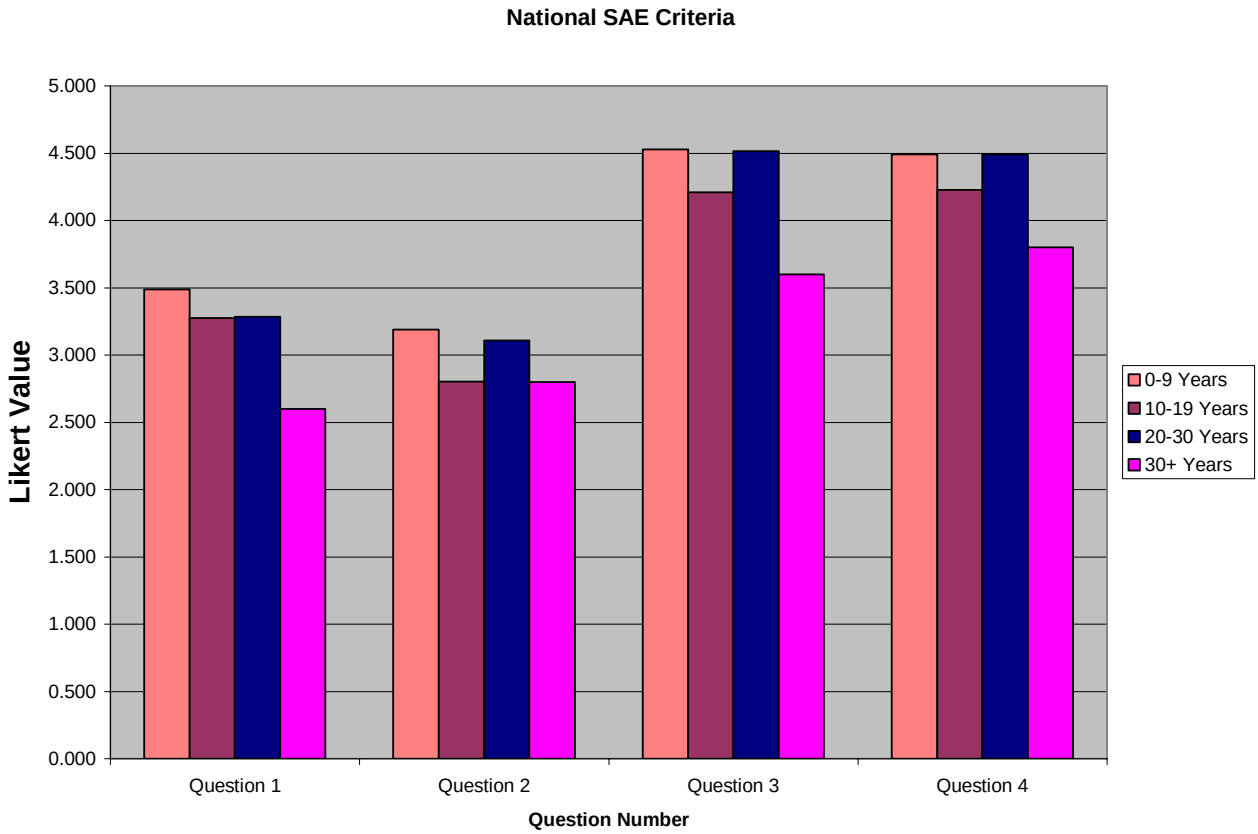

Core/Essential SAE Criteria
160.000
140.000
120.000
100.000
80.000
60.000
40.000
20.000
0.000
Number of Teachers
Supervised
Agricultural
Experience
Program
Instruction
Time
Economic Base
Evaluated
Recognition
Department Size
A (1 Teacher)
B (2 Teachers)
C (3+ Teachers)

