

AN ASSESSMENT OF INTRAORGANIZATIONAL CLIMATE IN THE
AMERICAN ASSOCIATION FOR AGRICULTURAL EDUCATION

A Dissertation

by

BILLY RAY McKIM

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

DOCTOR OF PHILOSOPHY

August 2010

Major Subject: Agricultural Leadership, Education, and Communications

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ABSTRACT

An Assessment of Intraorganizational Climate in the
American Association for Agricultural Education. (August 2010)

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Monitoring and evaluation of programs and outcomes is common practice in educational arenas; however, it is not so frequent within professional societies and organizations. By definition, professional organizations are groups of people working together to accomplish a set of goals and objectives that serve the profession. As an organization, the American Association for Agricultural Education (AAAE) serves educators, communicators, and leaders in agriculture through research and application of its principles. A clear understanding of the climate of an organization is important. Understanding the climate of the AAAE could potentially provide AAAE leadership with an understanding of how to improve the functionality of the organization. Organizational climate is a feeling by the members; how they perceive something should be done at that moment.

The research design of this nonexperimental quantitative study was descriptive and inferential in nature. The overarching construct proposed to be measured through conducting this study was organizational climate. A four-section electronic data

collection instrument, Organizational Climate Inventory (OCI), was researcher-developed. An ANOVA was used to determine if differences in the OCI scales existed based on selected professional characteristics of AAAE members.

Many individuals pay dues to be members of the AAAE; the return on their investment was not identified in this study. Nearly three-quarters of the membership of the AAAE is held by academic faculty in professorate ranks. Each of the five research priority areas were represented as were each of the three geographic regions. Both the regional and national meetings are relevant and important to the membership.

AAAE members' organizational vision was the scale in with the highest mean score; whereas, standard of performance was the scale in which the lowest mean was exhibited. Mean 6σ scores were reported for each of the OCI scales and organized by professional characteristic. Dues-paying-members and non-dues-paying-members did not perceive organizational vision of the AAAE in the same way. Perceptions also differed across all of the scales by region, academic position, and frequency of attendance at regional and national AAAE meetings.

DEDICATION

I dedicate this work to my wife, Glenda.

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This work would not have been possible without the help and guidance of many people. I am especially grateful to the faculty, staff, and graduate students of the Department of Agricultural Leadership, Education, and Communications at Texas A&M University.

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CHAPTER I

INTRODUCTION

Background and Setting

Basic organizational principles suggest that the effectiveness and efficiency of any group or organization requires frequent and continuous monitoring for the greatest impact (Senge, 2006). Monitoring and evaluation of programs and outcomes is common practice in educational arenas; however, it is not so frequent within professional societies and organizations. Professional organizations are groups of people working together to accomplish a set of goals and objectives that serve the profession (Ivoncevich, Konopaske, & Matteson, 2008). By definition, the American Association for Agricultural Education (AAAE) is a professional organization.

In recent years, several changes have been implemented by leaders within the AAAE to advance the desired outcomes of the organization as perceived by the organization's leadership. One such change was the development and adoption of the *National Research Agenda of Agricultural Education and Communication* (NRA; Osborne, 2007). The NRA was created in response to a need for prioritizing research areas to create opportunities for securing research funding from numerous state and national agencies. The NRA was the first national research agenda to be developed and formally embraced by the broader discipline of agricultural education and communication. The NRA is organized into five broad disciplinary dimensions: Agricultural communications, agricultural leadership, extension and outreach education,

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

agricultural education in university and postsecondary settings, and school-based agricultural education (Osborne).

Statement of the Problem

An effective organization will have a joint vision (Anderson & West, 1996a). According to Anderson and West (1996a), an organization's vision would include the "overriding objectives and targets as specified in the vision or mission statement" (p. 3). The mission statement of the AAAE indicates; as an organization, the AAAE serves educators, communicators, and leaders in agriculture through research and application of its principles. The three goals of the organization are "(a) provide an approach to identifying, prioritizing, and organizing research in teaching and learning; (b) provide opportunities for collaboration within and outside of agricultural education; and (c) provide opportunities for individual and organizational growth, development, and renewal" (AAAE, 2010, ¶ 2). AAAE members create one type of formal agreement between themselves and the AAAE, through the payment of dues, for access to a scholarly journal, voting rights, committee and leadership participation, regional and national conference participation, and listserv messages—all of which can arguably have an effect on the vision of the AAAE.

In 2007, the AAAE created a visioning document with the publication of a national research agenda (Osborne), essentially establishing the first formal vision for the AAAE. Specifically, the *National Research Agenda of Agricultural Education and*

Communication (Osborne) was developed to coordinate the research efforts within agricultural education. Osborne proposed that the NRA was

... the first national research agenda to be developed and formally embraced by the broader discipline of agricultural education and communication. Members of the profession have long recognized the value of such a document for effectively communicating research priorities to numerous state and national interests... (p. 2).

Furthermore, the *National Research Agenda* of the AAAE is intended to serve as a document that may be used to

- convey the research priorities of the AAAE to various stakeholders,
- provide focus toward the most pressing issues facing the discipline,
- facilitate coordination of research efforts between research parties, and
- enhance the perception of the profession as a whole (Doerfert, 2009, p. 1).

As the first formal document to provide guidance for research to the general membership of the AAAE, the NRA may affect the climate of the organization. The NRA specifically addresses one of the organization's goals: to identify, prioritize, and organize research. However, the other goals of the AAAE—provide opportunities for collaboration within and outside of agricultural education; and provide opportunities for individual and organizational growth, development, and renewal—are directly tied to the climate of the organization. Furthermore, the climate of an organization has a profound influence on the members' behavior and the goals they pursue (Ivoncevich, et al., 2008).

Jointly, the mission statement of the AAAE and the NRA serve as the primary guidance for the AAAE. Although an understanding of AAAE members' perceptions regarding the mission and NRA are important, it is also important to understand the climate of the AAAE as an organization. To further define climate, the following definitions will be used for this study:

“Climate is widely defined as the shared perception of ‘the way things are around here.’ More precisely, climate is shared perceptions of organizational policies, practices, and procedures, both formal and informal... Multiple climates are thought to exist in organizations” (Reichers & Schneider, 1990, as cited in Anderson & West, 1996b, p. 3).

“Essentially, climate is individual descriptions of the social setting or context of which the person is a part. What the individual describes, whether it is the organization's decision-making processes, relations with superiors, or interaction with co-workers, is neither specified nor constrained by the climate construct” (Rousseau, 1988, as cited in Anderson & West, 1996b, p. 3).

The shared perception of the AAAE's mission and goals are intertwined with the AAAE's formal policies, practices, and procedures outlined in the NRA. Hence, as the expiration date of the NRA approaches, it is important that members' perceptions of the NRA be included in the assessment of the climate of the AAAE.

Purpose of the Study and Research Objectives

A clear understanding of the climate of an organization is important. Understanding the climate of the AAAE could potentially provide AAAE leadership with an understanding of how to improve the functionality of the organization. The

Team Climate Inventory (TCI; Anderson & West, 1999) has been used in numerous previous organizational studies (Anderson, Hardy, & West, 1990; Anderson & West, 1996a, 1996b, 1998; Loo & Loewen, 2002; Mathison, Einarsen, Jorstad, & Bronnick, 2004; West & Farr, 1989) to describe the climate of organizations. As previously noted, effectiveness and efficiency of any group or organization requires frequent and continuous monitoring. Thus, the TCI may provide a longitudinal measure of organizational change when implemented over time, once the initial climate of the organization has been determined. Furthermore, the inaugural edition of the *National Research Agenda* is set to expire in 2010. Hence, the need to determine the climate of the AAAE membership and the vision of the NRA is apparent and timely. Therefore, the purpose of this study was to describe how AAAE members perceive the organizational climate of the AAAE. Additionally, this study will serve as the basis for comparison for a long-term longitudinal study of organizational change of the AAAE. This study was guided by three research objectives:

1. Describe selected professional characteristics of AAAE members;
 - a. AAAE membership status,
 - b. regional affiliation,
 - c. academic position,
 - d. frequency of attendance at regional AAAE meetings, and
 - e. frequency of attendance at national AAAE meetings.
2. Describe members' perceptions of the organizational climate of the AAAE using the scales of the Organizational Climate Inventory (OCI) data collection

instrument and based on the selected professional characteristics of AAAE members.

3. Determine if differences existed in the organizational climate of the AAAE based on members' perceptions of the scales of the OCI data collection instrument and the professional characteristics of AAAE members.

Limitations of the Study

Descriptive survey research is a type of nonexperimental research that uses questionnaires (among other methods) to “summarize the characteristics of different groups [and] to measure their attitudes and opinions toward some issue” (Ary, Jacobs, Razavieh, & Sorensen, 2006, p. 31). No experimental or manipulative procedures were employed, thus excluding the possibility of this study being experimental in nature.

The overarching construct proposed to be measured by conducting this study was organizational climate, which is considered to be intangible (Ary, Jacobs, Razavieh, & Sorenson, 2006). Intangibles are not directly observable; therefore, indirect measures were obtained through questionnaires to determine the organizational climate of the AAAE. This study is limited to the members of the AAAE when the frame was created.

Basic Assumptions

1. Respondents completed the instrument honestly and objectively.
2. Respondents possessed sufficient experience as a member of the AAAE to complete the Web-based instrument.

CHAPTER II

LITERATURE REVIEW

Introduction

University faculty members build relationships and develop professionally through voluntary membership in professional associations. As dues-paying members, the level of participation and the acquired benefits are controlled by the individual through a formalized agreement (Gruen, Summers, & Acito, 2000). Because membership in these associations is voluntary, it is important for the members to be involved in organizational knowledge and socialization. “Comprehension of the organization’s goals and values help link the membership to the mission as a whole” (Gruen, et al., p. 39). Researchers in organizational behavior posit that organizational knowledge has a positive effect because members understand how the organization affects the industry and increases members’ comfort and competence in their roles.

Change is subject to organizational climate and culture. The shared beliefs and perceptions of an organization define its climate. Organizational climate is a feeling by the members; how they perceive something should be done at that moment. The climate of the organization is developed through commonly accepted policies, practices, and procedures (Anderson & West, 1998).

Climate differs from organizational culture. In contrast, culture is the deeply rooted nature of the organization as a result of long-held formal and informal structures, expectations, and traditions. Culture is created through an evolution of a system, with researchers presenting detailed description and analysis of the social structure in a

holistic manner (Denison, 1996). Whereas the climate of an organization can be relatively easy to change, change in culture takes the full commitment of every leader within the organization for a sustained period of time (Hofstede, 1997).

According to Loo (2003), three conditions must be present for a shared climate to exist: “Individuals must interact, must have some common goal which predisposes individuals toward collective action, and sufficient task interdependence” (p. 512). Academic associations meet these criteria on many levels: Department, university, region, and national affiliations. Members interact within and outside of their respective departments and universities. The common affiliation with the association is based on interest in a common goal, and potentially, collective action. Finally, the common interest and affiliation create an interdependence that yields a shared understanding.

Challenges from Authorities

No published empirical studies of the AAAE exist in the agricultural education literature, which is somewhat puzzling given that the AAAE is founded on education and research. Although the empirical literature regarding the AAAE is scant, several agricultural education authorities have in recent years commented on issues facing the AAAE. These authorities have been identified as highly respected professors by being invited to deliver the annual distinguished lecture at the national research conference of the AAAE; each lecture is published the following year in the *Journal of Agricultural Education*.

In 2006, Donna Graham gave a lecture titled, *My Facebook Friends* (2007). In her lecture, Graham noted the popularity of social media and further noted that

individuals and groups personalize their profiles on Facebook to reflect their interests, values, and affiliations amongst other things. Graham added that individuals and groups often have creative names that express the uniqueness of their group. Graham posed the question; what groups might an AAAE member belong to? She proposed several groups:

- I hit the snooze button 11 times before I wake up
- I wear flip-flops all year long
- I love John Deere green
- Procrastinators unite ...tomorrow
- I wear cowboy boots on campus
- I love Flonase
- All my rowdy friends
- I don't know how to put this, but I'm a big deal (2007, p. 2)

Graham proposed *I hit the snooze button 11 times before I wake up* because she believed that some AAAE members lack alertness to the changing environment. She emphasized that without the ability to recognize a need to change or adapt early, groups or programs may become downsized or eliminated (2007). This was further noted with the group, *I wear flip-flops all year long*, suggesting that the AAAE is "...very comfortable in their routine mode of operation" (Graham, 2007, p. 2). AAAE members are "...satisfied in thinking that the same old things will work for the future" (Graham, p. 2).

The group, *I love John Deere green*, was suggested to represent a group focused on agriculture and reflective of agriculture in society—being downsized. Graham suggested that the individuals who were left after downsizing would not be able to carry the burden or respond to necessary changes. She proposed that in a time of budget cuts, *Procrastinators unite ...tomorrow*, was reflective of the mindset in AAAE; a mindset

that despite an obvious need to adapt or change, AAAE members were slow to accept that change, especially change that required individuals to meet different expectations.

Graham (2007) suggested that there is a societal need for change, and to meet that need, the AAAE must be forward thinking and have a vision. The group, *I love Flonase*, implied that some members of the AAAE are "...allergic to new ideas of instruction. They are fixed on the notion of 'if it ain't broke, don't fix it'" (Graham, 2007, p. 4). She further offered that "changes in technology, demographics, competition, and legislative expectations are all influencing or altering the ways [members of the AAAE] operate" (Graham, 2007, p. 4).

All my Rowdy Friends was the final group Graham discussed. Graham suggested some AAAE members are "...socially networked friends who spend too much time talking among themselves and listening to their own solutions to problems (2007, p. 5). Graham further suggested that the problem eventually becomes cyclic, "...younger faculty begin to model the old ways instead of creating new ways, and in a short time the younger faculty are just like the older faculty" (2007, p. 5). Additionally, Graham proposed that some members "...are focused on self to the extent that they have become self-serving to personal interests and are not team players" (2007, p. 5).

Graham offered several suggestions to the number of issues she proposed to exist in the AAAE. She suggested that a focused agenda could provide for the greatest impact. The AAAE should develop a team atmosphere so that members can engage in scholarship together, rather than being defensive or territorial (Graham, 2007). Graham suggested that "Brand identity is important so we must reconsider our brand" (2007, p.

5). She used the example *Be like KFC*[®], to illustrate that climate can be indicative of a need for change; change to meet the needs of those being served by the organization; change “...to look beyond traditional groups for solutions...; ...to look beyond traditional groups for solutions; ...to CHANGE our paradigm so that [the AAAE] remains relevant in a complex academic environment” (2007, p. 6).

In 2007, Gary Briers, gave his distinguished lecture titled, *Establishing, nurturing, propagating, and marketing our connections in agricultural education* (Briers, 2008). Briers’ comments were different, yet related to Graham’s, in the sense that the AAAE is a group of individuals who are closely connected. However, AAAE members may not realize how closely connected they are; connected to each other, to education, and to the context of agricultural education (Briers, 2008). Briers further emphasized that “an increasingly diverse and complex world makes connections—to make sense, to understand, and to solve problems...” (2008, p. 3). Briers iterated that change is occurring rapidly and that experiences and values of different generations are more evident. Briers inquired, “Do we embrace all of those faculty members in departments of agricultural education, extension [*sic*], leadership, communications—all those whose interests and expertise and subject matter content relate?” (2008, p. 4). Briers concluded that the AAAE should examine their connectivity (2008). AAAE members should question whether agricultural education is broad enough to survive or thrive (Briers, 2008).

In 2008, James Knight’s lecture was titled, *Educational excellence: Connecting the right dots* (Knight, 2009). In his lecture, Knight discussed lessons learned; in one of

which, he proposed that “...ultimately the educational climate matters the most” (Knight, 2009, p. 3). Knight further proposed that the most successful educators created a climate that was the root to their success; they made people feel important and invited. He further noted that successful educators approach people from a positive point of view. Knight proposed that getting to know student’s personally and knowing how to empathize with them was important. Most of Knight’s lecture was directed toward successful interactions with students, much of which was related to Rosenshine and Furst’s characteristics (behaviors) of effective teaching (see Rosenshine & Furst, 1971). Some may question if the same principles may be appropriate for a professional group of educators, such as the AAAE.

Theoretical Framework

Anderson and West (1998) are credited with developing team climate theory (Loo, 2003). Team climate theory is based on the application of the concepts of organizational climate and shared perception in groups. Anderson and West noted that individuals who are assigned, identify with, or interact with other individuals on a regular basis to perform work-related tasks can be considered a group or team. Although individuals are often members of more than one group at a time, the key aspect of association is task interdependence; sometimes referred to as *sharedness*. Thus the terms can be used interchangeably. Three conditions must exist for shared climate and shared perceptions to exist:

1. Individuals must interact;

2. Individuals must have some common goal that predisposes individuals toward collective action; and
3. There must be sufficient task interdependence to develop shared understandings (Loo, 2003).

Interaction

Axelrod (1984) believed that continual interaction between the same individuals was imperative. Axelrod suggested that the continuing interaction was what allowed “for cooperation based on reciprocity to be stable” (p. 125). Furthermore, Axelrod (1984) provided that the greater number of interactions which the same two individuals had, the more likely the individuals would be able to establish reciprocity. Moreover, through joint contributions, partners have committed themselves to the venture and therefore share proportionately the gains and losses (Kogut, 1989).

Common Goal

Deutsch (1949a, 1949b, 1973, 2000) is credited with initially developing the theory of Cooperation and Competition beginning in the 1940's and has continued to elaborate on his original work. Deutsch explained that his theory has two premises, one relates to the type of interdependence among goals of the people involved in a given situation, the other pertains to the type of action taken by the people involved (Deutsch, 2000). Deutsch suggested that when there is interdependence, entities will pursue goals in their own self interest (Tjosvold, West, & Smith, 2003). However, their interaction depends on their belief in how their goals are related and their interaction determines the outcome (Tjosvold, et al.).

Task Interdependence

Deutsch (2000) proposed two types of goal interdependence: positive and negative. He explained that positive goal interdependence will result in mutual benefit or loss, whereas negative interdependence will result in one person or organization reaping benefit, while the other suffers loss. Furthermore, Deutsch (2000) noted that the occurrence of “purely” positive or negative situations is rare because people most often have a mixture of positive and negative interdependent goals. Moreover, Deutsch recognized that while there are two types of interdependence, occasions do exist where no interdependence will occur. When entities are independent, no conflict occurs between the entities; the entities have no affect on one another, directly or indirectly. Therefore, continual interaction is important for interdependence to occur.

Conceptual Framework

Anderson and West’s (1999) Team Climate Inventory was used for the conceptual framework for this study. The TCI is a multidimensional measure of work climate inventory based on four scales identified by Anderson and West (1998): Vision, participative safety, task orientation, and support for innovation.

The initial 116-item TCI instrument was developed through exploratory and confirmatory factor analyses of senior management teams in 27 hospitals in the United Kingdom. Further analyses conducted by Anderson and West (Anderson & West, 1996a) resulted in the 61-item version of the TCI released in 1998 (Tseng, Liu, & West, 2009). A shorter, 44-item version of the TCI was released in 1999 by Anderson and West and has since been used to measure climate in Norway (see Mathison, et al., 2004), Canada

(see Loo & Loewen, 2002; and Loo, 2003), and Taiwan (Tseng, et al., 2009). Six of the 44 items included in the 1999 version of the TCI are proposed to measure the fifth scale: Social desirability. The five scales proposed by Anderson and West (1999) are shown in Figure 1.

Figure 1 also includes 15 subscales proposed by Anderson and West (1996b) who identified the subscales through qualitative content analyses:

The TCI was examined in some detail by correlating subjects' self-reported ratings of group climate with the results of the content analyses of tape-recorded team meetings. This analysis examined the correspondence between climate, as assessed by team members on the TCI, and verbal interactions coded by independent raters on verbal dimensions derived from the Four Factor Model of Climate (see West & Anderson, 1992; Anderson & West, 1996b, p. 64).

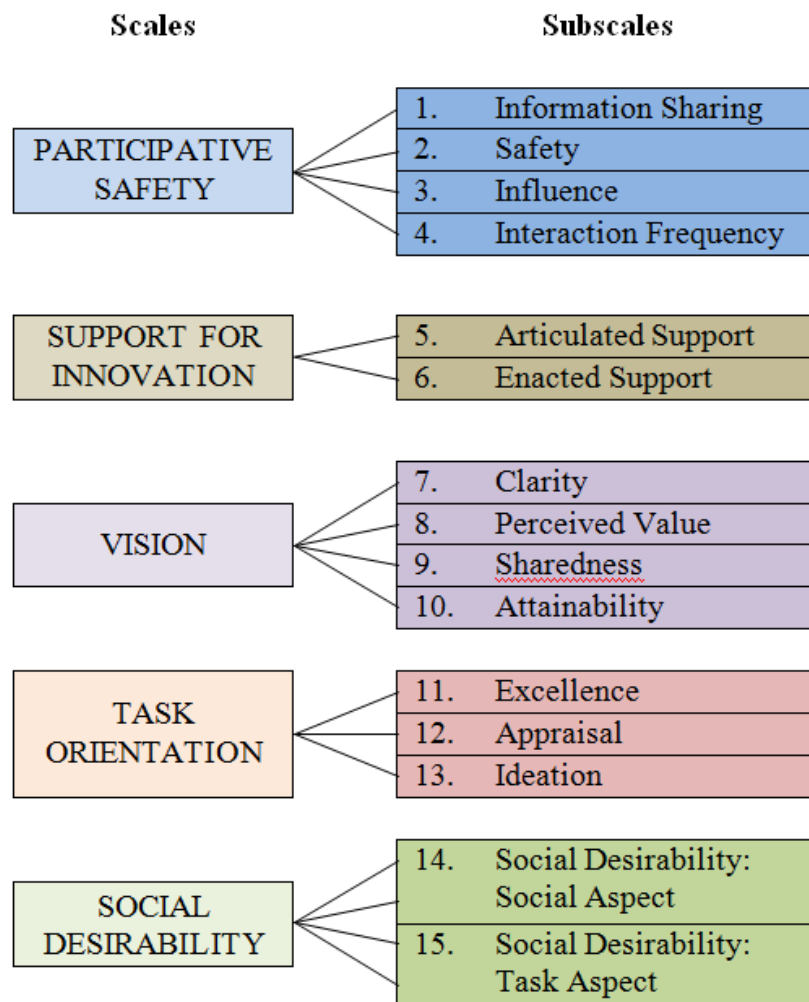


Figure 1. Scales and subscales of the Team Climate Inventory (Anderson & West, 1999).

Vision is the valued outcome that can serve as a motivating factor. Vision should be clear, negotiated, attainable, and should evolve out of the desire to attain desired outcomes (Tseng, et al., 2009). Participative safety represents the ability of group members to be involved in the sharing of ideas and information in a nonthreatening, supportive environment. “Participation is seen as a means of reducing resistance to

change, and encouraging commitment and engagement” (Tseng, et al., 2009, p. 467).

Task orientation is the collective accountability for excellence in performance of shared outcomes. “High task orientation is characterized by reflexivity, constructive controversy, tolerance of minorities, and commitment to excellence” (Tseng, et al., 2009, p. 468). Support for innovation is expressed through the expectation and support of new ideas and practices. “Practical support for innovation and creativity denotes, not just team outcomes and products, but also creative suggestions regarding changes to team objectives, processes, and strategies” (Tseng, et al., 2009, p. 468). Finally, social desirability reflects an organization’s level of functionality towards a target and the members’ perception of their organization’s esteem.

CHAPTER III

METHODS AND PROCEDURES

Numerous studies (Anderson, et al., 1990; Anderson & West, 1996a, 1996b, 1998; Loo & Loewen, 2002; Mathison, et al., 2004; West & Farr, 1989) have been conducted regarding organizational climate and have provided guidance for this study. However, the structure of the AAAE differs from organizations in the previously mentioned studies, which requires slight deviation from the previous studies regarding the populations of interest. Therefore, the research design, populations and samples, the instrumentation used to collect data, the processes implemented to determine validity and reliability of the instrument, the process of data collection, and lastly, the data analysis process used for this study will be addressed in this chapter. Because of the complexity in developing the instrument, the processes associated with the pilot test will be presented first, followed by the processes associated with collection, analyses, and reporting of the results in Chapter IV.

Research Design

The research design of this nonexperimental quantitative study was descriptive and inferential in nature. The overarching construct proposed to be measured through conducting this study was organizational climate, which is considered to be intangible (Ary, Jacobs, Razavieh, & Sorenson, 2006). Intangibles are not directly observable; therefore, indirect measures were obtained through questionnaires to determine the organizational climate of the AAAE.

Population

The target population for this study was the members of the AAAE. The frame used to identify members of the AAAE was the on-line *Directory of the American Association for Agricultural Education*. The directory was obtained from the database manager of the AAAE in the fall of 2009, and included a total of 593 faculty, student, or associate members. The frame was scrutinized by the researcher and four members of the AAAE from different regions and research priority areas to eliminate duplications or fill omissions that would be potential sources of frame error. The revised frame included 540 individuals.

Membership

According to the *Constitution and Bylaws of the American Association for Agricultural Education*, Article IV – Membership and Dues, there are five types of membership in the AAAE:

Active Membership – Individuals employed by colleges or universities, and who are engaged in agricultural education, as broadly defined herein, are eligible for Active Membership. Active members shall include those persons who have paid current dues as established in Article IV, Section 6. Once approved by the Board of Directors, Active Membership may be maintained through timely payment of annual dues (Active Annual Member), or by paying a lifetime membership fee (Active Life Member).

Associate Membership – Individuals who wish to associate with and support AAAE, but who do not qualify for Active Membership, or do not wish to

participate in the governance of AAAE, may be Associate Members. Once approved by the Board of Directors, Associate Membership is maintained through timely payment of annual dues.

Student Membership – Individuals accepted into a graduate degree program pursuing agricultural education objectives, as broadly defined herein, are eligible for Student Membership. Once approved by the Board of Directors, Student Members maintain their membership through timely payment of annual dues and continued student status.

Honorary Membership – Honorary membership may be conferred upon recommendation of the Board of Directors to individuals who have distinguished themselves by making outstanding contributions to the mission and goals of AAAE.

Retired Life Membership – Life membership may be conferred upon recommendation of the Board of Directors to individuals who have been active members of the organization (minimum of five years in good standing) who have retired or will retire during the academic year in which the annual AAAE meeting is held. The life membership will entitle the holder to no further payment of dues and to complimentary copies of the *AAAE Newsletter* and *Journal of Agricultural Education*. (AAAE, 2008, pp. 3-4).

All AAAE members ($N = 540$) were invited to complete the questionnaire to more accurately describe the characteristics of the population and eliminate potential

errors associated with subject selection and sampling. Not all former dues-paying members were included in the directory and the actual population was unknown; therefore, frame error existed.

Pilot Test Instrument

Development of the TCI instrument was reported in a series of studies (Anderson & West; West & Anderson, 1992; West & Farr, 1989) and outlined by Anderson and West (1996b). None of the previous studies were conducted in the United States or used a population that was reasonably comparable to the AAAE. Furthermore, the data collection instrument used in previous studies contained several potential sources of measurement error (e.g., multiple-component or *double-barreled* items).

Pilot Test Population

Faculty and staff of the Department of Agricultural Leadership, Education, and Communications at Texas A&M University served as the pilot study sample. The sample included individuals engaged in teaching and research in the research priority areas ($n = 30$).

Instrumentation

A three-section paper data collection instrument was researcher-developed by modifying the 51-item, commercially available, TCI developed by Anderson and West in 1996 and revised in 1999. The modifications to the design and format of the data collection instrument were guided by Dillman, Smyth, and Christian's (2009) suggestions.

In each section, subjects were asked to respond to statements or questions using a five-point Likert-type scale to reflect levels of agreement. The first section consisted of 30 statements representing communication and innovation behaviors within the Department of Agricultural Leadership, Education, and Communications at Texas A&M University. The associated Likert-type scales were comprised of five anchors: 1 = Strongly Disagree; 2 = Disagree; 3 = Neither Agree nor Disagree; 4 = Agree; 5 = Strongly Agree.

The second section consisted of 13 questions used to assess the level of the support for the objectives of the Department of Agricultural Leadership, Education, and Communications. The associated summatable scale items were comprised of three anchors representing a five-point scale: 1 = Not at all; 3 = Somewhat; 5 = Completely.

The third section consisted of eight questions related to the task style of members of the Department of Agricultural Leadership, Education, and Communications. The associated summatable scale items were comprised of three anchors representing a five-point scale: 1 = To a very little extent; 3 = To some extent; 5 = To a very great extent.

Design and Format

The design and format of the data collection instrument for the pilot test were guided by Dillman (2007). Dillman suggested that self-administered questionnaires should be “constructed in ways that make them easy to understand and answer” (p. 79). Dillman also noted that “respondent-friendly questionnaire design can improve response rates” (p. 81). Dillman further suggested that brightly colored paper should be used to construct questionnaires; however, the color of paper should contrast with the color of

the print. Questionnaires for the pilot study were printed on pastel-green colored paper with black print to increase the likelihood that questionnaires would be easy to read.

Dillman further suggested that an appropriate font for questionnaires was a non-stylized font, greater than a nine-point in size; therefore, an 11-point Calibri font was used throughout the paper questionnaire to further increase the readability.

The paper questionnaire for the pilot study was constructed using 8 ½ in. by 11 in. paper, stapled with one staple in the upper-left corner. Dillman noted that cover letters and lengthy instructions should not be included in the questionnaire because they increase the time spent on reading materials in the questionnaire before the subject has the opportunity to answer the first question. To eliminate the amount of time subjects would spend reading a cover letter, subjects were solicited to participate at the conclusion of a faculty meeting. An explanation of the purpose of the study was provided while questionnaires were handed out. Brief oral instructions on how to complete the questionnaire were also given. To further reduce the likelihood of misunderstanding, brief instructions were printed on the front cover to aid subjects in finding the first question on the first page when they opened the paper questionnaire.

Measurement Error

Measurement error cannot be eliminated; however, it can be minimized. Hence, the steps taken to minimize measurement error will be outlined in the following section. An instrument “can be reliable without being valid; but it cannot be valid unless it is first reliable” (Ary, Jacobs, Razavieh, & Sorensen, 2006, p. 256); reliability must be established by an appropriate method. The researcher-developed questionnaire was

constructed based on the information provided in the TCI manual (Anderson & West, 1999). At issue was the validity and reliability of the revised questionnaire.

Validity and Reliability

The researcher-developed data collection instrument used in the pilot test was constructed using information from similar studies and the TCI manual (Anderson & West, 1999). At issue was the validity and reliability of the questionnaire. Procedures addressing initial face validity, content validity, and construct validity of the instrument will be presented first, followed by procedures for addressing reliability.

Validity

“Validity is the most important consideration in developing and evaluating measuring instruments” (Ary, Jacobs, Razavieh, & Sorensen, 2006, p. 243). Three types of validity were determined for the data collection instrument used in the pilot test: Face validity, content validity, and construct validity.

Face Validity

Face validity of the data collection instrument used in the pilot test was determined by a panel of seven experts; each expert was informed of the purpose of the questionnaire and asked to determine if the paper questionnaire “appeared valid for its intended purpose” (Ary, Jacobs, Razavieh, & Sorensen, 2006, p. 439). Six members of the expert panel were faculty members of the Department of Agricultural Leadership, Education, and Communications at Texas A&M University; one member was on faculty at the University of Missouri, in the Department of Agricultural Education; all of whom

are considered experts in the areas of agricultural education, instrument development, and research methods.

Content Validity

Content validity of the data collection instrument used in the pilot test was determined by the previously noted panel of experts. Each of the experts assessed the “appropriateness and representativeness of the items” in the questionnaire (Ary, Jacobs, Razavieh, & Sorensen, 2006, p. 256). Six of the seven experts expressed a need to split the multiple-component or *double-barreled* items present in the original TCI instrument.

Construct Validity

Construct validity was determined in several previous studies (Anderson, et al., 1990; Anderson & West, 1996a, 1996b, 1998; Loo & Loewen, 2002; Mathison, et al., 2004; West & Farr, 1989) through exploratory and confirmatory factor analyses. Development of scales and testing of construct validity of the TCI were outlined by Anderson & West (1996b) who reported a series of studies (West & Anderson, 1992; West & Farr, 1989) that began in 1989 and resulted in the commercial TCI data collection instrument published by Assessment Services for Employment in 1996 and revised in 1999 (Anderson & West, 1999).

Reliability

Reliability of the TCI instrument was reported in a series of studies (Anderson & West; West & Anderson, 1992; West & Farr, 1989) and outlined by Anderson and West (1996b), who reported Cronbach’s alpha coefficients for the five scales—participative safety, support for innovation, vision, task orientation, social desirability—that ranged

from .64 to .95 ($N = 717$). Alpha coefficients below .80 are considered to be suspect (Field, 2009); therefore, reliability of some scales of the TCI instrument would be suspect as well.

None of the previous studies were conducted in the United States or used a population that was reasonably comparable to the AAAE. Furthermore, the data collection instrument used in previous studies contained several potential sources of measurement error (e.g., multiple-component or *double-barreled* items), which required expanding the instrument to 51 single-component competencies (see Figure 2). Therefore, a pilot test was conducted to estimate the reliability of the OCI instrument (Appendix A).

Scales	Subscales	Original	Revised
Participative Safety	1. Information Sharing	1, 16, 23	1, 18, 26
	2. Safety	7, 13	7, 8, 15
	3. Influence	3, 8, 19	3, 9, 22
	4. Interaction Frequency	5, 14, 20, 26	5, 16, 23, 29, 30
Support for Innovation	5. Articulated Support	2, 10, 21, 24	2, 11, 12, 24, 27
	6. Enacted Support	6, 11, 17, 25	6, 13, 19, 20, 28
Vision	7. Clarity	27, 31	31, 36
	8. Perceived Value	28, 33, 34, 35	32, 33, 38, 39, 40
	9. Sharedness	29, 30, 37	34, 35, 43
	10. Attainability	32, 36	37, 41, 42
Task Orientation	11. Excellence	43, 44	50, 51
	12. Appraisal	39, 40, 41	46, 47, 48
	13. Ideation	38, 42	44, 45, 49
Social Desirability	14. Social Desirability: Social Aspect	9, 12, 18	10, 14, 21
	15. Social Desirability: Task Aspect	4, 15, 22	4, 17, 25
		44 Items	51 Items

Figure 2. The original and revised data collection instrument items are included in Appendix A.

Miller, Torres, and Lindner (2004) noted that “a measure of reliability can also be obtained using a single administration of an instrument” (p. 14) by determining internal consistency. Miller, Torres, and Lindner further noted that Cronbach’s α coefficient can be used when items have multiple response categories, such as the

Likert-type response categories present in the second section of the questionnaire used in this study, and “will provide an appropriate estimate of reliability” (p. 15).

Response data were manually entered into to a Microsoft Excel spreadsheet, variable labels were added to the top row of the spreadsheet and then the spreadsheet imported into SPSS® version 17.0 for Windows™ platform computers to determine the Cronbach’s α coefficient. The results for each scale of the questionnaire are noted in Table 1.

Table 1. *Initial Reliability Estimates for the TCI Scales of the Pilot Test Questionnaire (n = 30)*

Scales	α
Participative Safety	0.88
Support for Innovation	0.90
Vision	0.87
Task Orientation	0.84
Social Desirability	0.51

Cronbach’s alpha coefficients were calculated for the five TCI scales (West & Anderson, 1998)—participative safety, support for innovation, vision, task orientation, and social desirability—yielding coefficient estimates of reliability of .88, .90, .87, .84, and .51 respectively ($N = 30$). According to Field (2009), alpha coefficients of .80 or greater are considered to be acceptable. The low coefficient ($r = .51$) estimate of reliability associated with the social desirability scale was investigated using SPSS® version 17.0 to determine if the coefficient would increase by eliminating one or more of the items in the scale. No solution could be found to increase the coefficient to an

acceptable level ($r \geq .80$) by eliminating one or more of the items in the scale. Therefore, items associated with the social desirability scale were eliminated from the questionnaire. The total number of items was reduced from 51 to 45 (see Figure 3), which yielded an overall reliability coefficient for the revised instrument of .95.

Scale	Items	<i>n</i>
Participative Safety	1, 3, 4, 6, 7, 12, 13, 14, 18, 20, 23, 24	12
Support for Innovation	2, 8, 9, 10, 11, 15, 16, 19, 21, 22	10
Vision	25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	13
Task Orientation	38, 39, 40, 41, 42, 43, 44, 45	8

Figure 3. Scale items after removing items associated with Social Desirability.