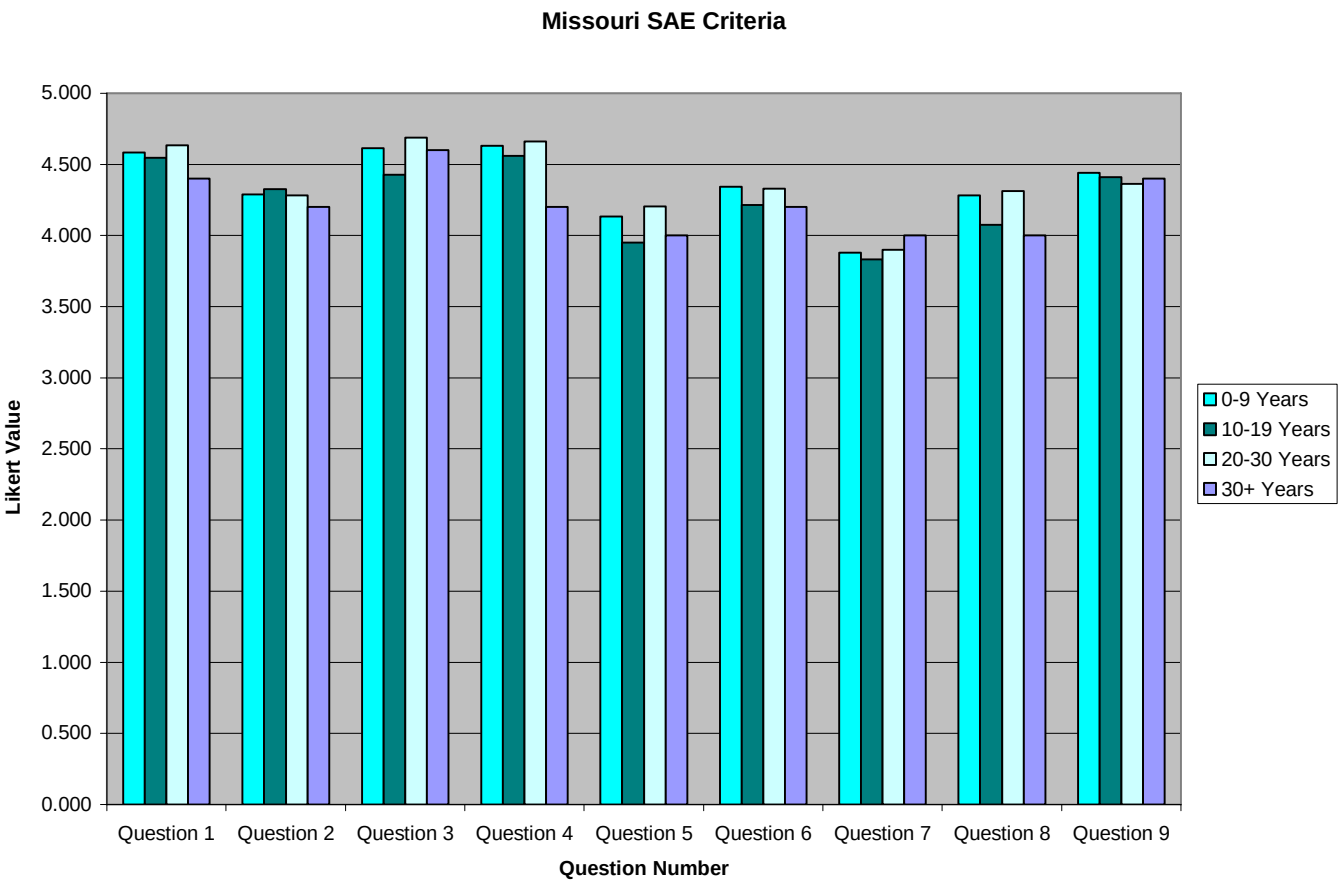
APPENDIX D

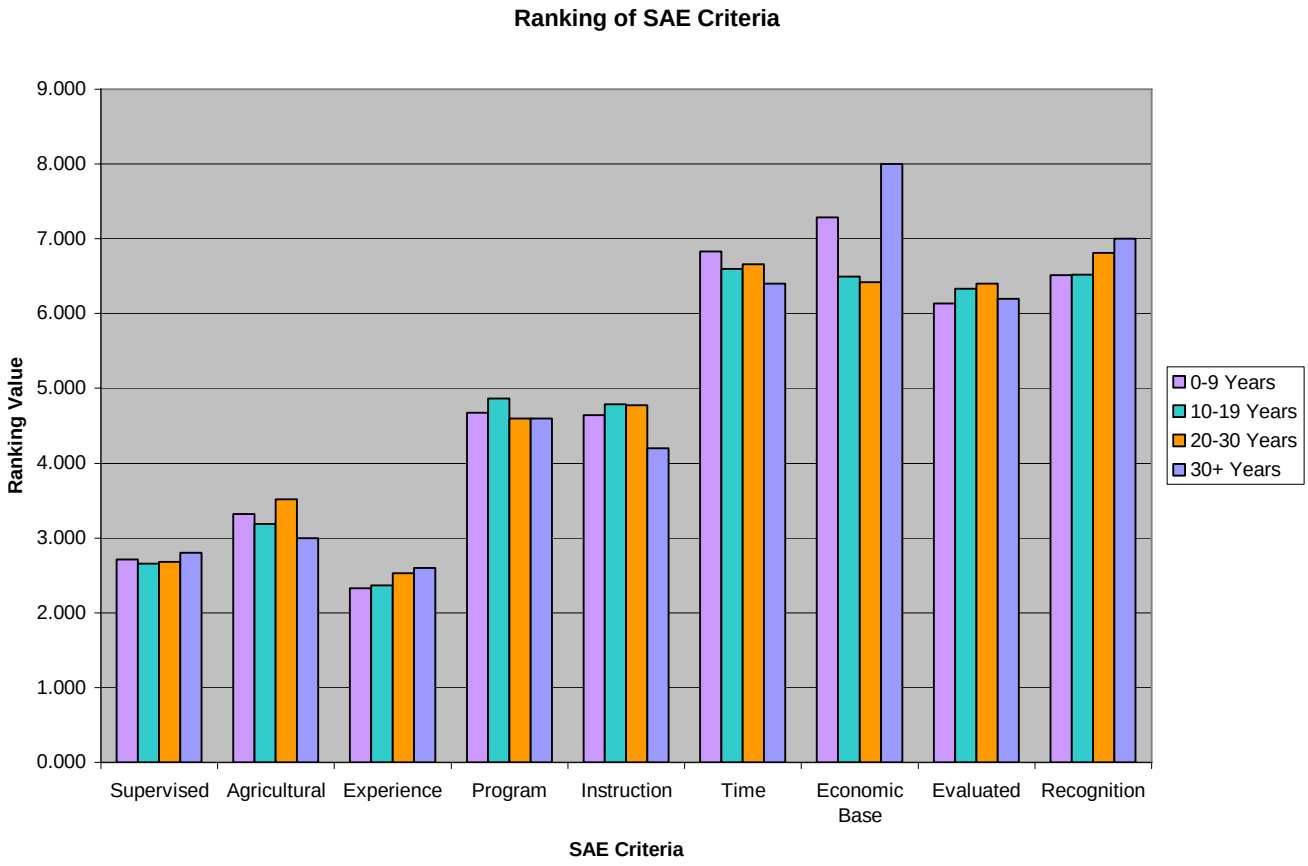
RESEARCH COMPILATION CHARTS SORTED

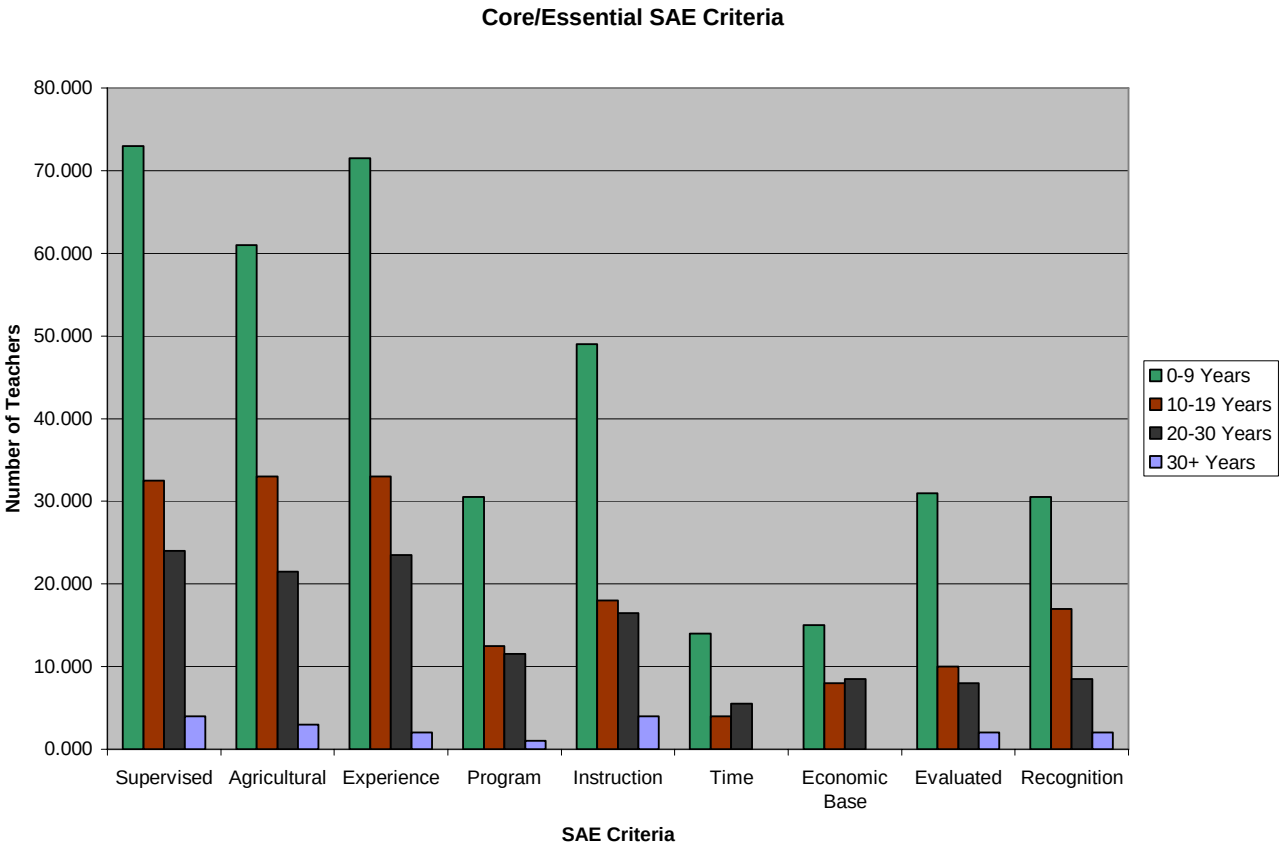
BY NUMBER

OF YEARS TEACHING


National SAE Criteria
Likert Value
5.000
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Question 1
Question 2
Question 3
Question 4
Question Number
0-9 Years
10-19 Years
20-30 Years
30+ Years


Missouri SAE Criteria
Likert Value
5.000
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Question 1
Question 2
Question 3
Question 4
Question 5
Question 6
Question 7
Question 8
Question 9
Question Number
0-9 Years
10-19 Years
20-30 Years
30+ Years