Organizational Climate Inventory Instrument

Instrumentation

A four-section electronic data collection instrument, Organizational Climate Inventory (OCI), was researcher-developed based on the results of the previously described pilot test. The modifications to the design and format of the data collection instrument were guided by Dillman, Smyth, and Christian's (2009) suggestions. In the first three sections, subjects were asked to respond to 45 statements or questions using a five-point Likert-type scale to reflect levels of agreement. The fourth section included questions regarding professional characteristics.

The first section consisted of 24 statements representing communication and innovation behaviors (Anderson & West, 1996b) within the AAAE. The associated Likert-type scales were comprised of five anchors: 1 = Strongly Disagree; 2 = Disagree; 3 = Neither Agree nor Disagree; 4 = Agree; 5 = Strongly Agree.

The second section consisted of 13 questions used to assess the level of the profession's support 2007-2010 version of the NRA. The associated summatable scale items were comprised of three anchors representing a five-point scale: 1 = Not at all ; 3 = Somewhat; 5 = Completely.

The third section consisted of eight questions related to the task style of members (Anderson & West, 1996b) of the AAAE. The associated summatable scale items were comprised of three anchors representing a five-point scale: 1 = To a very little extent; 3 = To some extent; 5 = To a very great extent.

The purpose of the fourth section was to identify subjects' characteristics: Academic position, research priority area focus, regional affiliation, AAAE membership status, length of membership in AAAE, frequency of attendance at regional and national AAAE meetings, and length of employment.

Design and Format

The design and format of the OCI data collection instrument were guided by Dillman (2007). An electronic, Web-based questionnaire was deemed the most appropriate mode for data collection, given the national scale of this study. Although mixed-mode methods were not used in this study, Dillman's (2007) unimode construction principles were followed when creating the electronic version of the

questionnaire, because the pilot study was conducted using a different mode: a paper questionnaire. Dillman defined unimode construction as “writing and presenting of questions to respondents in a way that assures receipt by [subjects] of a common mental stimulus, regardless of survey mode” (p. 232). Dillman noted that inconsistencies may be reduced or eliminated by utilizing unimode construction when conducting data collection with mixed-mode methods. Hence, once face validity, content validity, and reliability estimates were established in the pilot test, contents of the paper questionnaire were duplicated into an electronic version of the questionnaire developed using Web-hosted software provided by Hosted Survey™, a paid service for developing and administering online questionnaires. After reviewing several online survey services, the researcher determined that Hosted Survey’s™ services were appropriate for this study because they offered convenient, sophisticated, manipulatable software and were cost effective.

Face Validity

Face validity of the OCI instrument was determined by a panel of eight experts; each expert was informed of the purpose of the questionnaire and asked to determine if the electronic questionnaire “appeared valid for its intended purpose” (Ary, Jacobs, Razavieh, & Sorensen, 2006, p. 439). Six members of the expert panel were faculty members of the Department of Agricultural Leadership, Education, and Communications at Texas A&M University; one member was on faculty at the University of Missouri, in the Department of Agricultural Education; one member was the President of the AAAE, who is a faculty member at the University of Nebraska-Lincoln; all of whom are

considered experts in the areas of agricultural education, instrument development, and research methods.

Content Validity

Content validity of the OCI instrument was determined by the previously noted panel of experts. Each of the experts assessed the “appropriateness and representativeness of the items” in the questionnaire (Ary, Jacobs, Razavieh, & Sorensen, 2006, p. 256).

Construct Validity

As previously noted, although construct validity was determined in several previous studies (Anderson, et al., 1990; Anderson & West, 1996a, 1996b, 1998; Loo & Loewen, 2002; Mathison, et al., 2004; West & Farr, 1989) through exploratory and confirmatory factor analyses, each of the previously noted studies was conducted in foreign countries with populations that can be assumed to be different than agricultural educators in the United States.

“The influence of common methods variance (CMV) has been a pervasively cited concern in organizational research” (Meade, Watson, & Kroustalis, 2007, p. 1). CMV is important when involving self-reported measures, such as collecting independent variables and dependent variables via the same method; e.g. self administered questionnaire. Among the various methods of assessment reported to be effective in controlling for CVM (e.g. Harmon’s single factor test, partial correlation, etc.) those based on factor analysis tend to be the most rigorous (Meade, et al.). Hence, a principal component analysis was used as a method for controlling CVM and to test if

scales proposed in previous foreign studies (Anderson, et al., 1990; Anderson & West, 1996a, 1996b, 1998; Loo & Loewen, 2002; Mathison, et al., 2004; West & Farr, 1989) would remain stable in a U.S. population.

A principal component analysis was conducted using SPSS® version 17.0 for Windows™ platform computers. In determining the appropriate analysis and interpretation of the data, the primary guidance was exploratory factor analysis as outlined in Field (2009). Tabachnick and Fidell (2007) served as a secondary source of guidance.

The 45 scale items from the OCI were included in the principal component analysis using a varimax rotation; coefficients with an absolute value less than .5 were suppressed. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .94 and the Bartlett test of sphericity was significant ($p < .001$). All commonalities were greater than .30. Field (2009) noted that KMO values above .90 are considered to be *superb*; therefore, data were suitable for factor analytic procedures. Eigenvalues, percentages of variance, and cumulative percentages for scales of the OCI are reported in Table 2. Factor loadings from the principal component analysis of the items of the OCI are reported in Table 3.

Table 2. *Eigenvalues, Percentages of Variance, and Cumulative Percentages for Scales of the OCI Questionnaire*

	Scale	Eigenvalue	% of variance	Cumulative %
1	Organizational Cohesion	7.64	16.97	16.97
2	Collaboration and Cooperation	5.56	12.35	29.33
3	Standard of Performance	5.20	11.56	40.88
4	Collegiality	4.44	9.87	50.75
5	Organizational Vision	4.38	9.74	60.49

Eight items were not included in the scales because they had coefficients with an absolute value less than .5. One item was not included because it was the only item that loaded on that scale. One item was not included because it had loadings on two scales. The five-scale solution accounted for 60.49% of the total variance.

Table 3. *Scale Loadings from the Principal Component Analysis of the Items of the OCI*

Item	Scale loading
Scale 1: Organizational Cohesion	
In the AAAE, people feel accepted.	.80
The AAAE is open to change.	.76
Everyone's view is listened to, even if it is in a minority.	.76
The AAAE is responsive to change.	.70
In the AAAE, people feel understood.	.66
We have a 'we are in it together' attitude.	.63
Scale 2: Collaboration and Cooperation	
Members of the AAAE <i>provide</i> resources to help apply new ideas.	.75
Members of the AAAE <i>share</i> resources to help apply new ideas.	.70
Assistance in developing new ideas is readily available.	.66
AAAE members provide practical support for new ideas and their application.	.60
People in the AAAE cooperate in order to help develop new ideas.	.56
There is a lot of give-and-take.	.53
People in the AAAE are always searching for new ways of looking at problems.	.51
Scale 3: Standard of Performance	
Does the AAAE critically appraise potential weaknesses in what it is doing in order to achieve the best possible outcome?	.71
Are AAAE members prepared to question what the AAAE is doing?	.70
Do members of the AAAE build on each other's ideas in order to achieve the best possible outcome?	.69
Is there a real concern among AAAE members that the AAAE should achieve the highest standards of performance?	.67
Do you and your AAAE colleagues monitor each other so as to maintain a higher standard of work?	.65
Does the AAAE provide a clear criterion that members try to meet in order to achieve excellence as an association?	.61

(continued)

Table 3 Continued

Item	Scale loading
Scale 4: Collegiality	
We interact frequently.	.81
We keep in regular contact with each other.	.77
We keep in touch with others in the association.	.76
Members of the AAAE meet frequently to talk <i>formally</i> .	.64
Members of the AAAE meet frequently to talk <i>informally</i> .	.60
People keep each other informed about work-related issues in the AAAE.	.56
Scale 5: Organizational Vision	
To what extent do you think the <i>National Research Agenda</i> priorities are realistic?	.86
How worthwhile do you think the <i>National Research Agenda</i> priorities are to you?	.85
To what extent are you in agreement with the <i>National Research Agenda</i> priorities?	.83
To what extent do you think the <i>National Research Agenda</i> priorities are useful priorities?	.83
To what extent do you think the <i>National Research Agenda</i> priorities can be attained?	.82
To what extent do you think the <i>National Research Agenda</i> priorities are appropriate priorities?	.79
How worthwhile do you think the <i>National Research Agenda</i> priorities are to the wider society?	.75

After the principal component analysis was completed, a list of the scales and the items associated with the scales were e-mailed to a panel of eight experts; each expert was asked to review the items associated with each scale and provide one to three word description of what they believed the items in each scale measured. The panel's responses were pooled and common themes were used to name each of the scales. Each of the new scales identified by the principal component analysis will be referred to

hereupon as the scales: Organizational cohesion, collaboration and cooperation, standard performance, collegiality, and vision.

Post Hoc Reliability

SPSS® version 17.0 for Windows™ platform computers was used to determine the Cronbach's α coefficient for the revised scales. The results for each scale of the OCI questionnaire are noted in Table 4.

Table 4. *Reliability Estimates for the Organization Climate Inventory Questionnaire by Scale (n = 283)*

Scale	α
Organizational Cohesion	.91
Collaboration and Cooperation	.91
Standard of Performance	.87
Collegiality	.86
Organizational Vision	.95

Cronbach's alpha coefficients were calculated for the five scales of the OCI—organizational cohesion, collaboration and cooperation, standard performance, collegiality, and vision—yielding coefficient estimates of reliability of .91, .91, .87, .86, and .95 respectively ($N = 283$). According to Field (2009), alpha coefficients of .80 or greater are considered to be acceptable. Through the previously presented principal component analysis, the total number of items was reduced from 45 to 33 (see Figure 4). A bivariate correlation matrix is provided in Table 5. No reliability indices were

generated for static information reflected in section four of the data collection instrument.

Scale	Items	<i>n</i>
Organizational Cohesion	6, 7, 8, 9, 10, 12	6
Collaboration and Cooperation	2, 11, 15, 16, 17, 19, 22	7
Standard of Performance	40, 41, 42, 43, 44, 45	6
Collegiality	4, 13, 14, 18, 23	5
Organizational Vision	26, 27, 28, 31, 32, 33, 34, 35, 36	9

Figure 4. Revised scale items of the OCI after principal component analysis.

Table 5. *Bivariate Correlations between OCI Scales (n = 283)*

Scale	1	2	3	4	5
1 Organizational Cohesion					
2 Collaboration and Cooperation	.764				
3 Standard of Performance	.609	.684			
4 Collegiality	.493	.584	.497		
5 Organizational Vision	.389	.392	.495	.320	

Institutional Approval

After the data collection instrument was developed, but prior to implementation of the data collection process, the researcher submitted a proposed plan outlining the

data collection process and all related materials to the Texas A&M University, Office of Research Compliance, Human Subjects' Protection Program, in conjunction with the federally mandated Institutional Review Board. The data collection process began after receiving approval from the Institutional Review Board (Protocol Number: 2009-0594) and followed the requirements and specifications set forth in the approval notice.

Data Collection

This study followed the data collection protocol suggested by Dillman (2007); however, the researcher deviated by attempting four points of contact, rather than five. Dillman (2000, 2007) indicated a schedule for sending questionnaires and correspondence to subjects in his *Tailored Design Method*. Dillman suggested that a brief pre-notice letter be sent to subjects a few days prior to sending the first questionnaire mailing. Therefore, prior to sending the first invitation message, a brief prenotice e-mail message was sent to the AAAE membership by the President of the AAAE via the AAAE electronic list-serve (see Appendix B).

The prenotice indicated the need to investigate the organizational climate of the AAAE and the profession's level of support for the *NRA*. The prenotice also indicated the association president's support for the study. Three personalized e-mail invitations followed the prenotice in approximately five-day intervals; each appeared to be written by a different researcher who was affiliated with a different research focus area so as to appeal to the various interest groups (see Appendix C, Appendix D, and Appendix E).

E-mail invitations were sent using the Hosted Survey™ software to each of the AAAE members' e-mail addresses indicated in the *Directory of the American*

Association for Agricultural Education. The e-mail invitations were used to invite AAAE members to share their experiences and opinions about the AAAE and the *National Research Agenda*, and included a personalized link to the Web-based electronic questionnaire. A more detailed summary of the data collection procedures is indicated in Table 6.

As electronic questionnaires were completed, the names of the individuals who had responded were automatically removed from the correspondence list of AAAE members to avoid sending additional e-mail correspondence. A final response rate of 52.4% ($n = 283$) was obtained.

Table 6. *Correspondence Schedule to AAAE Members*

Data Collection Activity	Medium	Date Sent
Prenotice Message	e-mail	10/28/2009
1 st Invitation	e-mail/Web-software	10/29/2009
2 nd Invitation	e-mail/Web-software	11/04/2009
3 rd Invitation	e-mail/Web-software	11/10/2009

Controlling for Response Bias

Nonresponse error (Ary, Jacobs, Razavieh, & Sorenson, 2006) was a relevant concern; therefore, procedures for handling response bias were followed as outlined as *Method 1* in Lindner, Murphy, and Briers (2001). Respondents were dichotomously split into early ($n = 141$) and late ($n = 142$) respondent groups (Miller & Smith, 1983), and was used as the independent variable. The scales—organizational cohesion,

collaboration and cooperation, standard performance, collegiality, and organizational vision—were used as the dependent variables. A multivariate analysis of variance (MANOVA) was used to compare the variables of interest. A MANOVA is the appropriate analysis when “multiple independent and/or dependent variables and the measured variables are likely to be dependent on each other (i.e., to correlate)... Thus, multivariate analysis allows for the examination of two variables while simultaneously controlling for the influence of the other variables on each of them” (Newton & Rudestam, 1999, p. 137).

Box’s test of equality of covariance was significant ($p < .001$), which is an indicator that the assumption of equality of covariance was violated. However, “the Hotelling’s T^2 is robust in the two-group situation when sample sizes are equal” (Field, 2009, p. 604). Thus, the results of the MANOVA were interpreted using Hotelling’s T^2 —Hotelling’s trace statistic—because of the robustness of the test. Using Hotelling’s trace statistic, there was not a significant effect of respondent group (early or late response) on the scales, $T = .019$, $F(1, 281) = 1.034$, $p = .398$. Therefore, external validity in the form of response bias did not threaten the generalizability of the findings of this study to the population (Lindner, et al., 2001; Radhakrishna & Doamekpor, 2008).

Data Analysis

Summary

Response data were downloaded from the Hosted Survey™ website in a .txt form document, and then imported into a Microsoft Excel spreadsheet. Variable labels were

added to the top row of the Microsoft Excel spreadsheet and then the spreadsheet imported into SPSS data analysis software. Data were analyzed using SPSS® version 17.0 for Windows™ platform computers. The alpha level was set *a priori* at .05.

Research Objective One

The purpose of research objective one was to describe selected professional characteristics of AAAE members. Therefore, frequencies and percentages were reported for AAAE membership status, regional affiliation, regional affiliation, frequency of attendance at regional AAAE meetings, and frequency of attendance at national AAAE meetings.

Research Objective Two

The purpose of research objective two was to describe members' perceptions of the organizational climate of the AAAE using the scales of the OCI and selected professional characteristics of AAAE members. A summated 6σ composite score was calculated in SPSS to provide a standardized point of comparison for each characteristic and scale. A 6σ score is a "transformation" of a normal probability distribution in such a way that the mean of the distribution is 50. One standard deviation in either direction of the mean accounts for 68% of the data in the group; two standard deviations account for 95% of it; and three standard deviations account for 99% of the data.

Individual 6σ scores were also calculated in SPSS for each OCI scale and aggregated by AAAE membership status, regional affiliation, regional affiliation, frequency of attendance at regional AAAE meetings, and frequency of attendance at national AAAE meetings. Each 6σ score was calculated using the following formula:

$$\left(\frac{X - \bar{X}}{SD}\right) 16.67 + 50$$

A 6σ composite score and the 6σ score of each scale were reported as a basis of comparison between groups in terms of the scales. Six-sigma scores were reported by professional characteristics.

Research Objective Three

The purpose of research objective three was to determine if differences existed in the organizational climate of the AAAE based on members' perceptions of the scales of the OCI and the professional characteristics of AAAE members. Mean, standard deviations, and standard error were reported for each OCI scale by AAAE membership status, regional affiliation, regional affiliation, frequency of attendance at regional, and frequency of attendance at national AAAE meetings.

Multivariate methods are generally desirable (Newton & Rudestam, 1999); however, "they work better with large samples. With small samples, the estimates produced by these methods are likely to be unreliable and/or biased" (p. 139). The SPSS function of Crosstabs was used to determine if parametrically amenable cell sizes existed to conduct a MANOVA. Cell sizes were not sufficiently large ($n \geq 30$) enough to conduct a MANOVA; therefore, an ANOVA was conducted for each of the dependent variables (organizational cohesion, collaboration and cooperation, standard performance, collegiality, and vision) using academic position, regional affiliation, membership status, and frequency of attendance at regional and national AAAE meetings as the independent variables. Tests of homogeneity of variance by scale and professional characteristic are reported. Results of each ANOVA— degrees of freedom, sums of squares, mean

squares, F ratio, p -value, eta squared, and power—are reported by OCI scale and levels of professional characteristic. The SPSS test Ryan-Einot-Gabriel-Welsh F (REGWF) was determined *a priori* to serve as the post hoc test where significant differences existed. It is important to note that post hoc tests do not necessarily coincide with logic; rather, what is achieved with a post hoc test is significant differences based on magnitude of distance.

To meet parametrically amenable cell sizes for the variable academic position, master's and doctoral student data were collapsed into a single category reported as *graduate student*. Lecturer, professor emeritus, and other data were collapsed into a single category reported as *other*. Assistant professor, associate professor, and professor data remained categorically unique and are reported respectively.

Eta squared was reported as an indicator of effect size. Effect size can "...help to decide whether the difference an independent variable makes on the dependent variable is strong enough to recommend its implementation in practice" (Ary, Jacobs, Razavieh, & Sorenson, 2006, p. 156). Effect sizes were interpreted according to Tabachnick and Fidell (2007) who noted guidelines for small ($\eta^2 = .01$), medium ($\eta^2 = .09$), and large ($\eta^2 = .25$) effects.

CHAPTER IV

FINDINGS

Research Objective One

The purpose of research objective one was to describe selected professional characteristics of AAAE members. Each subject was asked to indicate his or her AAAE membership status, regional affiliation, research priority area focus, frequency of attendance at regional, and frequency of attendance at national AAAE meetings. Respondents were able to choose all research priority areas that applied to them; hence, summed percentages were greater than 100%. The results are summarized in Table 7.