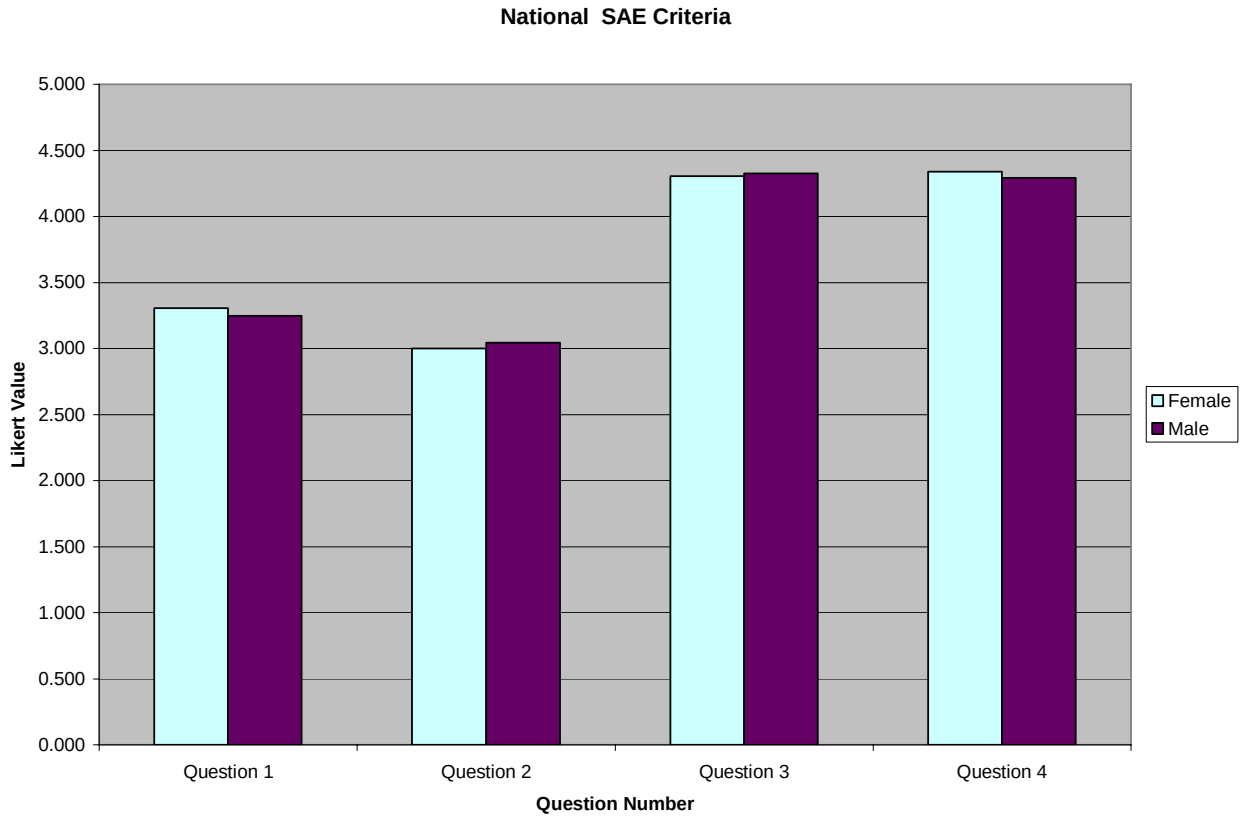

Ranking of SAE Criteria
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
Ranking Value
Supervised
Agricultural
Experience
Program
Instruction
Time
Economic Base
Evaluated
Recognition
SAE Criteria
0-9 Years
10-19 Years
20-30 Years
30+ Years

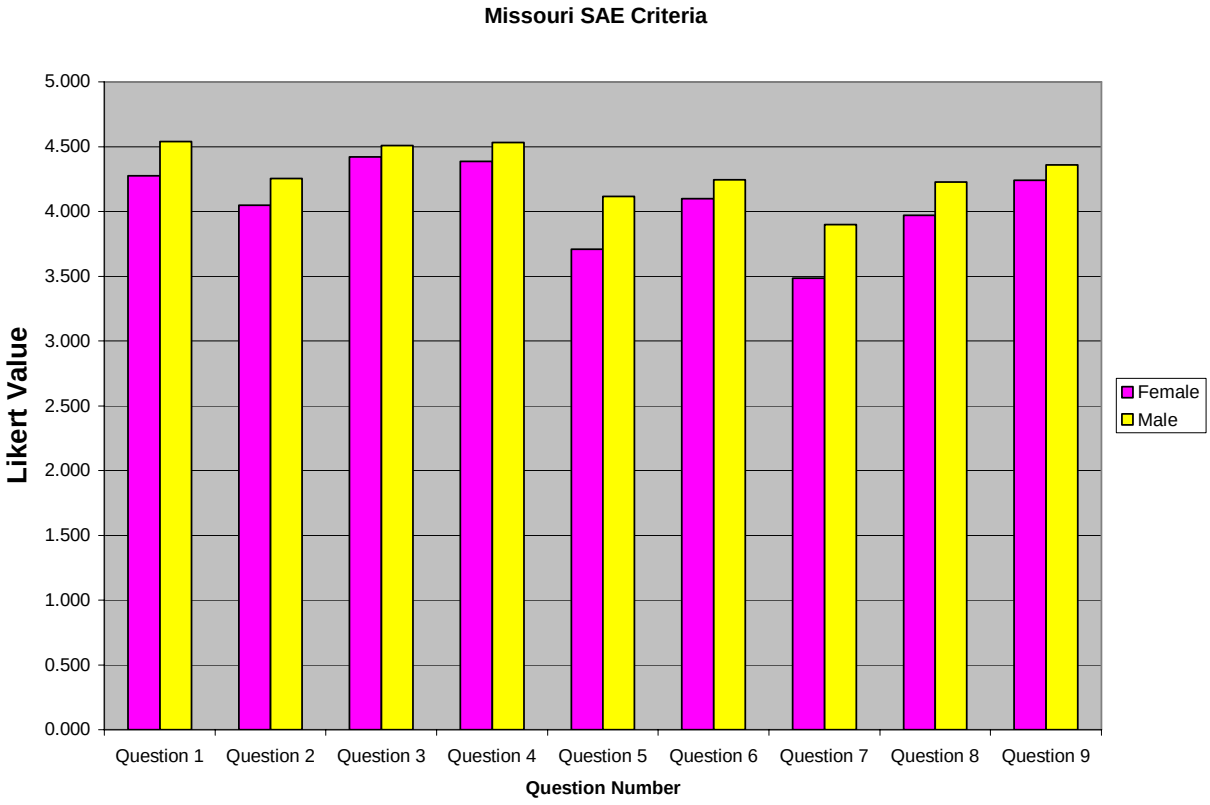

Core/Essential SAE Criteria
80.000
70.000
60.000
50.000
40.000
30.000
20.000
10.000
0.000
Number of Teachers
Supervised
Agricultural
Experience
Program
Instruction
Time
Economic Base
Evaluated
Recognition
SAE Criteria
0-9 Years
10-19 Years
20-30 Years
30+ Years

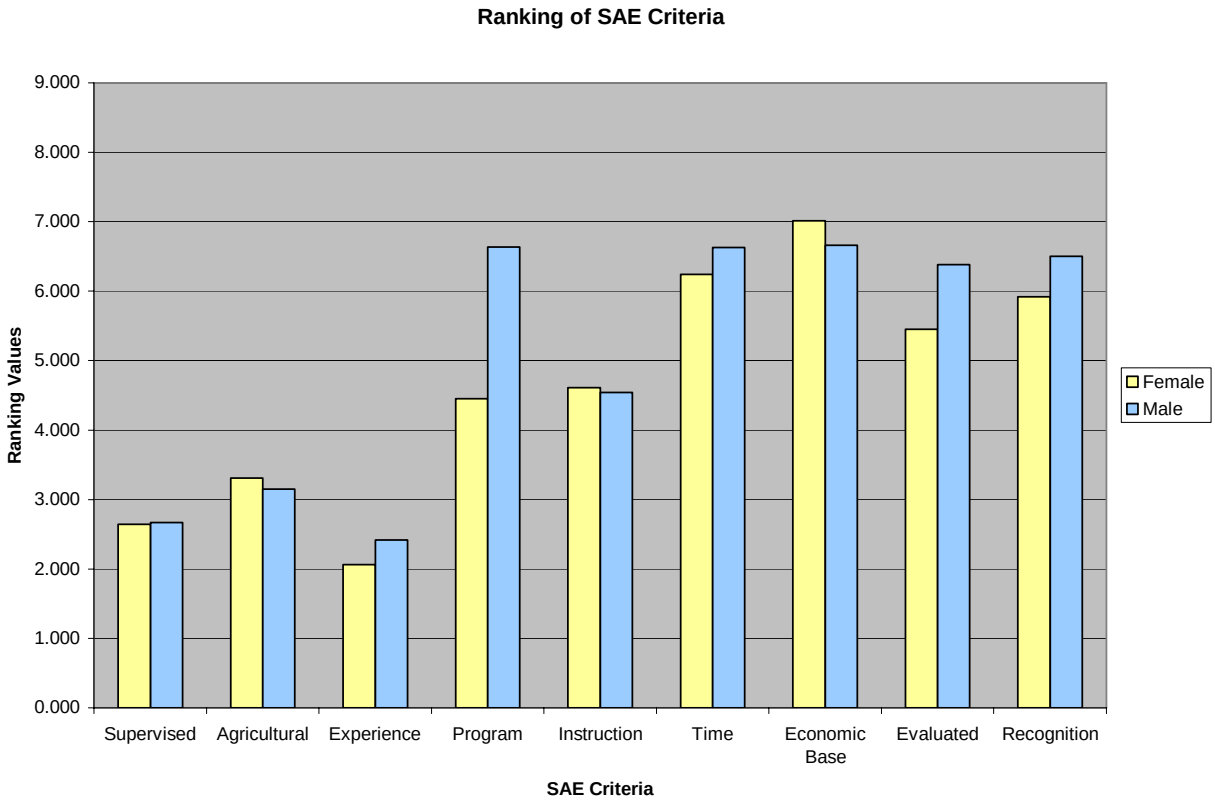
APPENDIX E

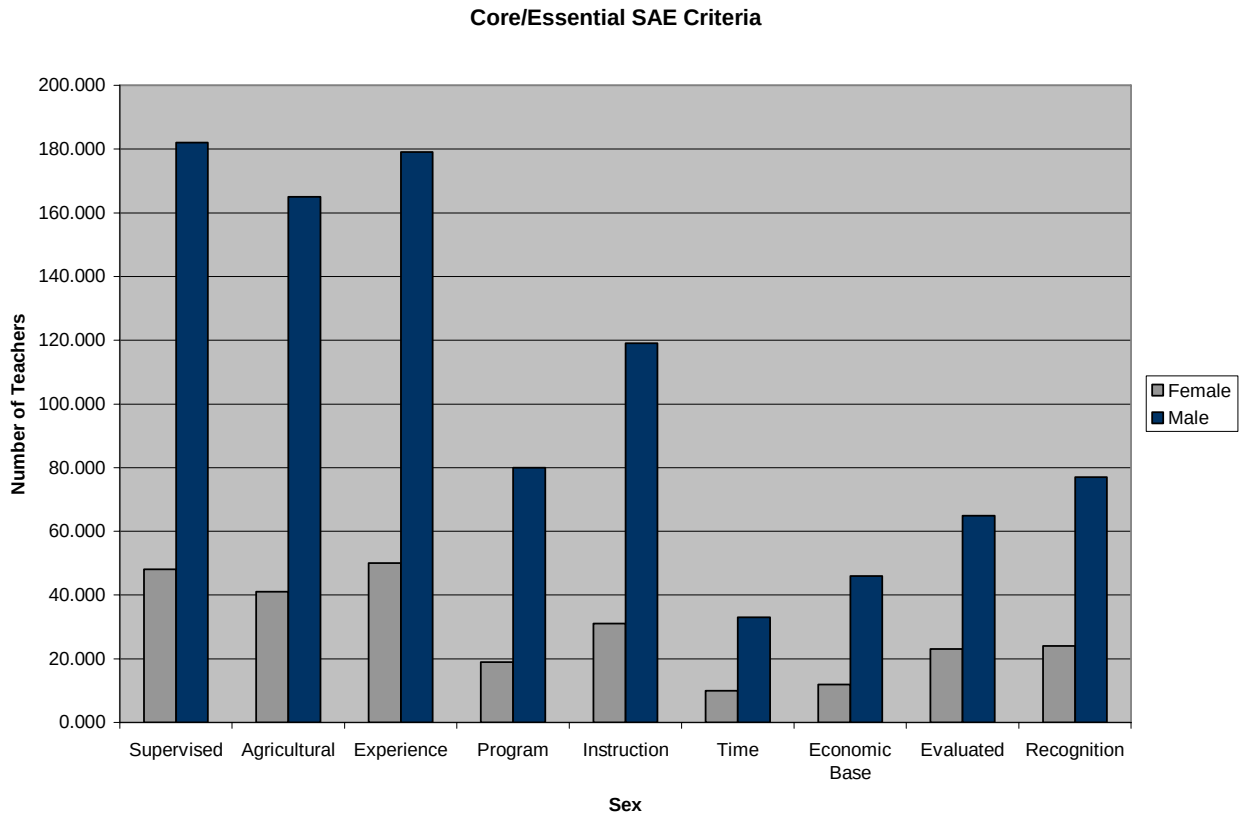
RESEARCH COMPILATION CHARTS

SORTED BY GENDER OF TEACHER


National SAE Criteria
5.000
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Likert Value
Question 1
Question 2
Question 3
Question 4
Question Number
Female
Male


Missouri SAE Criteria
Likert Value
5.000
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Question 1
Question 2
Question 3
Question 4
Question 5
Question 6
Question 7
Question 8
Question 9
Question Number
Female
Male


Ranking of SAE Criteria
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
Ranking Values
Supervised
Agricultural
Experience
Program
Instruction
Time
Economic Base
Evaluated
Recognition
SAE Criteria
Female
Male