Most respondents were dues-paying-members ($n = 245$; 86.6%). Nearly 15% of respondents were a master's ($n = 3$; 1.1%) or doctoral ($n = 37$; 13.1%) students; 11 were lecturers (3.9%); 70% were assistant ($n = 68$; 24.0%), associate ($n = 47$; 16.6%), or professors ($n = 83$; 29.3%); five were emeritus professors (1.8%), and 29 were classified as other (10.2%). Each of the five research priority areas were represented, with the most commonly indicated areas being agricultural education in university and post secondary settings ($n = 126$; 44.5%), and agricultural education in schools ($n = 152$; 53.7%).

Nearly half of the respondents were affiliated with the Southern region ($n = 129$; 45.6%), followed by the North Central and Western regions. More than 60% of respondents attended regional AAAE meetings either every year ($n = 106$; 38.7%) or most years ($n = 68$; 24.8%). Similarly, more than 50% of respondents attended the national AAAE meeting either every year ($n = 87$; 31.8%) or most years ($n = 64$; 23.4%).

Table 7. *Professional Characteristics of AAAE Members (n =283)*

Professional Characteristic	<i>f</i>	%
Membership Status		
Dues-paying-member	245	86.6
Non-dues-paying member	38	13.4
Research Priority Area Focus^a		
Agricultural Communications	31	11.0
Agricultural Leadership	43	15.2
Agricultural Education in Domestic and International Settings: Extension and Outreach	66	23.3
Agricultural Education in University and Postsecondary Settings	126	44.5
Agricultural Education in Schools	152	53.7
AAAE Regional Affiliation		
North Central	90	31.8
Southern	129	45.6
Western	64	22.6
Academic Position		
Master's Graduate Student	3	1.1
Doctoral Graduate Student	37	13.1
Lecturer	11	3.9
Assistant Professor	68	24.0
Associate Professor	47	16.6
Professor	83	29.3
Professor Emeritus	5	1.8
Other	29	10.2
Attendance at Regional AAAE Meeting		
Every year	106	38.7
Most Years	68	24.8
Occasionally	67	24.5
Never	33	12.0
Attendance at National AAAE Meeting		
Every Year	87	31.8
Most Years	64	23.4
Occasionally	75	27.4
Never	48	17.5

Note: ^a data does not equal 100% because of members with multiple focus areas

Research Objective Two

The purpose of research objective two was to describe members' perceptions of the organizational climate of the AAAE using the scales of the OCI and based on the selected professional characteristics of AAAE members. Mean scores and standard deviations were calculated for each scale of the OCI and are reported in Table 8.

Organizational vision was the scale with the highest scale mean ($M = 3.47$; $SD = .82$); whereas, standard of performance was the scale with the lowest scale mean ($M = 3.02$; $SD = .78$).

Table 8. *Grand Means of the OCI Scales (n = 283)*

Scales	\bar{G}	SD
Organizational Vision	3.47	.822
Collegiality	3.34	.734
Collaboration and Cooperation	3.26	.747
Organizational Cohesion	3.12	.871
Standard of Performance	3.02	.777

Note: Organizational Vision Scale: 1 = Not at all ; 3 = Somewhat; 5 = Completely; Collegiality Scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Neither Agree nor Disagree; 4 = Agree; 5 = Strongly Agree; Coordination and Cooperation Scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Neither Agree nor Disagree; 4 = Agree; 5 = Strongly Agree; Organizational Cohesion Scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Neither Agree nor Disagree; 4 = Agree; 5 = Strongly Agree; Standard of Performance Scale: 1 = To a very little extent ; 3 = To some extent; 5 = To a very great extent

Individual item frequencies and percentages are reported by scale in the appendices: organizational cohesion (see Appendix G), collaboration and cooperation

(see Appendix H), standard performance (see Appendix I), collegiality (see Appendix J), and vision (see Appendix K).

To overcome differences in scales, a summated 6σ -score was calculated in SPSS to provide a standardized point of comparison across the scales. A summated 6σ composite score was calculated in SPSS to provide a standardized point of comparison for each of the scales. A 6σ score is a “transformation” of a normal probability distribution in such a way that the mean of the distribution is 50. One standard deviation in either direction of the mean accounts for 68% of the data in the group; two standard deviations account for 95% of it; and three standard deviations account for 99% of the data. A summated 6σ score was calculated and then aggregated by professional characteristic (see Table 9).

Table 9. *Summated 6σ -Scores Aggregated by Professional Characteristic (n = 283)*

Professional Characteristic	\bar{X} 6σ -score	<i>SD</i>	<i>min</i>	<i>max</i>
Summated 6σ -Score	50.00	10.54	11.57	79.46
Membership Status				
Dues-paying-member	50.52	10.49	14.97	79.46
Non-dues-paying-member	46.65	10.38	11.57	68.17
Regional Affiliation				
North Central	47.67	10.27	20.88	76.45
Southern	50.72	10.08	11.57	77.67
Western	51.83	11.40	18.22	79.46
Academic Position				
Graduate Student	52.44	6.61	41.05	64.56
Assistant Professor	49.33	8.73	24.73	66.51
Associate Professor	47.73	13.91	11.57	79.46
Professor	49.78	11.23	14.97	77.92
Other	51.62	10.28	23.35	73.44

(continued)

Table 9 Continued

Professional Characteristic	\bar{X} 6σ -score	SD	min	max
Attendance at Regional AAAE Meetings				
Every Year	50.78	11.15	14.97	77.92
Most Years	50.67	9.59	24.84	77.67
Occasionally	48.57	9.88	23.35	79.46
Never	50.73	10.32	27.43	72.96
Attendance at National AAAE Meetings				
Every Year	50.76	10.28	14.97	72.46
Most Years	50.39	11.25	20.88	77.92
Occasionally	48.92	9.35	23.35	77.67
Never	50.97	10.91	18.22	79.46

The summated 6σ -score of dues-paying-members ($6\sigma = 50.52$, $SD = 10.49$) of the AAAE was greater than the score of the non-dues-paying members ($6\sigma = 46.65$, $SD = 10.38$) and the overall summated 6σ -score ($6\sigma = 50.00$, $SD = 10.54$). The summated 6σ -score of AAAE members in the Western region ($6\sigma = 51.83$, $SD = 11.40$) was the greatest score, followed by the summated 6σ -scores of AAAE members in the Southern ($6\sigma = 50.72$, $SD = 10.08$) and North Central regions ($6\sigma = 47.67$, $SD = 10.27$). The summated 6σ -score of graduate students ($6\sigma = 52.44$, $SD = 6.61$) was the greatest, followed by members categorized as *other* ($6\sigma = 51.62$, $SD = 10.28$), professors ($6\sigma = 48.78$, $SD = 11.23$), assistant professors ($6\sigma = 49.33$, $SD = 8.73$), and associate professors ($6\sigma = 47.73$, $SD = 13.91$).

The summated 6σ -score of the AAAE members who attended their regional AAAE meeting every year ($6\sigma = 50.78$, $SD = 11.15$) was the highest, followed by the AAAE members who never attended ($6\sigma = 50.73$, $SD = 10.32$) their regional AAAE

meeting, those who attended most years ($6\sigma = 50.67$, $SD = 9.57$), and those who attended occasionally ($6\sigma = 48.57$, $SD = 9.88$). The summated 6σ -score of the AAAE members who never attended the national AAAE meeting ($6\sigma = 50.97$, $SD = 10.91$) was the highest, followed by those members who attended their regional AAAE meeting every year ($6\sigma = 50.76$, $SD = 10.28$), those who attended most years ($6\sigma = 50.39$, $SD = 11.25$), and those who attended occasionally ($6\sigma = 48.92$, $SD = 9.35$).

A 6σ score was calculated and then aggregated by for each OCI scale; values are listed in Table 10. Mean 6σ scores were calculated for each OCI scale and are reported as aggregated by professional characteristic: AAAE membership status (see Table 11), regional affiliation (see Table 12), regional affiliation (see Table 13), frequency of attendance at regional AAAE meetings (see Table 14), and frequency of attendance at national AAAE meetings (see Table 15).

Table 10. 6σ -Scores by OCI Scale ($n = 283$)

Scale	\bar{X} 6σ -score	SD	min	Max
Summated 6σ -Score	50.00	10.54	11.57	79.46
Organizational Cohesion	50.00	13.90	15.83	79.95
Collaboration and Cooperation	50.00	13.29	9.66	80.88
Standard Performance	50.00	12.72	16.78	82.31
Collegiality	50.00	13.13	8.09	79.65
Organizational Vision	50.00	14.06	7.51	76.18

Mean 6σ scores for each OCI scale by membership status are presented in Table 11. Mean scores associated with dues-paying-members are above the mean for all of the

scales and had a more expansive range in comparison to the non-dues-paying-members. Mean scores associated with non-dues-paying-members are below the mean for all of the scales.

Table 11. *OCI Scale 6 σ -Scores by Membership Status (n = 283)*

Scale		\bar{X} 6 σ -score	SD	min	max
1	Dues-paying-member	50.73	16.58	9.34	85.84
	Non-dues-paying-member	45.33	16.70	9.34	76.28
2	Dues-paying-member	50.63	16.78	-0.54	88.74
	Non-dues-paying-member	45.94	15.54	-0.54	75.98
3	Dues-paying-member	50.46	16.86	6.62	92.38
	Non-dues-paying-member	47.00	15.29	6.62	77.07
4	Dues-paying-member	50.49	16.76	-3.15	87.68
	Non-dues-paying-member	46.80	15.91	-3.15	69.52
5	Dues-paying-member	50.86	15.86	-0.13	80.95
	Non-dues-paying-member	44.44	20.58	-0.13	74.20

Note: 1 = Organizational Cohesion, 2 = Collaboration and Cooperation, 3 = Standard Performance, 4 = Collegiality, 5 = Vision; Dues-paying-members ($n = 245$), Non-dues-paying-members ($n = 38$)

Mean 6 σ scores for each OCI scale by regional affiliation are presented in Table 12. Mean scores associated with AAAE members affiliated with the North Central region are below the mean for all of the scales. Mean scores associated with AAAE members affiliated with the Southern region are above the mean for all of the scales except organizational cohesion. Mean scores associated with AAAE members affiliated with the Western region are above the mean for all of the scales.

Table 12. *OCI Scale 6 σ -Scores by Regional Affiliation (n = 245)*

Scale		\bar{X} 6 σ -score	SD	min	max
1	North Central	48.48	17.30	9.34	85.84
	Southern	49.67	16.28	9.34	85.84
	Western	52.82	16.44	9.34	85.84
2	North Central	47.36	16.91	-0.54	88.74
	Southern	50.77	16.58	-0.54	88.74
	Western	52.17	16.30	9.02	88.74
3	North Central	46.64	14.88	6.62	80.13
	Southern	50.93	17.18	6.62	92.38
	Western	52.85	17.47	6.62	92.38
4	North Central	46.25	16.17	-3.15	87.68
	Southern	51.45	15.91	-3.15	87.68
	Western	52.34	18.18	19.56	87.68
5	North Central	46.74	15.44	8.88	76.45
	Southern	51.67	17.10	-0.13	80.95
	Western	51.21	17.05	-0.13	78.70

Note: 1 = Organizational Cohesion, 2 = Collaboration and Cooperation, 3 = Standard Performance, 4 = Collegiality, 5 = Vision; North Central ($n = 90$), Southern ($n = 129$), Western ($n = 64$)

Mean 6 σ scores for each OCI scale by academic position are presented in Table 13. Mean scores associated with master's students, doctoral students, and emeritus professors are above the mean for all of the scales. Mean scores associated with lecturers are below the mean for all of the scales except organizational cohesion. Mean scores associated with assistant professors, professors, and other vary. Mean scores associated with associate professors are below the mean for all of the scales.

Table 13. *OCI Scale 6 σ -Scores by Academic Position (n = 283)*

Scale		\bar{X} 6 σ -score	SD	min	max
1	Master's Student	55.03	10.25	47.59	66.71
	Doctoral Student	51.90	11.72	25.28	73.09
	Lecturer	52.52	15.18	18.90	73.09
	Assistant Professor	44.64	15.28	12.53	85.84
	Associate Professor	48.81	20.58	9.34	85.84
	Professor	52.24	17.43	12.53	85.84
	Professor Emeritus	64.16	8.25	53.96	76.28
	Other	51.77	15.57	25.28	85.84
2	Master's Student	60.04	6.38	53.66	66.42
	Doctoral Student	52.89	11.85	28.15	75.99
	Lecturer	48.73	14.64	12.21	63.23
	Assistant Professor	48.88	15.47	18.59	75.98
	Associate Professor	47.28	20.07	-0.54	88.74
	Professor	50.01	18.78	-0.54	88.74
	Professor Emeritus	64.50	8.00	53.66	75.98
	Other	50.25	13.66	28.15	82.36
3	Master's Student	62.78	1.77	61.75	64.82
	Doctoral Student	53.39	15.21	25.00	80.13
	Lecturer	48.11	18.85	18.87	74.01
	Assistant Professor	48.47	14.28	12.75	80.13
	Associate Professor	46.76	18.66	6.62	92.38
	Professor	50.09	16.59	6.62	92.38
	Professor Emeritus	61.75	18.51	37.25	83.20
	Other	51.61	19.34	6.62	92.38

(continued)

Table 13 Continued

Scale		\bar{X} 6 σ -score	<i>SD</i>	<i>min</i>	<i>max</i>
4	Master's Student	55.89	19.80	33.18	69.52
	Doctoral Student	53.19	13.22	24.10	74.06
	Lecturer	49.70	14.82	19.56	64.97
	Assistant Professor	51.28	15.29	1.39	74.06
	Associate Professor	43.81	20.23	-3.15	87.68
	Professor	48.94	17.12	1.39	87.68
	Professor Emeritus	61.34	7.46	51.35	69.52
	Other	53.54	15.67	24.10	87.68
5	Master's Student	50.17	14.30	33.65	58.43
	Doctoral Student	52.40	12.52	24.64	76.45
	Lecturer	49.01	18.71	8.88	71.94
	Assistant Professor	52.57	14.96	8.88	80.95
	Associate Professor	49.04	18.70	-0.13	78.70
	Professor	47.33	18.18	-0.13	78.70
	Professor Emeritus	58.88	17.11	40.41	80.95
	Other	48.95	16.63	-0.13	74.20

Note: 1 = Organizational Cohesion, 2 = Collaboration and Cooperation, 3 = Standard Performance, 4 = Collegiality, 5 = Vision; Master's Student ($n = 3$), Doctoral Student ($n = 37$), Lecturer ($n = 11$), Assistant Professor ($n = 68$), Associate Professor ($n = 47$), Professor ($n = 83$), Professor Emeritus ($n = 5$), Associate Member ($n = 29$)

Mean 6 σ scores for each OCI scale by frequency of attendance at regional AAEE meetings are presented in Table 14. There is no apparent consistency of mean 6 σ scores for the OCI scales by level of frequency of attendance at regional AAEE meetings.

Table 14. *OCI Scale 6 σ -Scores by Frequency of Attendance at Regional AAAE Meetings (n = 274)*

Scale		\bar{X} 6 σ -score	SD	min	max
1	Every Year	49.61	17.38	8.83	85.85
	Most Years	48.95	15.50	12.04	85.85
	Occasionally	50.89	17.23	12.04	85.85
	Never	51.62	16.02	8.83	76.22
2	Every Year	50.76	16.99	1.93	88.95
	Most Years	50.08	17.14	-1.30	88.95
	Occasionally	47.82	16.62	5.15	88.95
	Never	51.83	14.97	18.04	82.50
3	Every Year	51.34	17.43	6.24	92.10
	Most Years	48.95	16.55	18.51	82.90
	Occasionally	47.90	15.32	9.31	92.10
	Never	52.33	17.10	6.24	76.77
4	Every Year	50.56	16.86	0.40	87.87
	Most Years	51.04	16.24	-4.20	87.87
	Occasionally	47.40	16.72	18.82	87.87
	Never	51.32	17.03	23.42	87.87
5	Every Year	51.33	16.68	-0.61	80.92
	Most Years	53.64	14.18	15.24	80.92
	Occasionally	45.90	17.36	-0.61	78.66
	Never	46.54	18.26	-0.61	76.39

Note: 1 = Organizational Cohesion, 2 = Collaboration and Cooperation, 3 = Standard Performance, 4 = Collegiality, 5 = Vision; Every Year ($n = 106$), Most Years ($n = 68$), Occasionally ($n = 67$), Never ($n = 33$)

Mean 6 σ scores for each OCI scale by frequency of attendance at national AAAE meetings are presented in Table 14. Mean scores associated with AAAE members who attend the national AAAE meeting every year are above the mean for all scales. Mean scores associated with AAAE members who attend the national AAAE meeting occasionally are below the mean for all scales. There is no other apparent consistency of

mean 6σ scores for the OCI scales by level of frequency of attendance at national AAAE meetings.

Table 15. *OCI Scale 6σ -Scores by Frequency of Attendance at National AAAE Meetings ($n = 274$)*

Scale		\bar{X} 6σ -score	<i>SD</i>	<i>min</i>	<i>max</i>
1	Every Year	50.29	16.87	12.04	85.85
	Most Years	49.60	17.15	12.04	85.85
	Occasionally	49.31	16.14	15.25	85.85
	Never	51.09	16.93	8.83	85.85
2	Every Year	50.09	16.69	1.93	82.50
	Most Years	50.37	18.25	-1.30	88.95
	Occasionally	48.25	15.55	5.15	88.95
	Never	52.08	16.37	8.37	88.95
3	Every Year	50.41	16.20	6.24	85.97
	Most Years	49.03	17.45	12.37	92.10
	Occasionally	48.35	15.55	9.31	92.10
	Never	53.13	18.14	6.24	92.10
4	Every Year	51.52	16.30	0.40	74.06
	Most Years	50.68	17.52	-4.20	87.87
	Occasionally	47.17	16.11	18.82	87.87
	Never	50.75	17.02	18.82	87.87
5	Every Year	51.17	16.04	-0.61	80.92
	Most Years	51.27	16.13	8.45	80.92
	Occasionally	48.73	16.97	-0.61	78.66
	Never	48.18	18.18	-0.61	78.66

Note: 1 = Organizational Cohesion, 2 = Collaboration and Cooperation, 3 = Standard Performance, 4 = Collegiality, 5 = Organizational Vision; Every Year ($n = 87$), Most Years ($n = 64$), Occasionally ($n = 75$), Never ($n = 48$)

Research Objective Three

The purpose of research objective three was to determine if differences existed in the organizational climate of the AAAE based on members' perceptions of the scales of the OCI and the professional characteristics of AAAE members. Tests of homogeneity of variance by scale and professional characteristic are reported in Table 16. Mean, standard deviations, and standard error, degrees of freedom, sums of squares, mean squares, F ratio, p -value, eta squared, and power are reported by OCI scale and levels of professional characteristic.