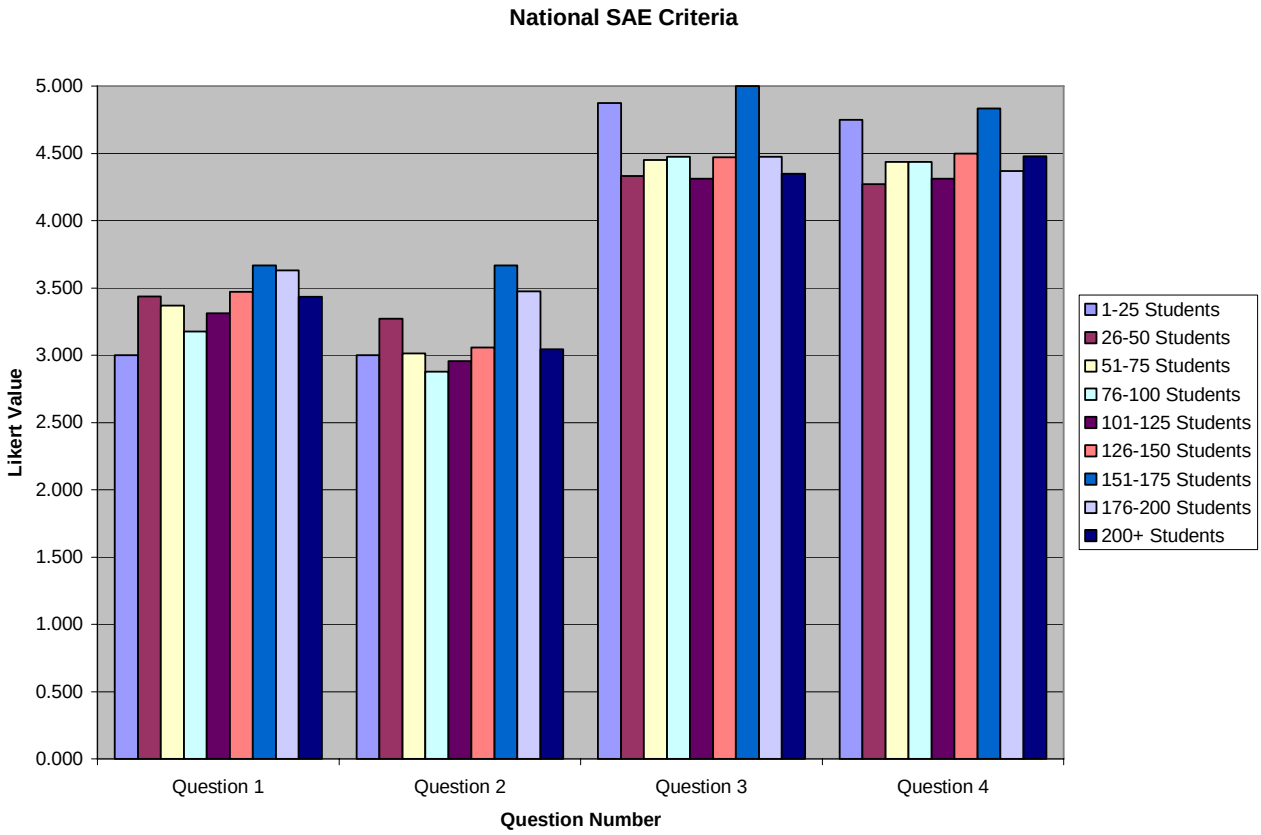

Core/Essential SAE Criteria
200.000
180.000
160.000
140.000
120.000
100.000
80.000
60.000
40.000
20.000
0.000
Number of Teachers
Supervised
Agricultural
Experience
Program
Instruction
Time
Economic Base
Evaluated
Recognition
Sex
Female
Male

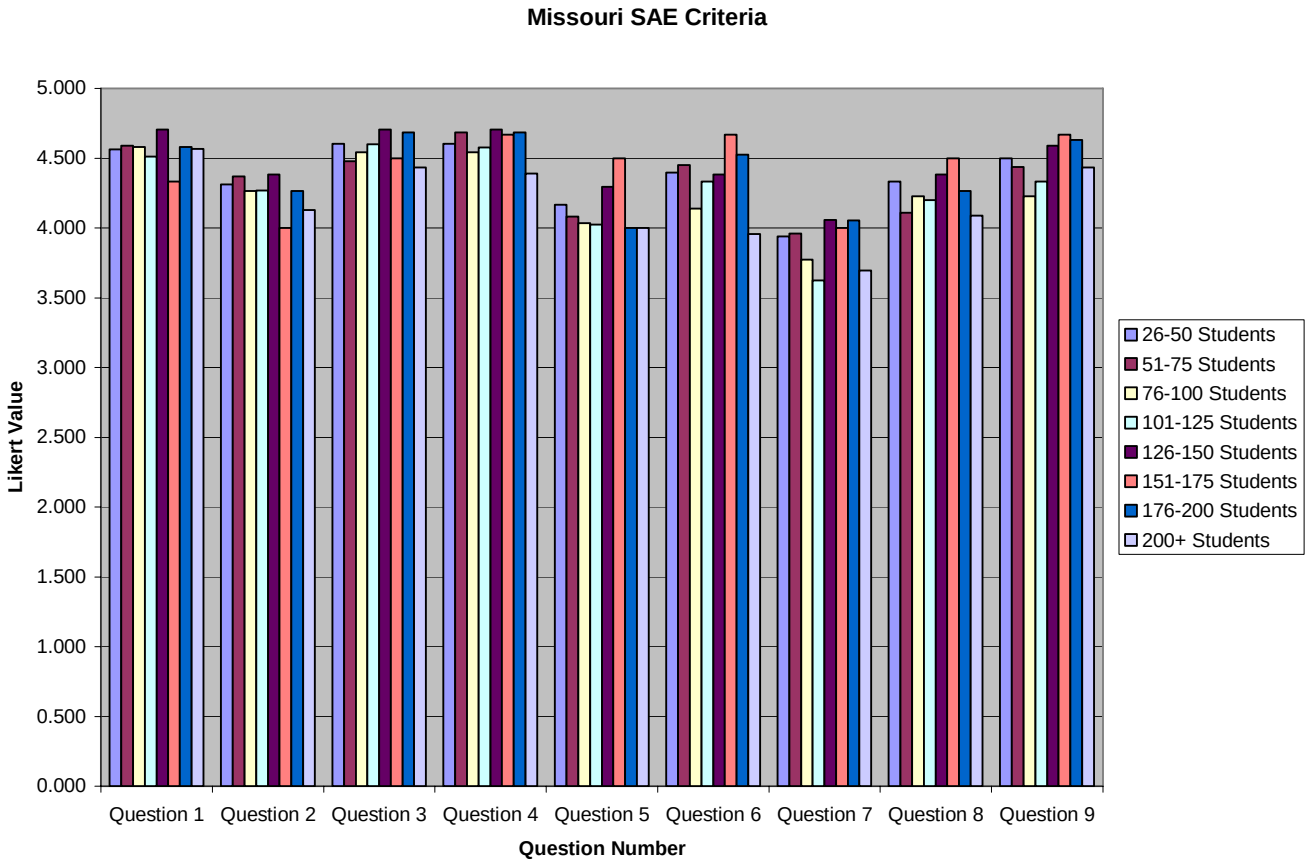
APPENDIX F

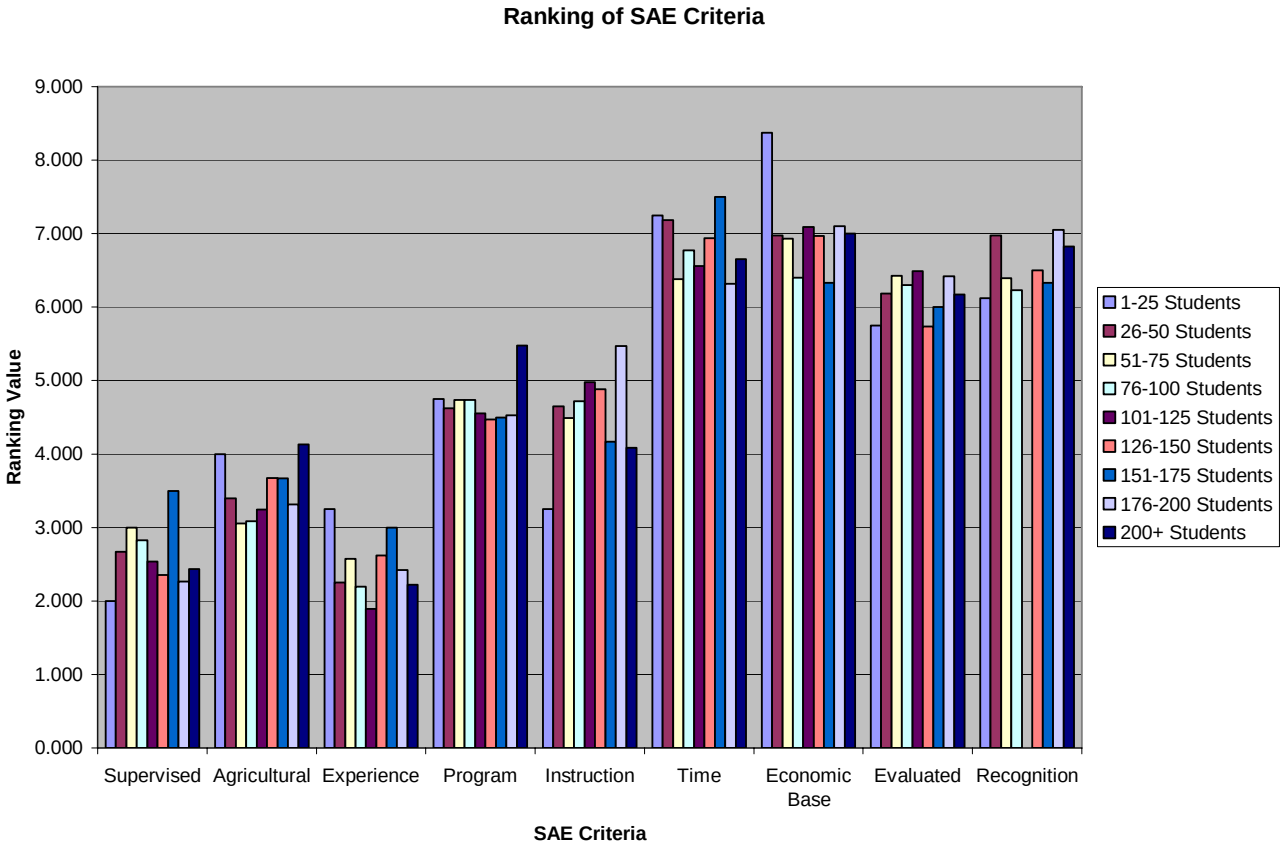
RESEARCH COMPILATION CHARTS SORTED

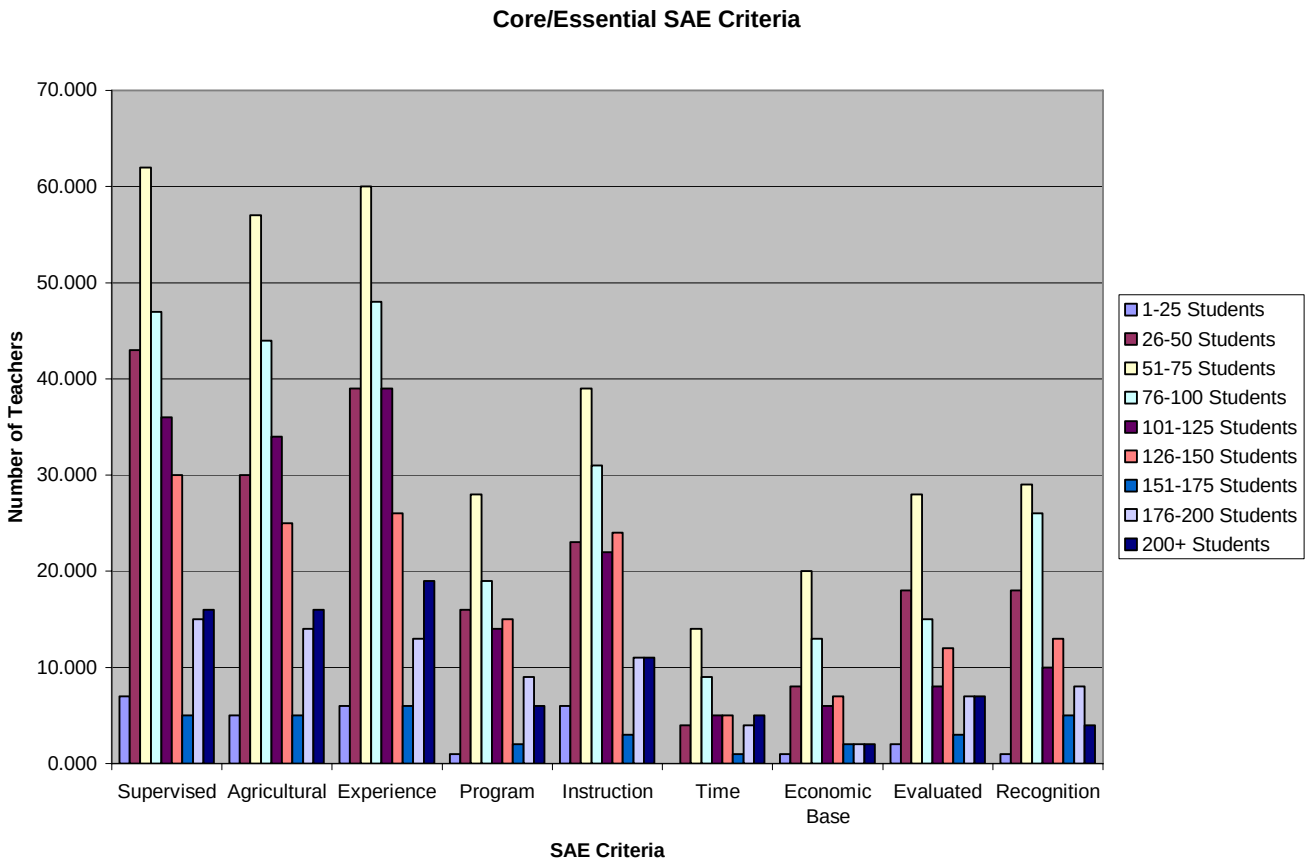
BY NUMBER

OF STUDENTS IN PROGRAM


National SAE Criteria
Likert Value
5.000
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Question 1
Question 2
Question 3
Question 4
Question Number
1-25 Students
26-50 Students
51-75 Students
76-100 Students
101-125 Students
126-150 Students
151-175 Students
176-200 Students
200+ Students


Missouri SAE Criteria
Likert Value
5.000
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Question 1
Question 2
Question 3
Question 4
Question 5
Question 6
Question 7
Question 8
Question 9
Question Number
26-50 Students
51-75 Students
76-100 Students
101-125 Students
126-150 Students
151-175 Students
176-200 Students
200+ Students