Based on the results of the Levene's test reported in Table 16, variances can be assumed to be equal, with two exceptions associated with academic position: organizational cohesion ($p = .003$) and collaboration and cooperation ($p = .033$). Welsh's F tests of equity of means were conducted for organizational cohesion ($F = 3.300$, $df_1 = 4$, $df_2 = 126.304$, $p = .013$) and collaboration and cooperation ($F = 1.165$, $df_1 = 4$, $df_2 = 127.529$, $p = .329$).

Table 16. *Results for Tests of Homogeneity of Variance^a by Scale and Professional Characteristic*

Characteristic and Scale	<i>F</i>	<i>df</i> ₁	<i>df</i> ₂	<i>p</i>
Membership Status				
Organizational Cohesion	0.016	1	281	.899
Collaboration and Cooperation	0.799	1	281	.372
Standard Performance	2.259	1	281	.134
Collegiality	0.594	1	281	.442
Organizational Vision	3.787	1	281	.053
Regional Affiliation				
Organizational Cohesion	0.247	2	280	.781
Collaboration and Cooperation	0.015	2	280	.985
Standard Performance	1.267	2	280	.283
Collegiality	0.700	2	280	.497
Organizational Vision	0.104	2	280	.901
Academic Position				
Organizational Cohesion	4.064	4	278	.003*
Collaboration and Cooperation	2.658	4	278	.033*
Standard Performance	1.269	4	278	.282
Collegiality	1.967	4	278	.100
Organizational Vision	1.992	4	278	.096
Frequency of Attendance at Regional Meetings				
Organizational Cohesion	0.476	3	270	.699
Collaboration and Cooperation	0.084	3	270	.969
Standard Performance	1.289	3	270	.278
Collegiality	0.295	3	270	.829
Organizational Vision	1.150	3	270	.329
Frequency of Attendance at National Meetings				
Organizational Cohesion	0.081	3	270	.970
Collaboration and Cooperation	0.445	3	270	.721
Standard Performance	0.741	3	270	.529
Collegiality	0.012	3	270	.998
Organizational Vision	0.496	3	270	.685

Note: ^a Levene's test of homogeneity; * Welsh's F tests of equity of means results:

Organizational Cohesion ($F = 3.300$, $df_1 = 4$, $df_2 = 126.304$, $p = .013$), Collaboration and Cooperation ($F = 1.165$, $df_1 = 4$, $df_2 = 127.529$, $p = .329$)

The mean scores for the OCI scales by membership status are higher for dues-paying-members than non-dues-paying members (see Table 17). The highest mean score for the OCI scales for dues-paying-members was for organizational vision ($M = 3.52$); whereas, the highest mean scores for the OCI scales for non-dues-paying-members were collegiality ($M = 3.20$) and organizational vision ($M = 3.20$).

Table 17. Means, Standard Deviations, and Standard Errors by Scale and Membership Status ($n = 283$)

Scale	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Organizational Cohesion				
Dues-paying-member	245	3.16	0.867	.055
Non-dues-paying-member	38	2.88	0.873	.141
Collaboration and Cooperation				
Dues-paying-member	245	3.29	0.751	.048
Non-dues-paying-member	38	3.08	0.696	.121
Standard of Performance				
Dues-paying-member	245	3.05	0.786	.050
Non-dues-paying-member	38	2.88	0.713	.126
Collegiality				
Dues-paying-member	245	3.36	0.738	.047
Non-dues-paying-member	38	3.20	0.701	.119
Organizational Vision				
Dues-paying-member	245	3.52	0.782	.052
Non-dues-paying-member	38	3.20	1.015	.132

Note: See Appendix G for each individual item associated with the scale.

The ANOVA results for the comparison of membership status by OCI scales are indicated in Table 18. Significant difference existed between dues-paying-members and non-dues-paying-members for the OCI scale organizational vision ($p = .027$). The eta

squared for organizational vision ($\eta^2 = .017$) indicates a small effect size. Additionally, the observed power ($1 - \beta = .602$) does not meet the minimum power cut-off of 0.80 which indicates that significant differences may exist due to chance or error. Post hoc comparisons were not necessary because there were only two groups. No other significant differences existed between dues-paying-members and non-dues-paying-members in terms of the OCI scales.

Table 18. *Summary of Comparative Analyses of Membership Status by OCI Scales*

Scale	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2	$1 - \beta$
Organizational Cohesion							
Between	1	2.62	2.62	3.48	.063	.012	.460
Within	281	211.66	0.75				
Total	282	214.28					
Collaboration and Cooperation							
Between	1	1.45	1.45	2.62	.107	.009	.364
Within	281	155.85	0.55				
Total	282	157.30					
Standard of Performance							
Between	1	0.86	0.86	1.42	.234	.005	.221
Within	281	169.60	0.60				
Total	282	170.46					
Collegiality							
Between	1	0.87	0.87	1.62	.205	.006	.245
Within	281	151.10	0.54				
Total	282	151.96					
Organizational Vision							
Between	1	3.30	3.30	4.95	.027*	.017	.602
Within	281	187.39	0.67				
Total	282	190.69					

Note: Dues-paying-member ($n = 245$), Non-dues-paying-member ($n = 38$); * ($p \leq 0.05$)

Mean scores for AAAE members affiliated with the Western Region were highest for organizational cohesion ($M = 3.27$), collaboration and cooperation ($M = 3.36$), standard of performance ($M = 3.16$), collegiality ($M = 3.44$). Mean scores for AAAE members affiliated with the Southern Region were highest for organizational vision ($M = 3.56$). Additional mean, standard deviation, and standard error scores are reported by scale and regional affiliation in Table 19.

Table 19. *Means, Standard Deviations, and Standard Errors by Scale and Regional Affiliation*

Scale	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Organizational Cohesion				
North Central	90	3.05	.905	.092
Southern	129	3.11	.852	.077
Western	64	3.27	.860	.109
Collaboration and Cooperation				
North Central	90	3.15	.757	.078
Southern	129	3.30	.743	.066
Western	64	3.36	.730	.093
Standard of Performance				
North Central	90	2.87	.693	.081
Southern	129	3.07	.801	.068
Western	64	3.16	.815	.097
Collegiality				
North Central	90	3.18	.712	.077
Southern	129	3.40	.701	.064
Western	64	3.44	.800	.091
Organizational Vision				
North Central	90	3.31	.762	.086
Southern	129	3.56	.843	.072
Western	64	3.53	.841	.102

Note: See Appendix G for each individual item associated with the scale.

The ANOVA results for the comparison of membership status in terms of OCI scales are indicated in Table 20. Significant difference existed between AAAE members affiliated with the North Central, Southern, and Western regions for the OCI scale collegiality ($p = .033$).

Results of the REGWF test indicated that AAAE members who affiliate with the Southern and Western regions were not significantly different ($p = .726$) from one another based on their perceptions of the collegiality scale. There was a significant difference between AAAE members who affiliate with North Central region and those who affiliate with the Southern and Western regions based on their perceptions of the collegiality scale.

The eta squared for collegiality ($\eta^2 = .024$) indicates a medium effect size. Additionally, the observed power ($1 - \beta = .645$) does not meet the minimum power cut-off of 0.80 which indicates that significant differences may exist due to chance or error. No other significant differences existed between regional affiliations and the OCI scales.

Table 20. Summary of Comparative Analyses of Regional Affiliation by OCI Scales ($n = 245$)

Scale	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2	$1 - \beta$
Organizational Cohesion							
Between	2	2.00	1.00	1.32	.269	.009	.284
Within	280	212.28	0.76				
Total	282	214.28					
Collaboration and Cooperation							
Between	2	2.02	1.01	1.82	.164	.013	.379
Within	280	155.28	0.56				
Total	282	157.30					
Standard of Performance							
Between	2	3.58	1.79	3.00	.051	.021	.580
Within	280	166.88	0.60				
Total	282	170.46					
Collegiality							
Between	2	3.66	1.83	3.46	.033*	.024	.645
Within	280	148.30	0.53				
Total	282	151.96					
Organizational Vision							
Between	2	3.43	1.72	2.57	.079	.018	.510
Within	280	187.26	0.669				
Total	282	190.69					

Note: North Central ($n = 90$), Southern ($n = 129$), Western ($n = 64$)

Mean, standard deviation, and standard error scores are reported by scale and academic position in Table 21. The highest mean score for the scale organizational cohesion was associated with others ($M = 3.30$); whereas, the highest mean scores for the scale collaboration and cooperation ($M = 3.42$), and standard of performance ($M = 3.21$) were associated with graduate students. Graduate students and other had the

highest mean score for the scale collegiality ($M = 3.49$). The highest mean score for the scale organizational vision ($M = 3.60$) was associated with assistant professors.

Table 21. *Means, Standard Deviations, and Standard Errors by Scale and Academic Position*

Scale	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Organizational Cohesion				
Graduate Student	40	3.23	0.602	.136
Assistant Professor	68	2.85	0.799	.104
Associate Professor	47	3.06	1.076	.125
Professor	83	3.24	0.912	.094
Other	45	3.30	0.789	.128
Collaboration and Cooperation				
Graduate Student	40	3.42	0.521	.118
Assistant Professor	68	3.21	0.694	.091
Associate Professor	47	3.14	0.899	.109
Professor	83	3.27	0.841	.082
Other	45	3.33	0.626	.111
Standard of Performance				
Graduate Student	40	3.21	0.691	.123
Assistant Professor	68	2.95	0.666	.094
Associate Professor	47	2.87	0.870	.113
Professor	83	3.03	0.773	.085
Other	45	3.11	0.891	.116
Collegiality				
Graduate Student	40	3.49	0.594	.115
Assistant Professor	68	3.40	0.673	.088
Associate Professor	47	3.07	0.891	.106
Professor	83	3.29	0.754	.080
Other	45	3.49	0.656	.108

(continued)

Table 21 Continued

Scale	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Organizational Vision				
Graduate Student	40	3.58	0.615	.130
Assistant Professor	68	3.60	0.738	.100
Associate Professor	47	3.43	0.922	.120
Professor	83	3.34	0.897	.090
Other	45	3.48	0.843	.122

Note: See Appendix G for each individual item associated with the scale.

The ANOVA results for the comparison of academic position by OCI scales are indicated in Table 22. To meet parametrically amenable cell sizes for academic position, master's and doctoral student data were collapsed into a single category reported as *graduate student*. Lecturer, professor emeritus, and other data were collapsed into a single category reported as *other*. Assistant professor, associate professor, and professor data remained categorically unique and are reported respectively.

Significant difference existed between levels of academic position for the OCI scale organizational cohesion ($p = .023$). Results of the REGWF test indicated that graduate students, assistant professors, and associate professors were grouped together because they were not significantly different from one another ($p = .109$). Similarly, graduate students, associate professors, professors, and others grouped together because they are not significantly different from one another ($p = .572$). There was a significant difference between graduate students, assistant professors, and associate professors, when compared to graduate students, associate professors, professors, and others based on their perceptions of the organizational cohesiveness scale.

The eta squared for organizational cohesiveness ($\eta^2 = .040$) indicated a medium effect size. Additionally, the observed power ($1 - \beta = .776$) does not meet the minimum power cut-off of 0.80, which indicates that significant differences may exist due to chance or error.

Results of the REGWF test indicated that assistant professors, associate professors, and professors are grouped together because they were not significantly different from one another ($p = .092$). Graduate students, assistant professors, professors, and others grouped together because they were not significantly different from one another ($p = .374$). There was a significant difference between assistant professors, associate professors, and professors, when compared to graduate students, assistant professors, professors, and others based on their perceptions of the collegiality scale.

The eta squared for collegiality ($\eta^2 = .038$) indicates a medium effect size; however, the observed power ($1 - \beta = .758$) does not meet the minimum power cut-off of 0.80, which indicates that significant differences may exist due to chance or error. No other significant differences existed between academic position and the OCI scales.

Table 22. Summary of Comparative Analyses of Academic Position by OCI Scales ($n = 283$)

Scale	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2	$1 - \beta$
Organizational Cohesion							
Between	4	8.52	2.13	2.88	.023*	.040	.776
Within	278	205.76	0.74				
Total	282	214.28					
Collaboration and Cooperation							
Between	4	2.00	0.50	0.90	.467	.013	.284
Within	278	155.30	0.56				
Total	282	157.30					
Standard of Performance							
Between	4	3.23	0.807	1.341	.255	.019	.417
Within	278	167.23	0.602				
Total	282	170.46					
Collegiality							
Between	4	5.83	1.46	2.77	.028*	.038	.758
Within	278	146.13	0.526				
Total	282	151.96					
Organizational Vision							
Between	4	3.12	0.78	1.16	.330	.016	.362
Within	278	187.57	0.68				
Total	282	190.69					

Note: Graduate Student ($n = 40$), Assistant Professor ($n = 68$), Associate Professor ($n = 47$), Professor ($n = 83$), Other ($n = 45$)

Mean scores for AAAE members who never attended AAAE regional meetings were highest for organizational cohesion ($M = 3.22$), collaboration and cooperation ($M = 3.36$), standard of performance ($M = 3.15$), collegiality ($M = 3.41$). Mean scores for AAAE members who attended AAAE regional meetings most years were highest for

organizational vision ($M = 3.66$). Additional mean, standard deviation, and standard error scores are reported by scale and regional affiliation in Table 23.

Table 23. Means, Standard Deviations, and Standard Errors by Scale and Frequency of Attendance at Regional AAAE Meetings

Scale	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Organizational Cohesion				
Every Year	106	3.12	.903	.084
Most Years	68	3.08	.805	.105
Occasionally	67	3.18	.895	.106
Never	33	3.22	.832	.151
Collaboration and Cooperation				
Every Year	106	3.31	.753	.072
Most Years	68	3.28	.760	.090
Occasionally	67	3.18	.736	.090
Never	33	3.36	.663	.129
Standard of Performance				
Every Year	106	3.10	.812	.075
Most Years	68	2.99	.771	.094
Occasionally	67	2.94	.714	.095
Never	33	3.15	.797	.135
Collegiality				
Every Year	106	3.38	.732	.070
Most Years	68	3.40	.706	.088
Occasionally	67	3.24	.727	.089
Never	33	3.41	.740	.126
Organizational Vision				
Every Year	106	3.55	.818	.078
Most Years	68	3.66	.696	.098
Occasionally	67	3.28	.852	.099
Never	33	3.31	.896	.141

Note: See Appendix G for each individual item associated with the scale.

The ANOVA results for the comparison of frequency of attendance at regional AAAE meetings by OCI scales are indicated in Table 24. In terms of organizational vision, significant difference existed between AAAE members who attended AAAE meetings every year, most years, occasionally, and never ($p = .024$).

Results of the REGWF test indicated that AAAE members who attended AAAE meetings every year, occasionally, and never are not significantly different ($p = .076$) from one another based on their perceptions of the organizational vision. AAAE members who attended AAAE meetings every year, most years, and never are grouped together because they are not significantly different from one another ($p = .128$). There is a significant difference between AAAE members who attended AAAE meetings every year, occasionally, and never, when compared to AAAE members who attended AAAE meetings every year, most years, and never based on their perceptions of the organizational vision scale.

The eta squared for organizational vision ($\eta^2 = .034$) indicated a medium effect size. Additionally, the observed power ($1 - \beta = .736$) does not meet the minimum power cut-off of 0.80 which indicates that significant differences may exist due to chance or error. No other significant differences existed between frequency of attendance at regional AAAE meetings and the OCI scales.

Table 24. Summary of Comparative Analyses of Regional AAAE Meeting Attendance by OCI Scales ($n = 274$)

Scale	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2	$1 - \beta$
Organizational Cohesion							
Between	3	0.62	0.21	0.275	.844	.003	.102
Within	270	204.02	0.76				
Total	273	204.64					
Collaboration and Cooperation							
Between	3	0.96	0.32	0.587	.624	.006	.171
Within	270	148.08	0.55				
Total	273	149.04					
Standard of Performance							
Between	3	1.67	0.56	0.923	.430	.010	.252
Within	270	162.98	0.60				
Total	273	164.65					
Collegiality							
Between	3	1.16	0.39	0.739	.530	.008	.207
Within	270	142.03	0.53				
Total	273	143.20					
Organizational Vision							
Between	3	6.29	2.10	3.21	.024*	.034	.736
Within	270	176.28	0.65				
Total	273	182.57					

Note: Every Year ($n = 106$), Most Years ($n = 68$), Occasionally ($n = 67$), Never ($n = 33$)

Mean scores for AAAE members who never attended AAAE national meetings were highest for organizational cohesion ($M = 3.19$), collaboration and cooperation ($M = 3.37$), and standard of performance ($M = 3.18$). Mean scores for AAAE members who attended AAAE national meetings every year were highest for collegiality ($M = 3.42$). Mean scores for AAAE members who attended AAAE national meetings most years

were highest for organizational vision ($M = 3.55$). Additional mean, standard deviation, and standard error scores are reported by scale and attendance in Table 25.

Table 25. Mean, Standard Deviations, and Standard Error by Scale and Frequency of Attendance at National AAAE Meetings

Scale	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Organizational Cohesion				
Every Year	87	3.15	.876	.093
Most Years	64	3.12	.891	.109
Occasionally	75	3.10	.838	.100
Never	48	3.19	.879	.126
Collaboration and Cooperation				
Every Year	87	3.28	.740	.079
Most Years	64	3.29	.809	.093
Occasionally	75	3.20	.689	.086
Never	48	3.37	.725	.107
Standard of Performance				
Every Year	87	3.06	.755	.083
Most Years	64	2.99	.813	.097
Occasionally	75	2.96	.724	.090
Never	48	3.18	.845	.112
Collegiality				
Every Year	87	3.42	.708	.078
Most Years	64	3.38	.761	.091
Occasionally	75	3.23	.700	.084
Never	48	3.39	.740	.105
Organizational Vision				
Every Year	87	3.54	.787	.088
Most Years	64	3.55	.791	.102
Occasionally	75	3.42	.833	.095
Never	48	3.39	.892	.118

Note: See Appendix G for each individual item associated with the scale.

The ANOVA results for the comparison of frequency of attendance at national AAAE meetings by OCI scales are indicated in Table 26. No significant differences existed between frequency of attendance at national AAAE meetings and the OCI scales.

Table 26. *Summary of Comparative Analyses of National AAAE Meeting Attendance by OCI Scales (n = 274)*

Scale	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>P</i>	η^2	$1 - \beta$
Organizational Cohesion							
Between	3	0.30	0.10	0.131	.942	.001	.074
Within	270	204.34	0.76				
Total	273	204.64					
Collaboration and Cooperation							
Between	3	0.88	0.29	0.534	.659	.006	.159
Within	270	148.16	0.55				
Total	273	149.04					
Standard of Performance							
Between	3	1.63	0.54	0.897	.443	.010	.246
Within	270	163.03	0.60				
Total	273	164.65					
Collegiality							
Between	3	1.62	0.54	1.027	.381	.011	.278
Within	270	141.58	0.52				
Total	273	143.20					
Organizational Vision							
Between	3	1.21	0.40	0.599	.616	.007	.174
Within	270	181.36	0.67				
Total	273	182.57					

CHAPTER V

CONCLUSIONS

Summary of Findings

Research Objective One

The purpose of research objective one was to describe selected professional characteristics of AAAE members. Therefore, frequencies and percentages were reported for AAAE membership status (see Figure 5), regional affiliation (see Figure 6), academic position (see Figure 7), frequency of attendance at regional AAAE meetings (see Figure 8), and frequency of attendance at national AAAE meetings (see Figure 9).

Most respondents were dues-paying-members and held an academic position in the professorate ranks. Each of the AAAE regions was represented. A full two-thirds of the members attend regional AAAE meetings, and nearly two-thirds attend the national AAAE meeting every year or most years.

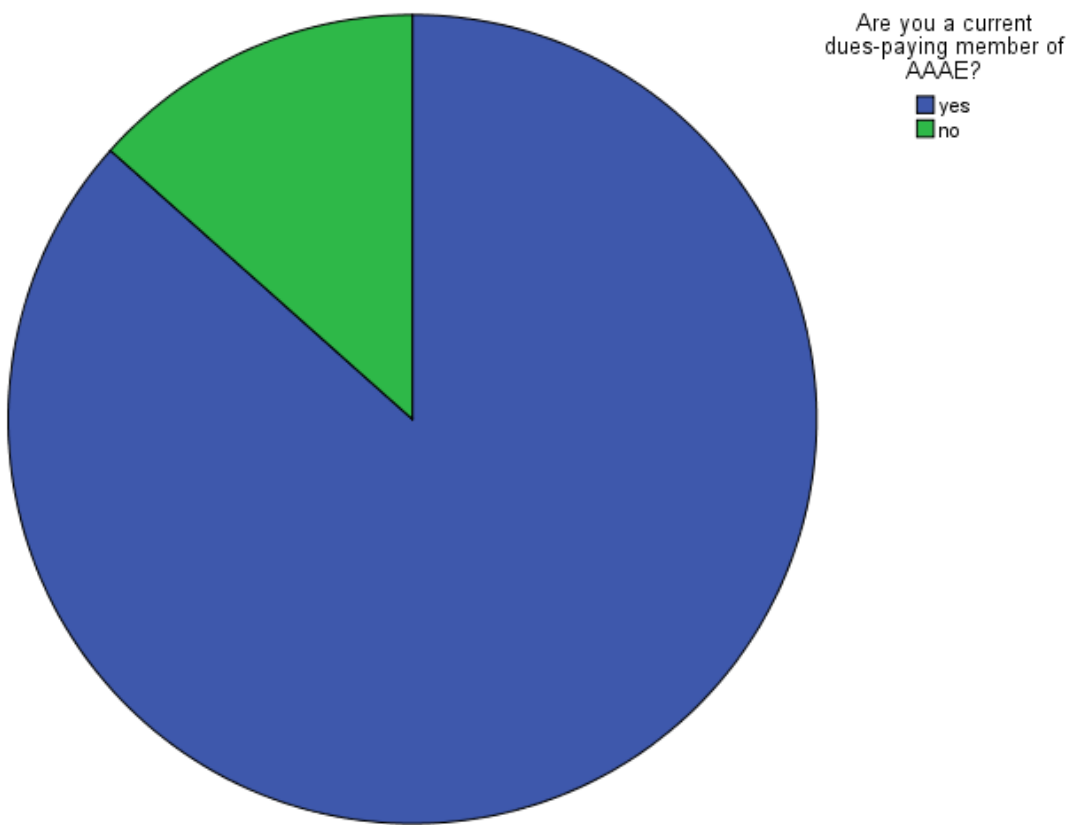


Figure 5. A visual representation of distribution of members by membership status.

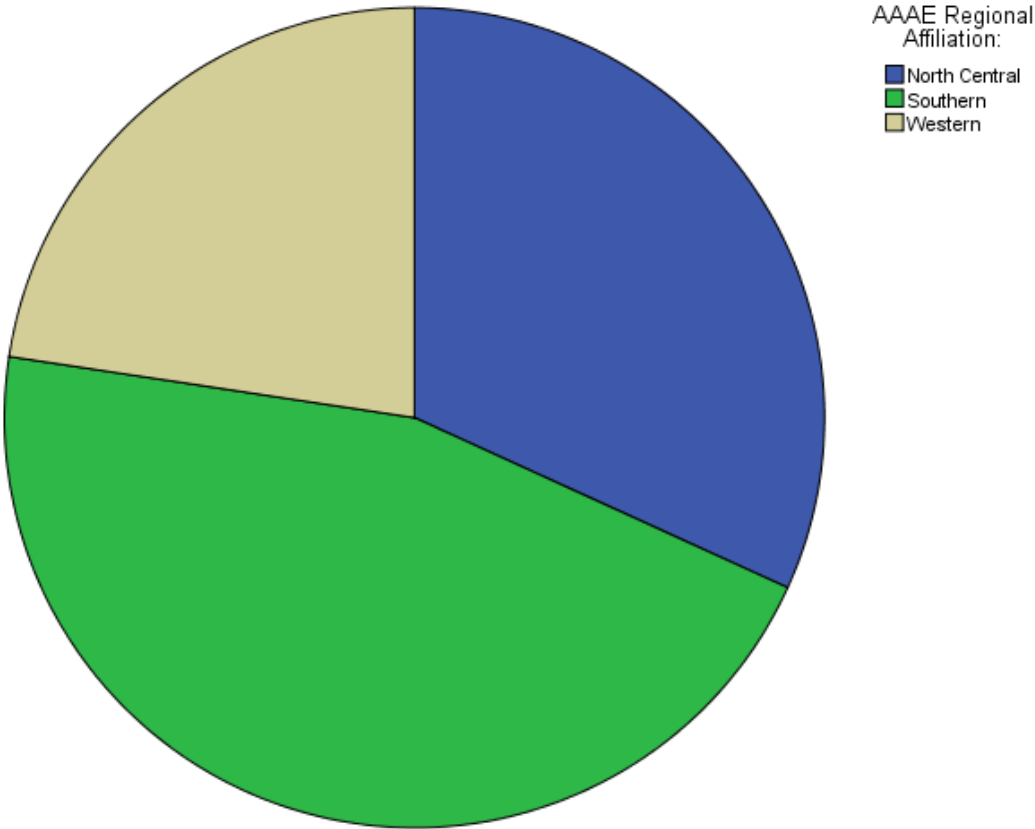


Figure 6. A visual representation of distribution of members by regional affiliation.

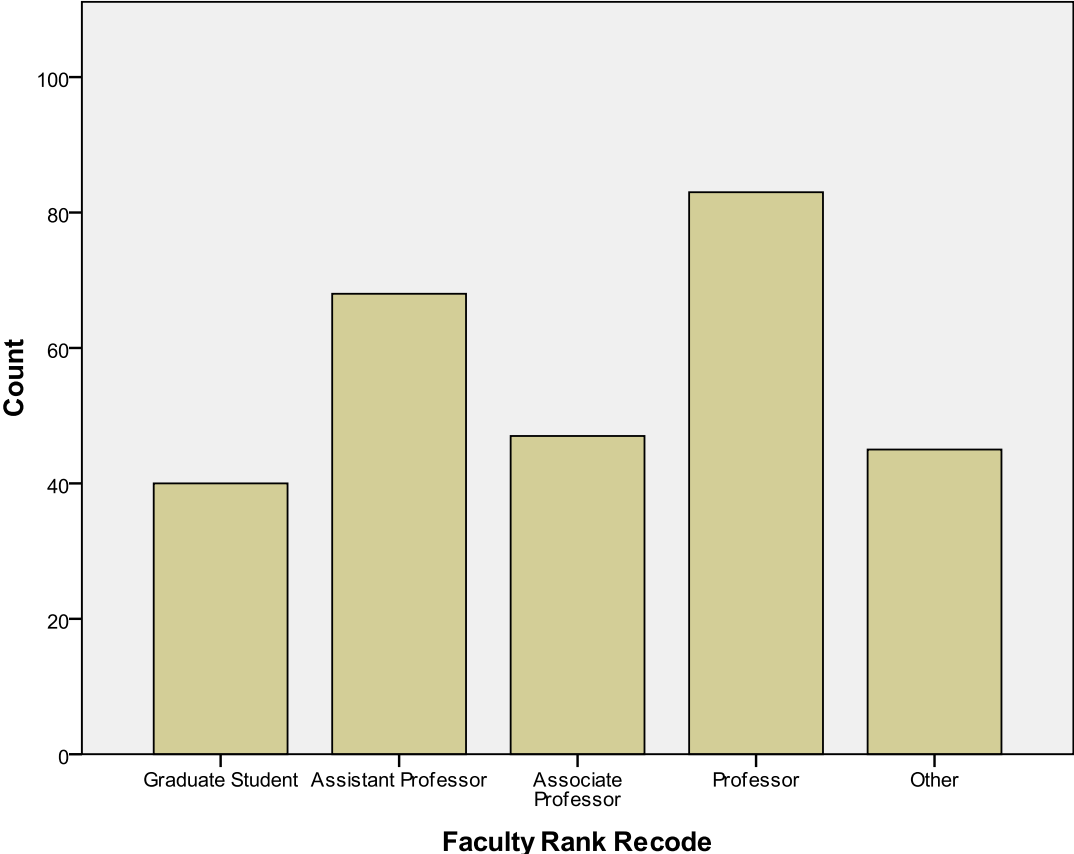


Figure 7. A visual representation of distribution of members by academic position.

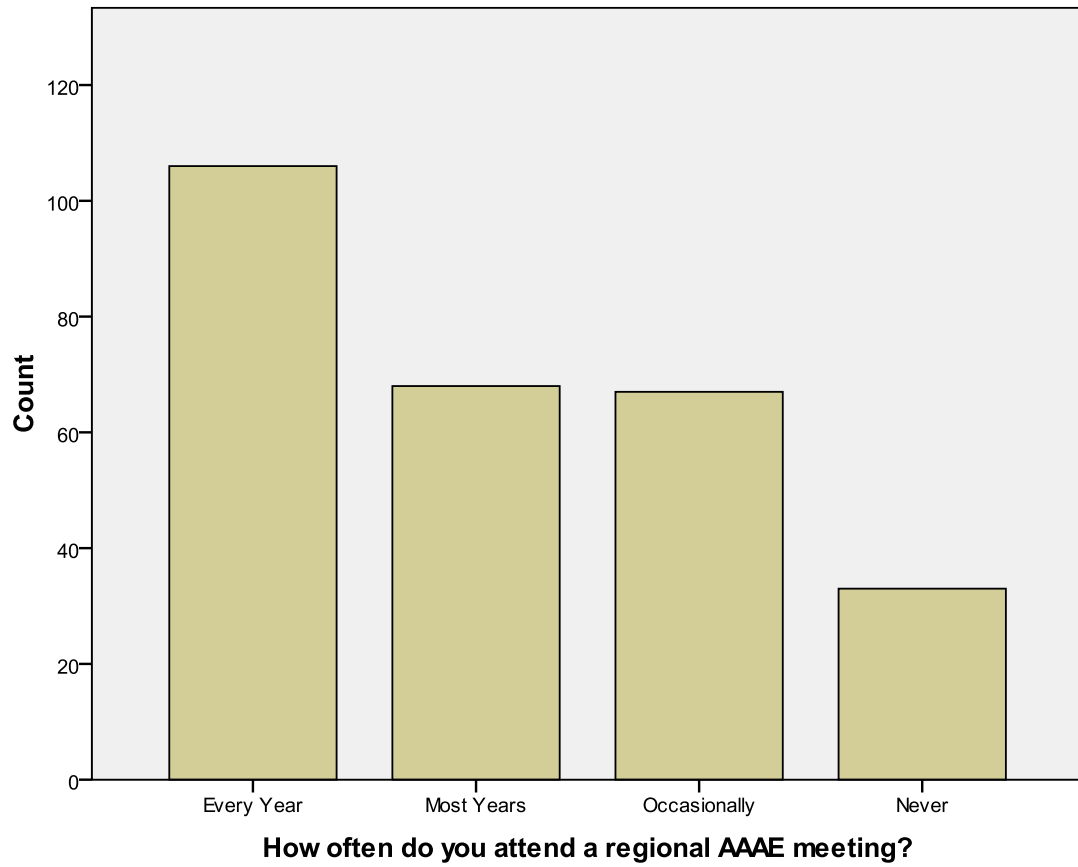


Figure 8. A visual representation of distribution of members by frequency of attendance at regional AAAE meetings.

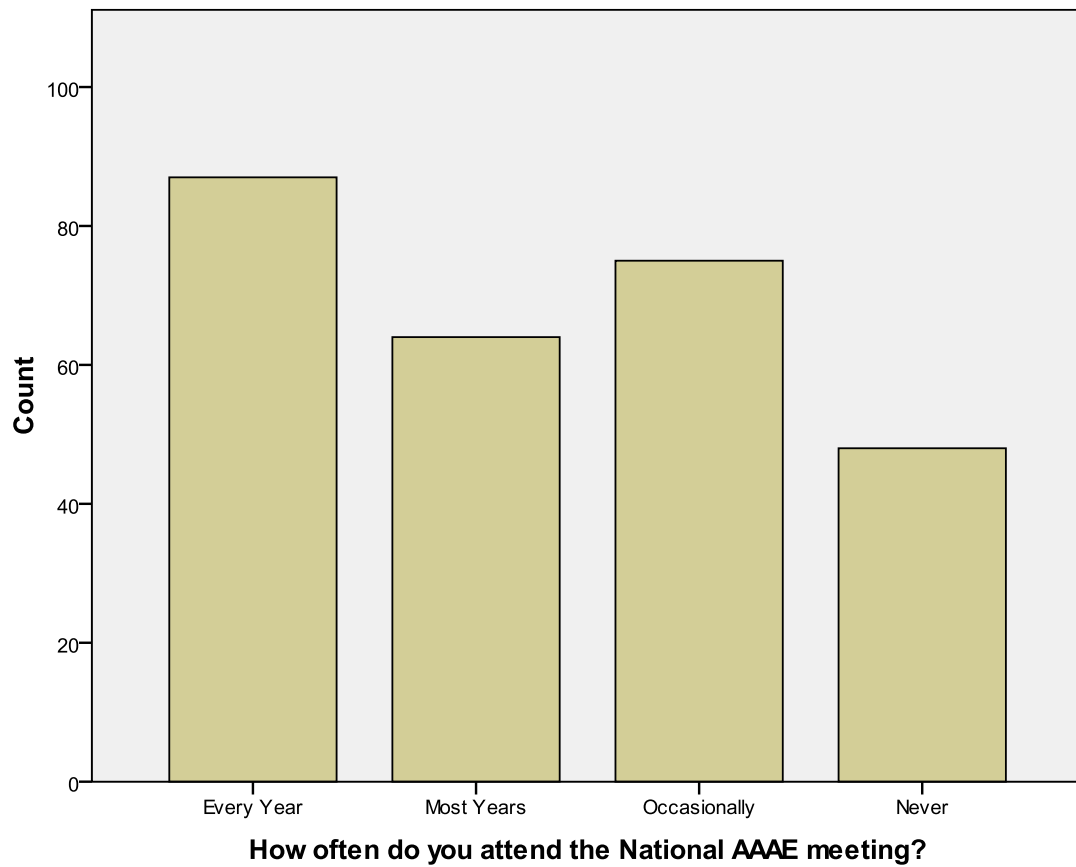


Figure 9. A visual representation of distribution of members by frequency of attendance at national AAAE meetings.

Research Objective Two

The purpose of research objective two was to describe members' perceptions of the organizational climate of the AAAE using the OCI and selected professional characteristics of AAAE members.

The summated 6σ -score of dues-paying-members of the AAAE was greater than the score of the non-dues-paying members and the overall summated 6σ -score (see Figure 10). The summated 6σ -score of AAAE members in the Western region was the greatest score, followed by the summated 6σ -scores of AAAE members in the Southern and North Central regions (see Figure 11). The summated 6σ -score of graduate students was the greatest, followed by members categorized as *other*, professors, assistant professors, and associate professors (see Figure 12).

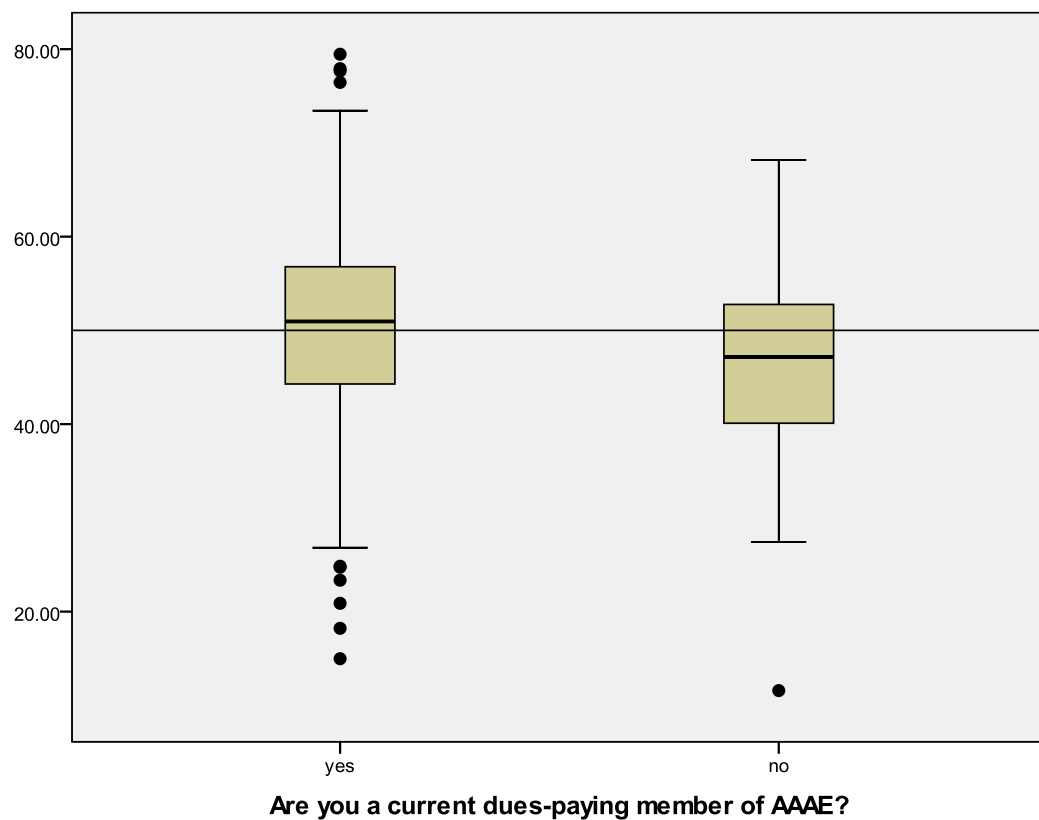


Figure 10. A summated 6σ score was calculated and then aggregated by membership status.