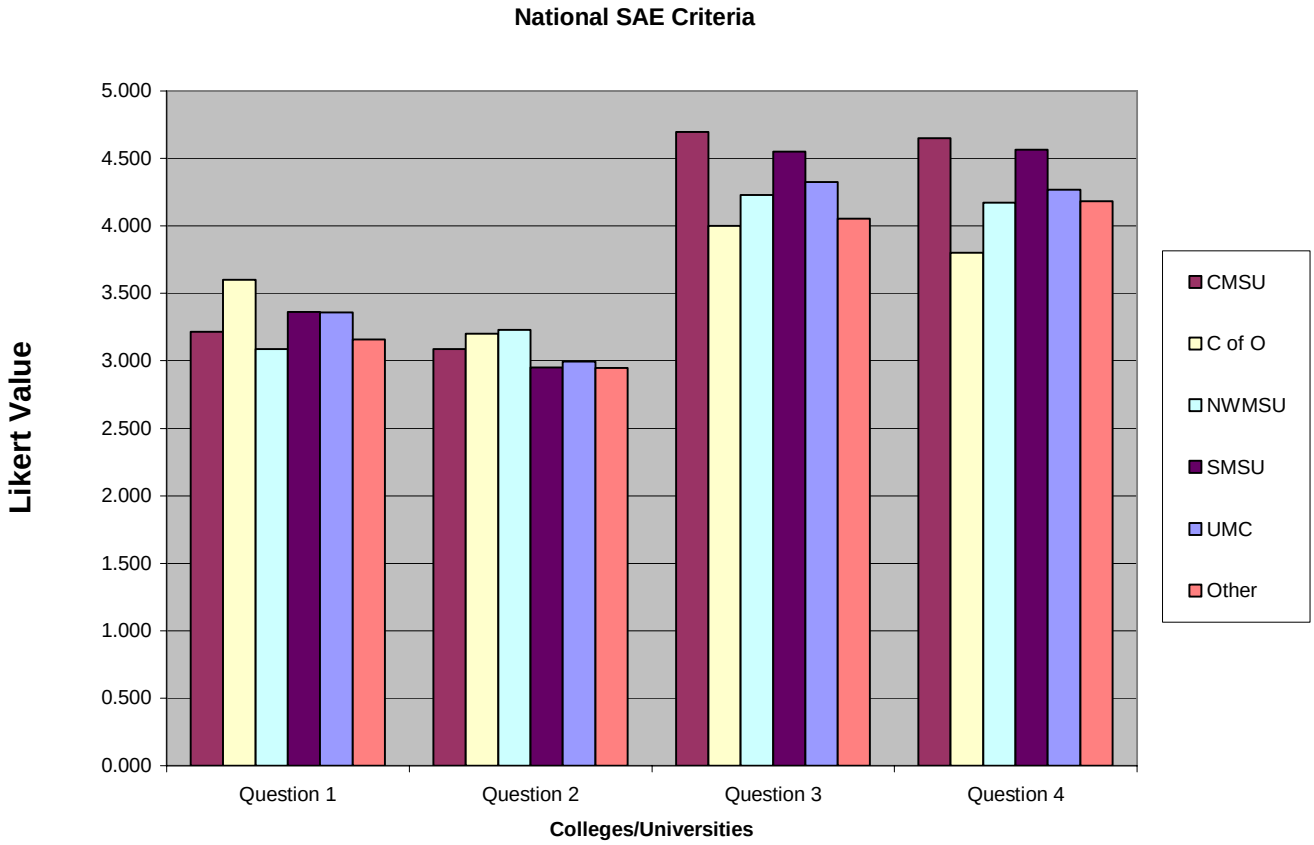

Ranking of SAE Criteria
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
Ranking Value
Supervised
Agricultural
Experience
Program
Instruction
Time
Economic Base
Evaluated
Recognition
SAE Criteria
1-25 Students
26-50 Students
51-75 Students
76-100 Students
101-125 Students
126-150 Students
151-175 Students
176-200 Students
200+ Students

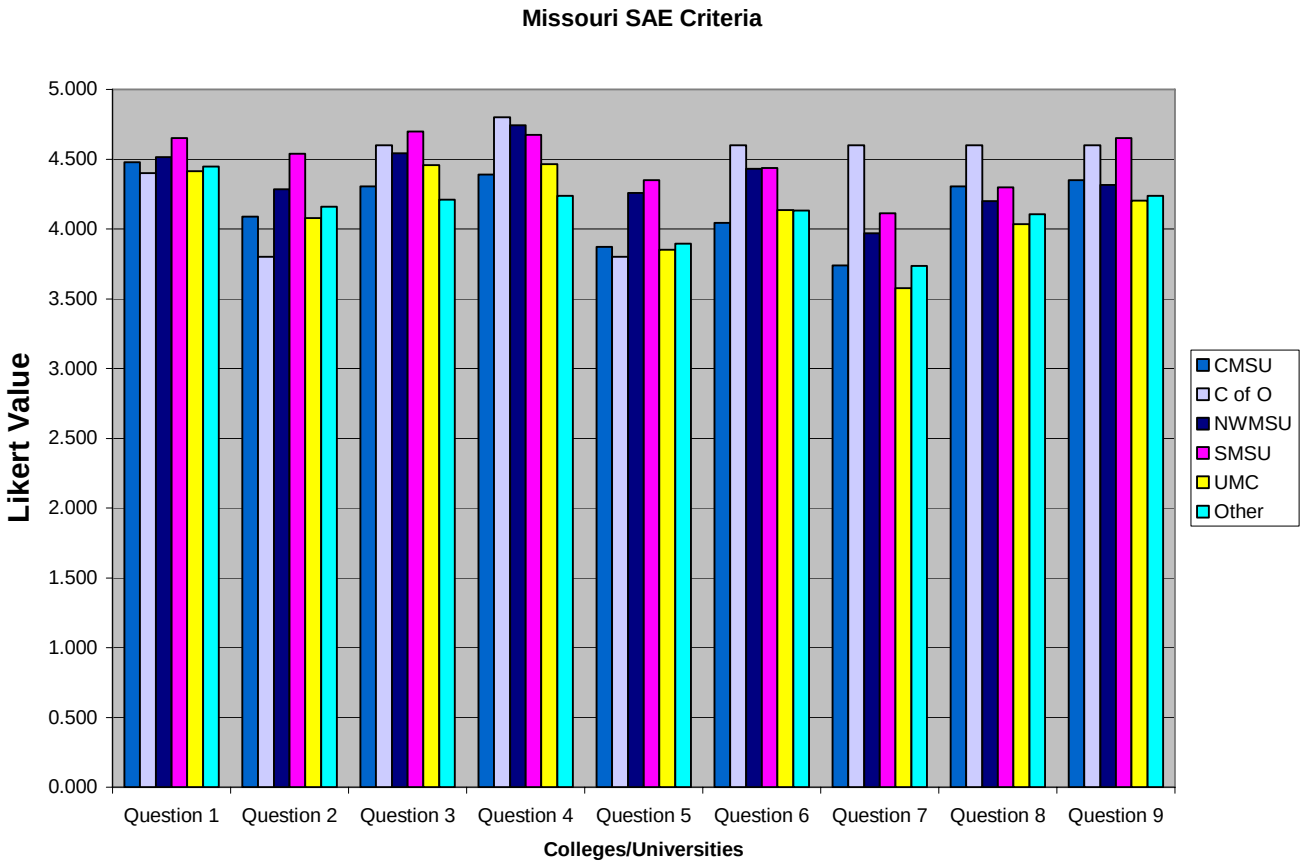

Core/Essential SAE Criteria
70.000
60.000
50.000
40.000
30.000
20.000
10.000
0.000
Number of Teachers
Supervised
Agricultural
Experience
Program
Instruction
Time
Economic Base
Evaluated
Recognition
SAE Criteria
1-25 Students
26-50 Students
51-75 Students
76-100 Students
101-125 Students
126-150 Students
151-175 Students
176-200 Students
200+ Students