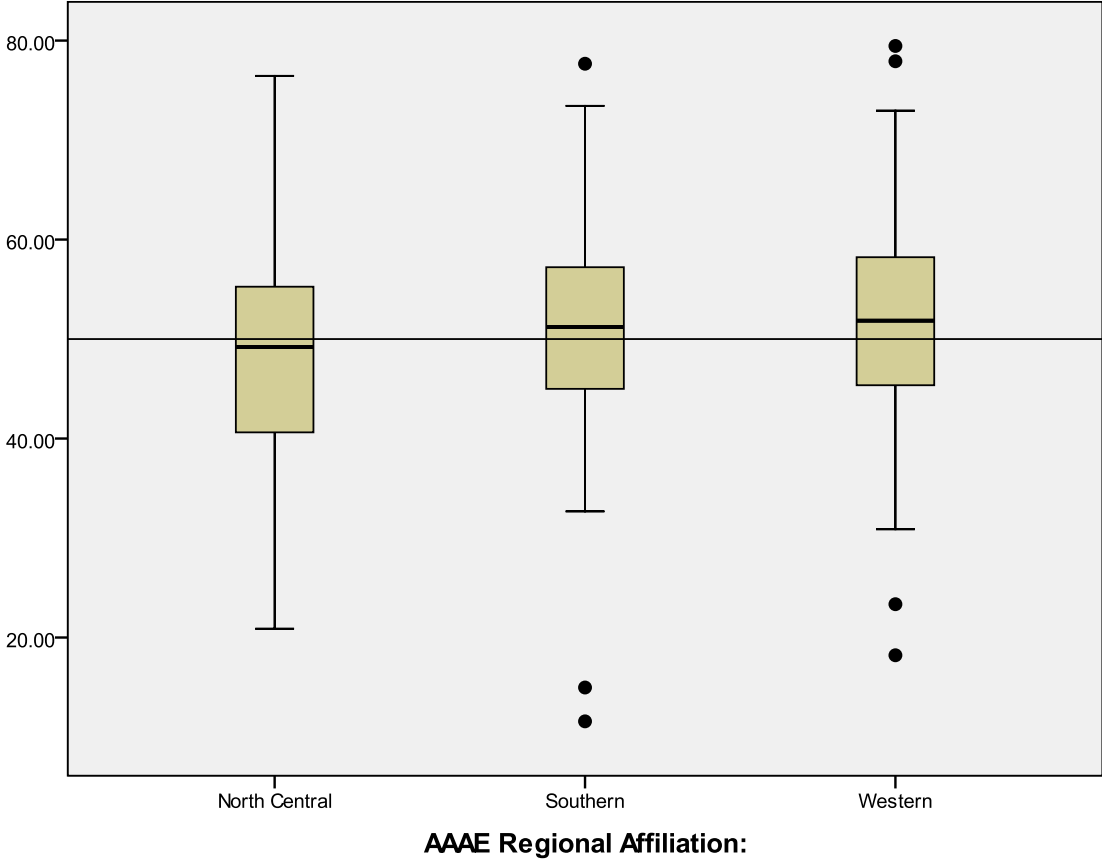


Figure 11. A summated 6σ score was calculated and then aggregated by regional affiliation.

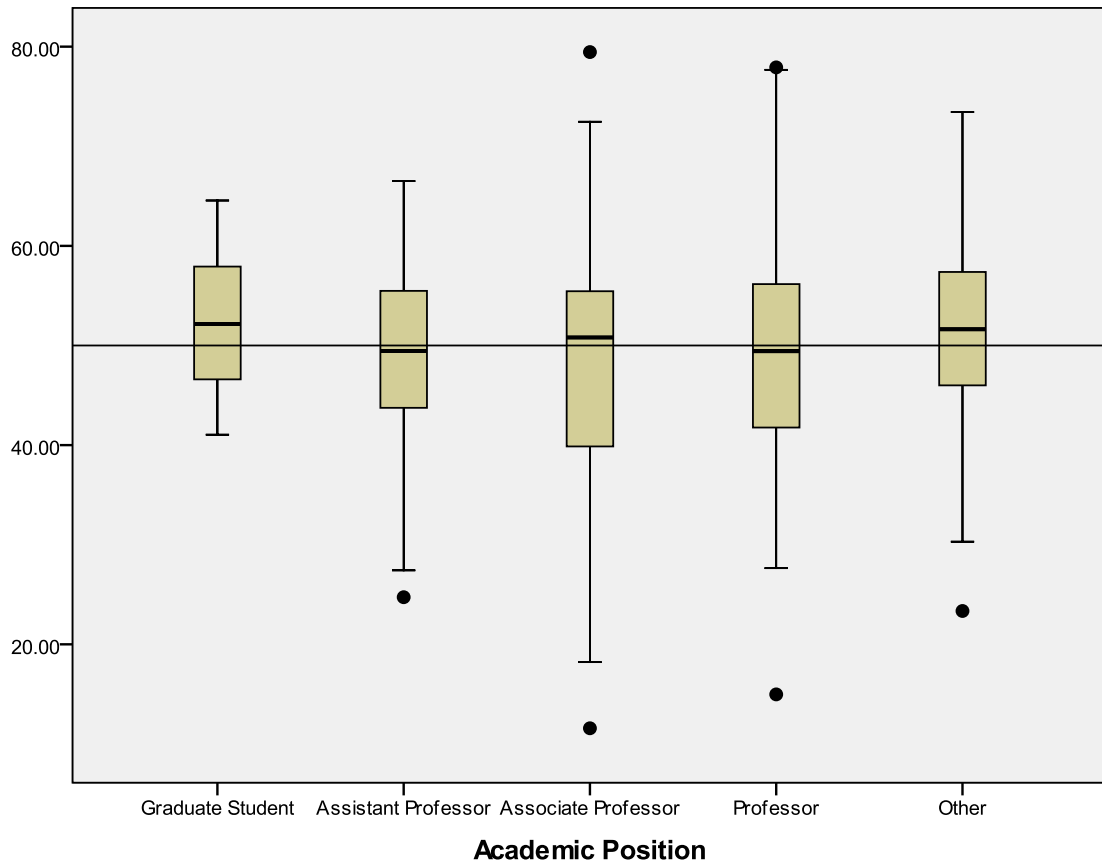


Figure 12. A summated 6σ score was calculated and then aggregated by academic position.

The summated 6σ -score of the AAEE members who attended their regional AAEE meeting every year was the highest, followed by the AAEE members who never attended their regional AAEE meeting, those who attended most years, and those who attended occasionally (see Figure 13). The summated 6σ -score of the AAEE members who never attended the national AAEE meeting was the highest, followed by those

members who attended their regional AAEE meeting every year, those who attended most years, and those who attended occasionally (see Figure 14).

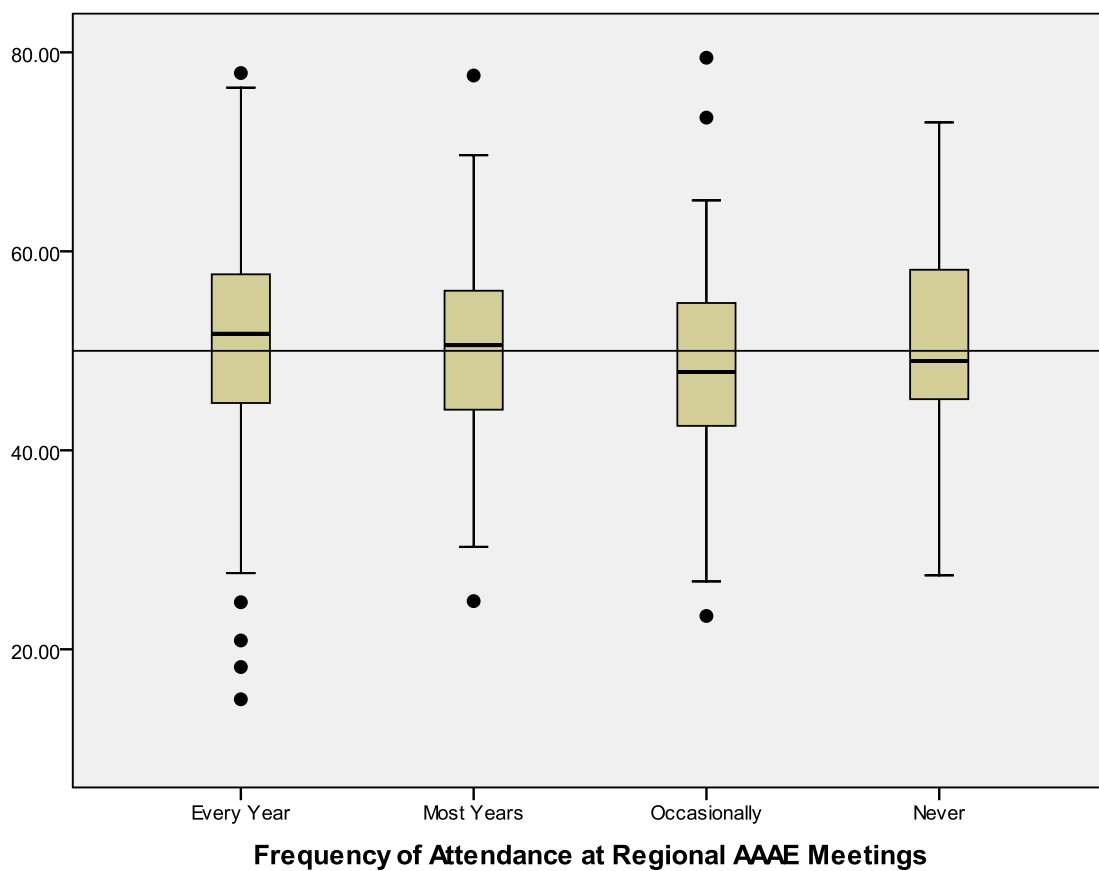


Figure 13. A summated 6σ score was calculated and then aggregated frequency of attendance at regional AAEE meetings.

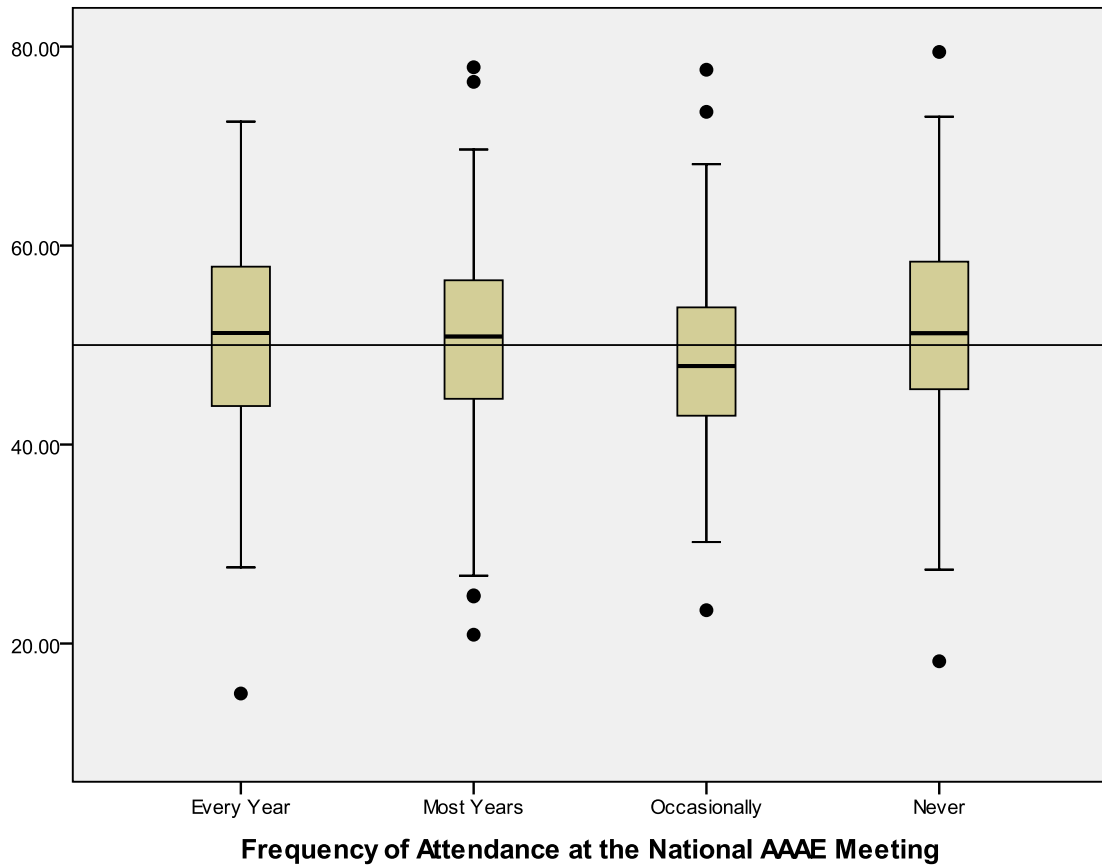


Figure 14. A summated 6σ score was calculated and then aggregated frequency of attendance at national AAAE meetings.

A 6σ composite score was calculated to provide a standardized point of comparison for each of the scales. A 6σ score was calculated for each of the scales; values are pictured in Figure 15. Organizational vision was the scale with the highest scale mean; whereas, standard of performance was the scale with the lowest scale mean.

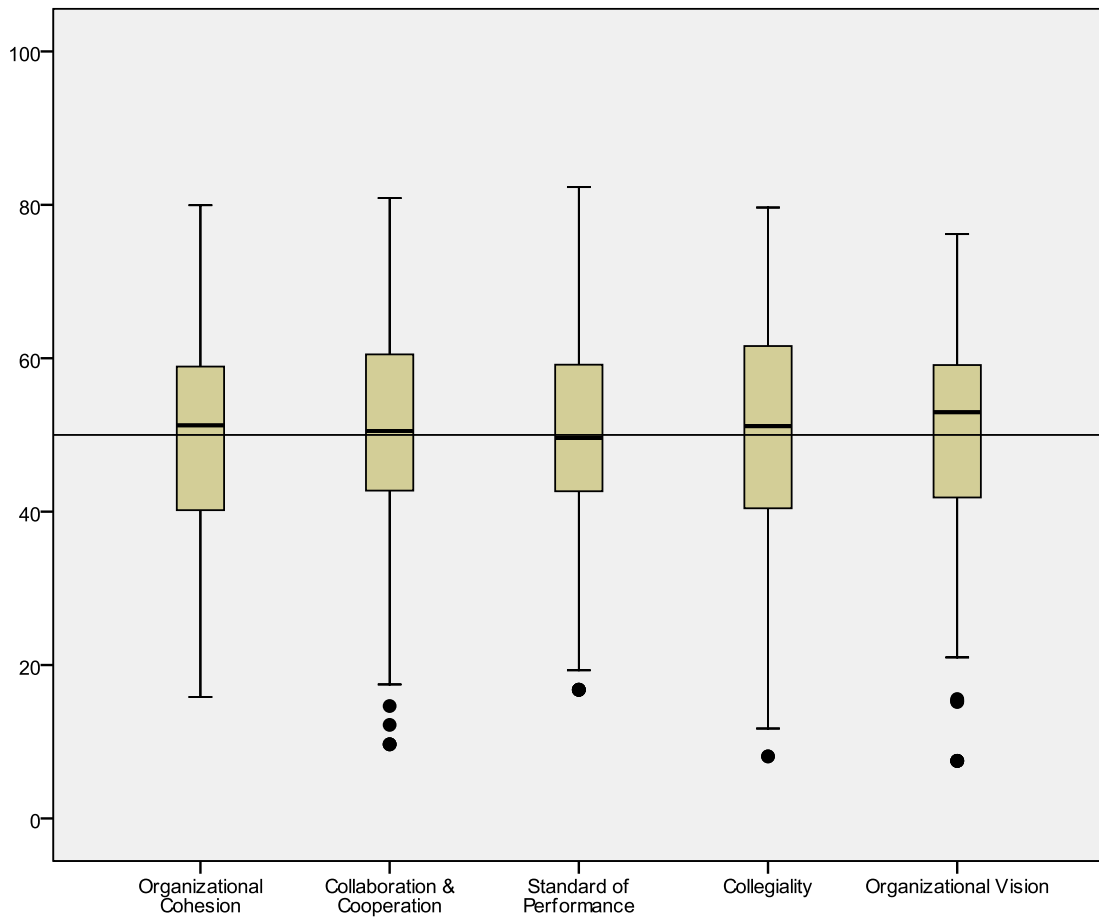


Figure 15. A 6σ score was calculated for each of the scales.

Mean 6σ scores associated with dues-paying-members were above the mean for all of the scales. Mean 6σ scores associated with non-dues-paying-members were below the mean for all of the scales: organizational cohesion (see Figure 16), collaboration and cooperation (see Figure 17), standard performance (see Figure 18), collegiality (see Figure 19), organizational vision (see Figure 20).