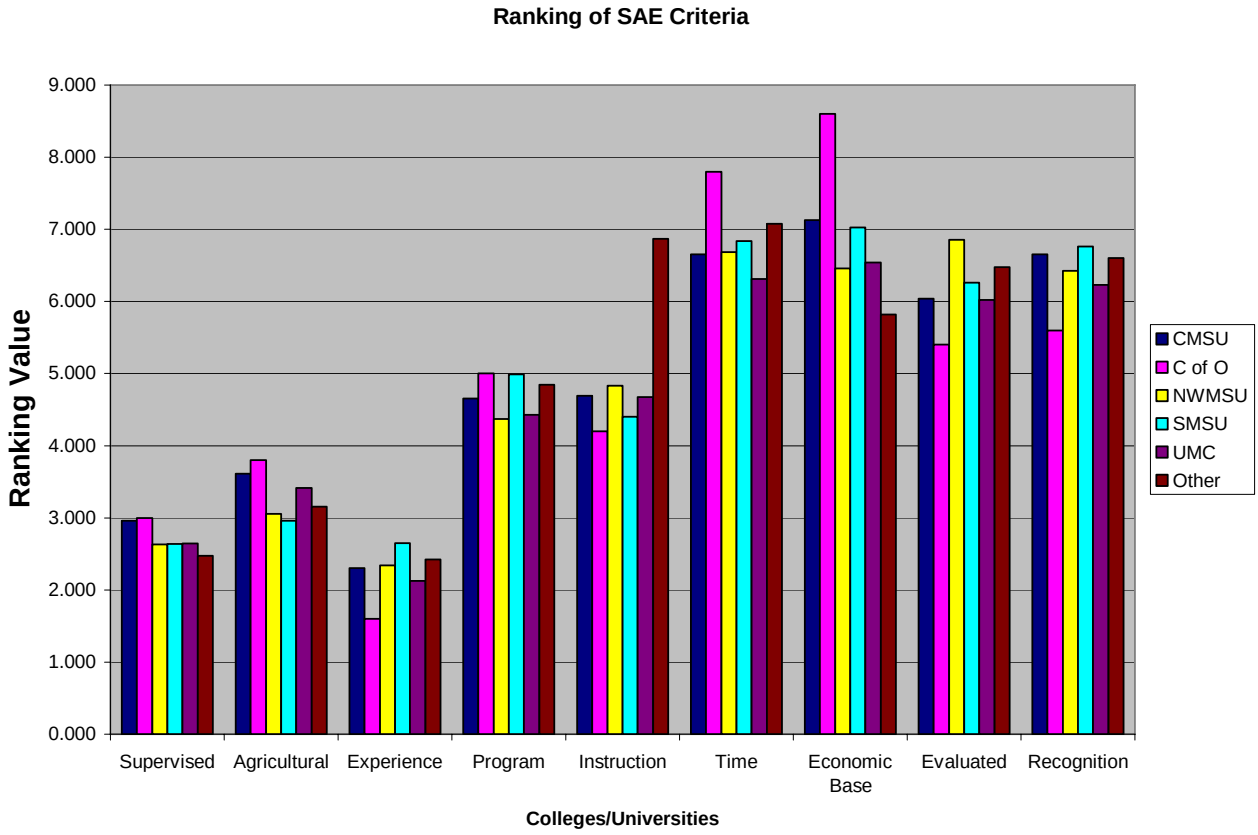
APPENDIX G

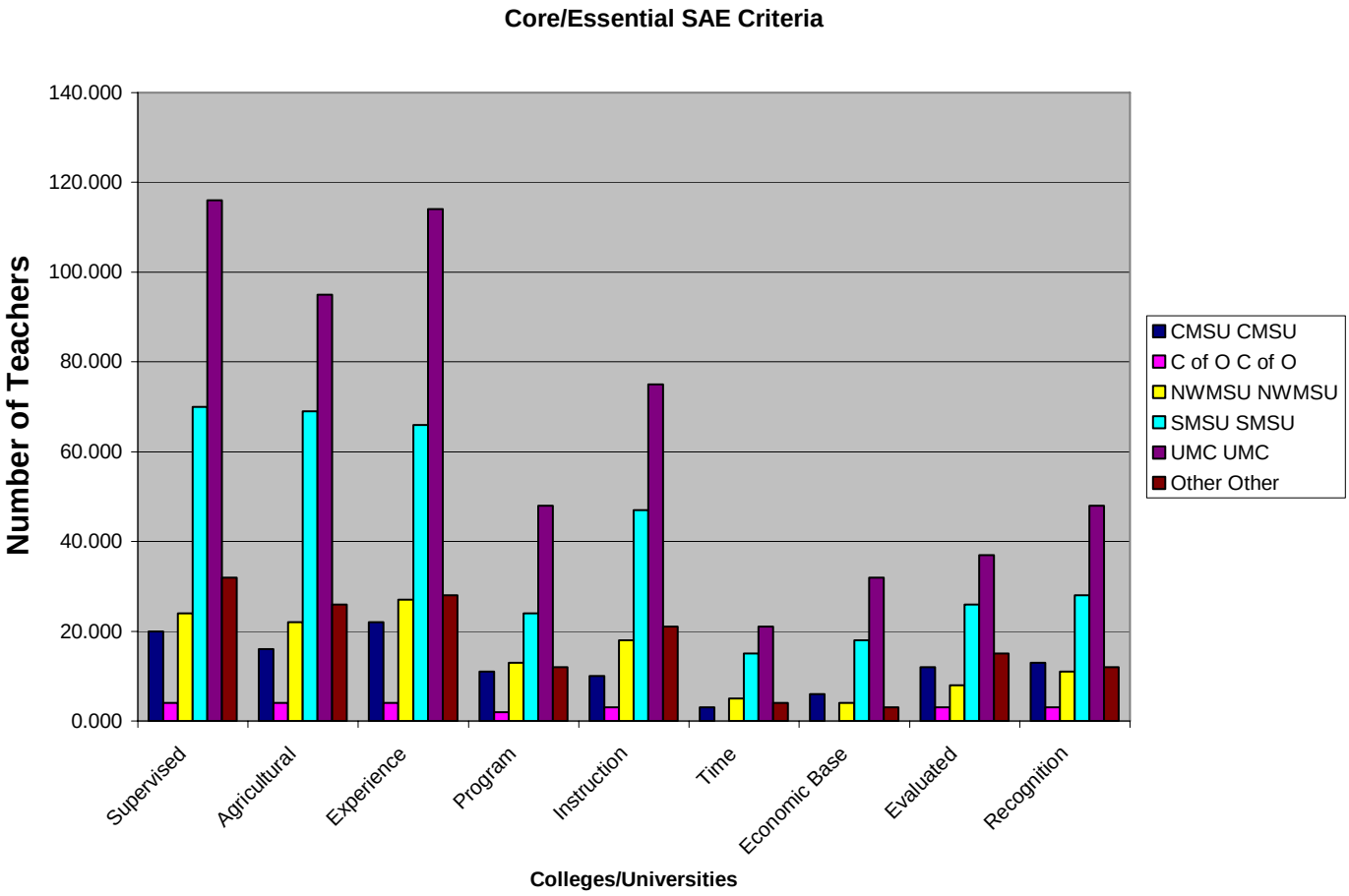
RESEARCH COMPILATION CHARTS

SORTED BY COLLEGIATE TRAINING


National SAE Criteria
Likert Value
5.000
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Question 1
Question 2
Question 3
Question 4
Colleges/Universities
CMSU
C of O
NWMSU
SMSU
UMC
Other


Missouri SAE Criteria
Likert Value
5.000
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Question 1
Question 2
Question 3
Question 4
Question 5
Question 6
Question 7
Question 8
Question 9
Colleges/Universities
CMSU
C of O
NWMSU
SMSU
UMC
Other


Ranking of SAE Criteria
Ranking Value
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
Supervised
Agricultural
Experience
Program
Instruction
Time
Economic Base
Evaluated
Recognition
Colleges/Universities
CMSU
C of O
NWMSU
SMSU
UMC
Other


Core/Essential SAE Criteria
Number of Teachers
140.000
120.000
100.000
80.000
60.000
40.000
20.000
0.000
Supervised
Agricultural
Experience
Program
Instruction
Time
Economic Base
Evaluated
Recognition
Colleges/Universities
CMSU CMSU
C of O C of O
NWMSU NWMSU
SMSU SMSU
UMC UMC
Other Other