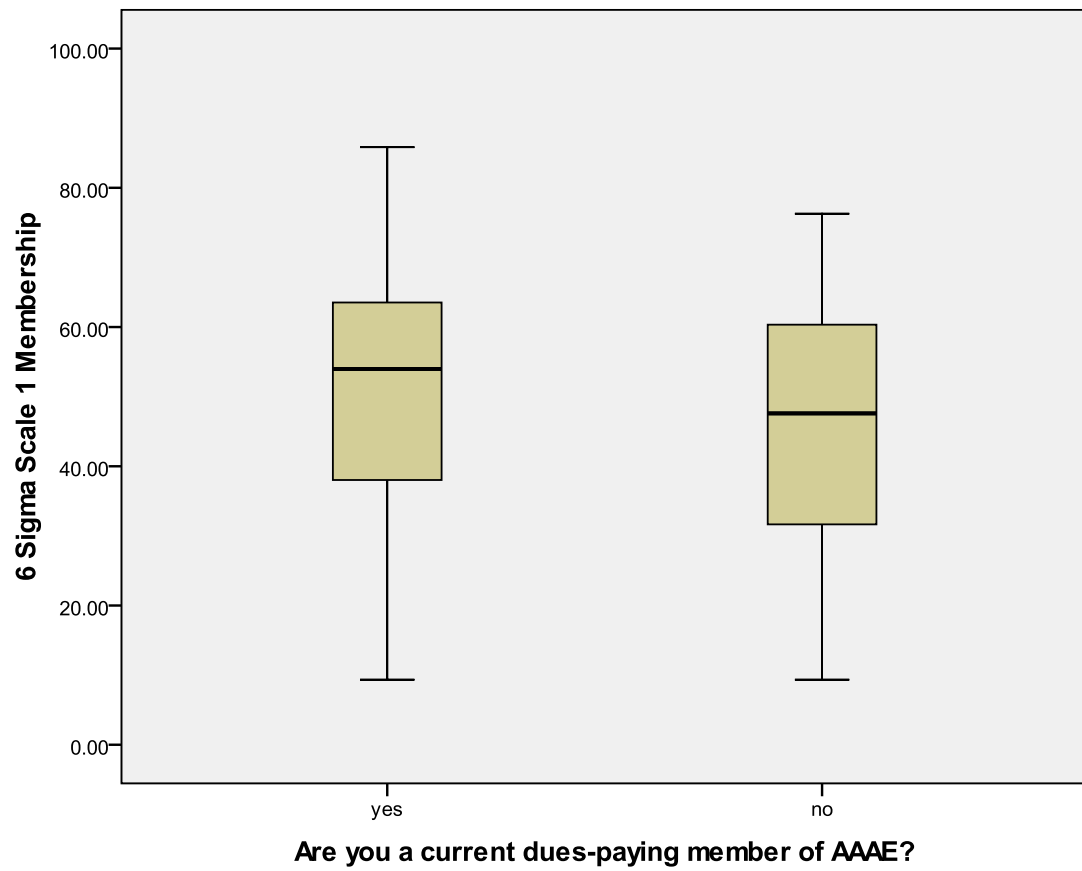


Figure 16. Boxstem plots of 6 σ -scores by membership status and organizational cohesion.

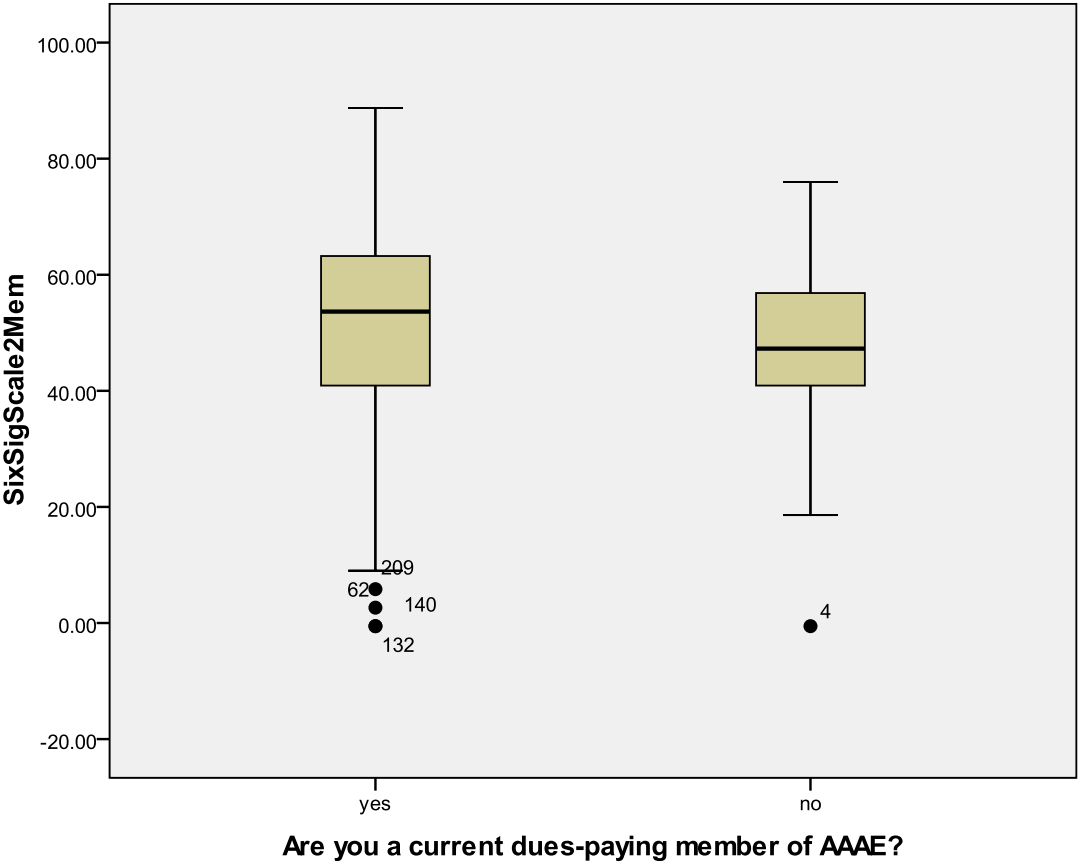


Figure 17. Boxstem plots of 6σ -scores by membership status and collaboration and cooperation.

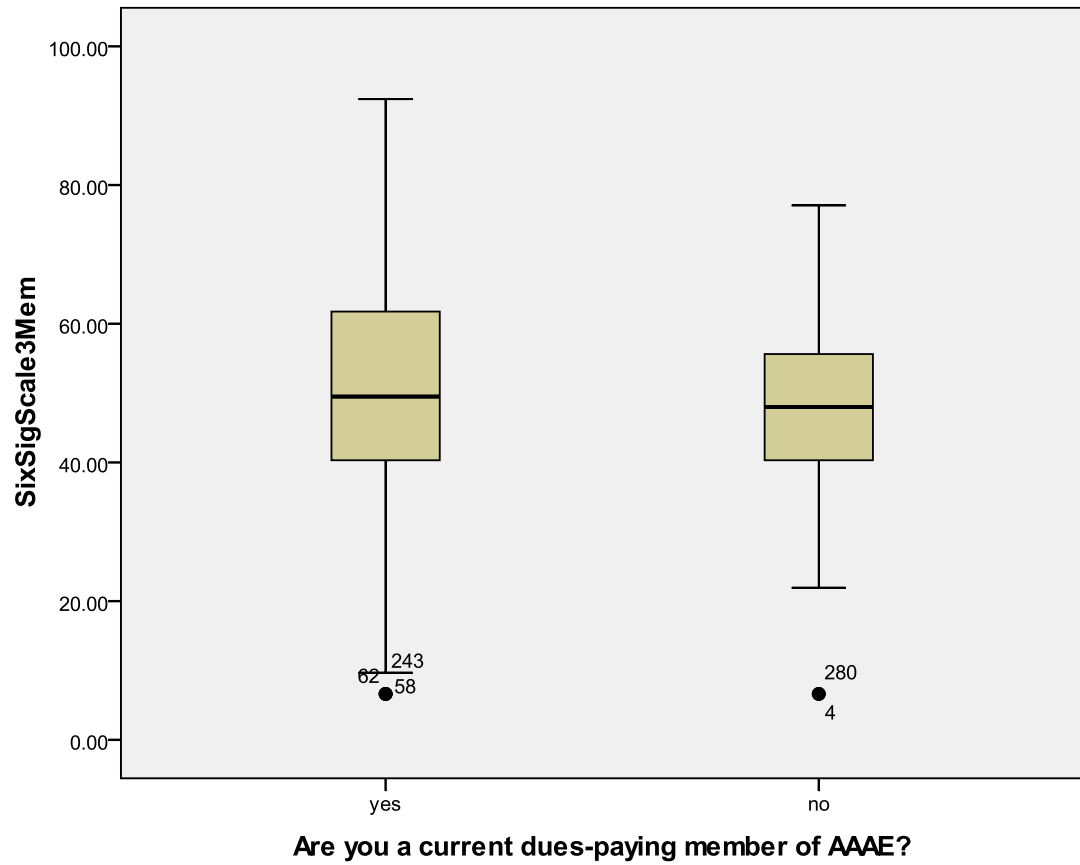


Figure 18. Boxstem plots of 6σ -scores by membership status and standard of performance.

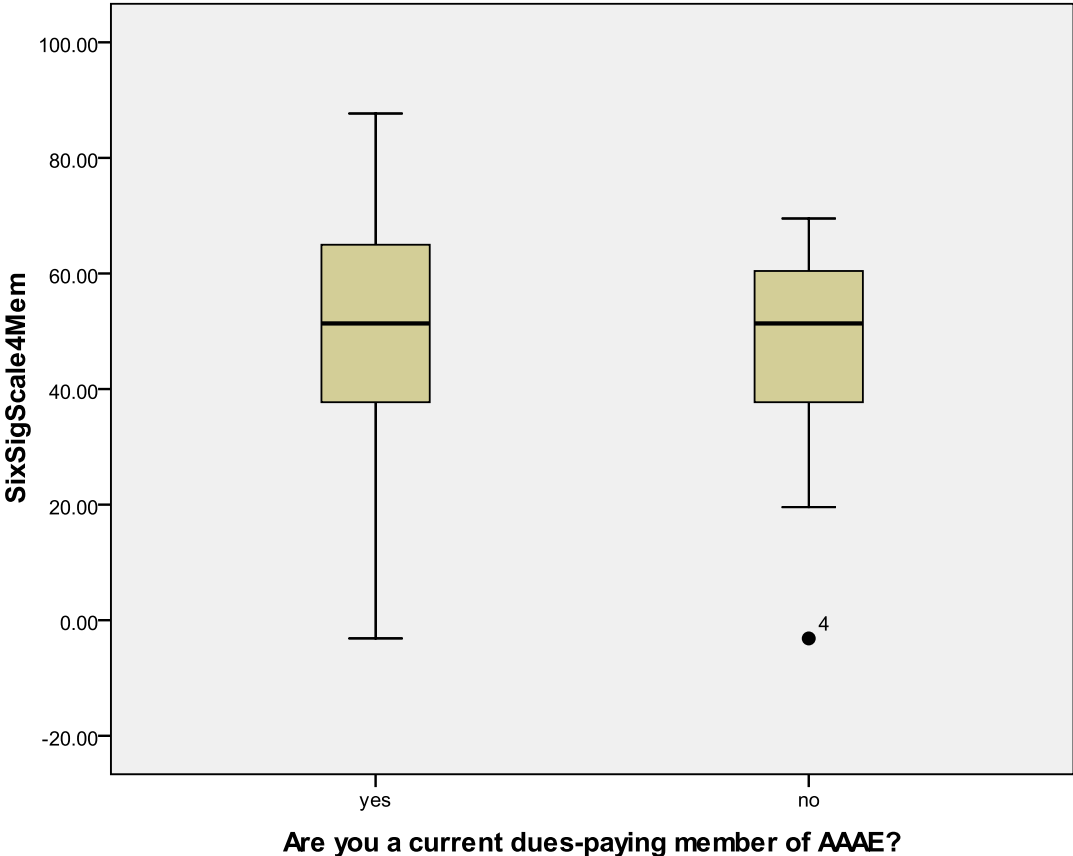


Figure 19. Boxstem plots of 6σ -scores by membership status and collegiality.

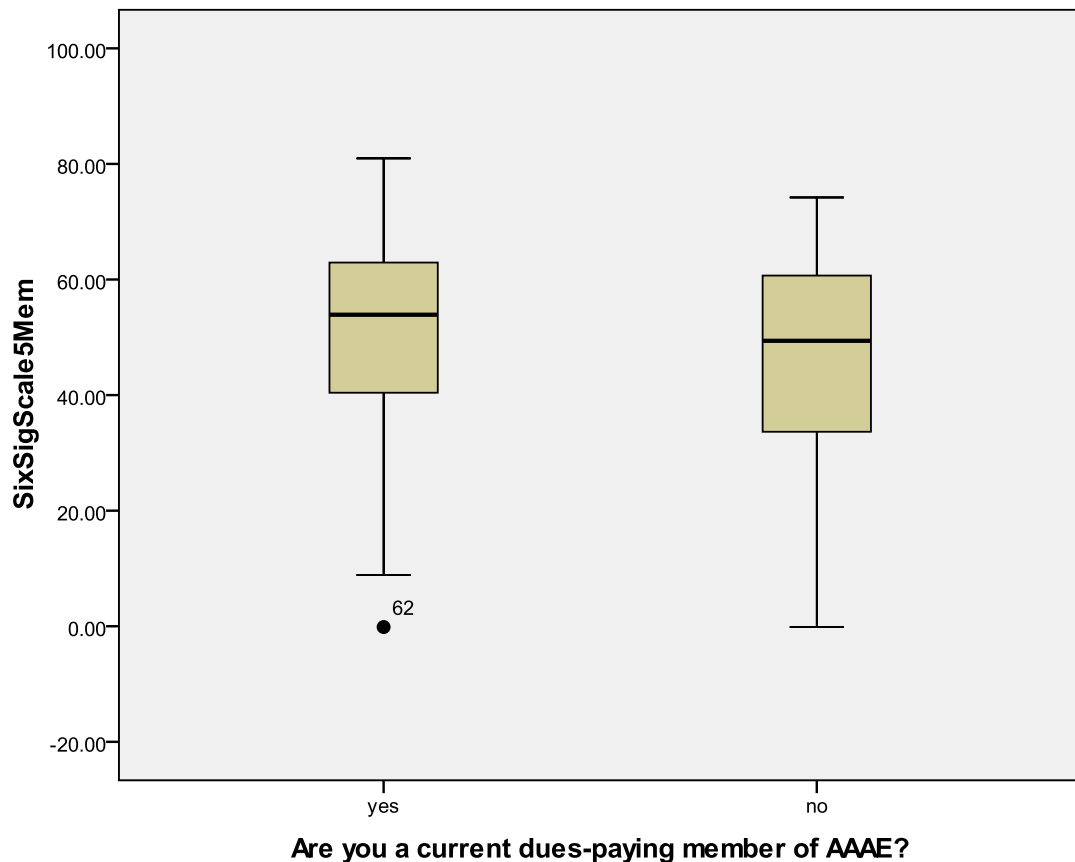


Figure 20. Boxstem plots of 6σ -scores by membership status and organizational vision.

Mean 6σ scores associated with AAAE members affiliated with the North Central region were below the mean for all of the scales: organizational cohesion (see Figure 21), collaboration and cooperation (see Figure 22), standard performance (see Figure 23), collegiality (see Figure 24), organizational vision (see Figure 25). Mean scores associated with AAAE members affiliated with the Southern region are above the mean for all of the scales except organizational cohesion. Mean scores associated with

AAAE members affiliated with the Western region are above the mean for all of the scales.

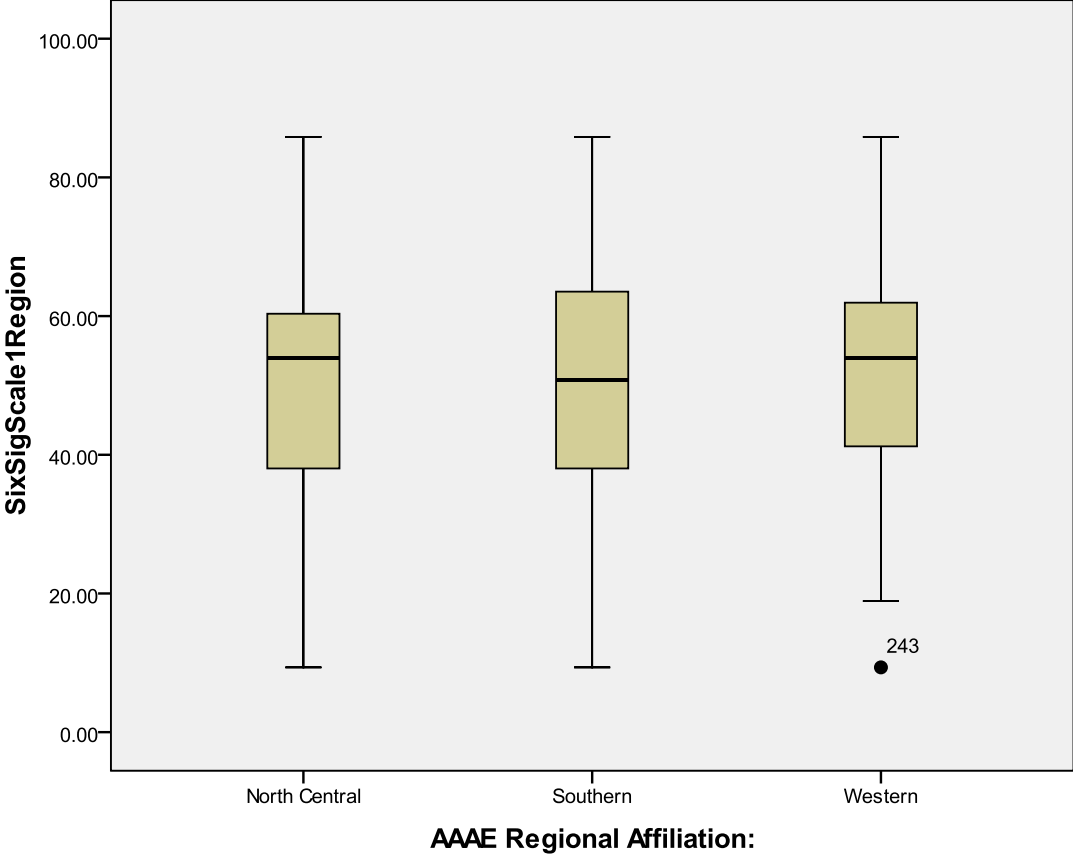


Figure 21. Boxstem plots of 6σ-scores by regional affiliation and organizational cohesion.

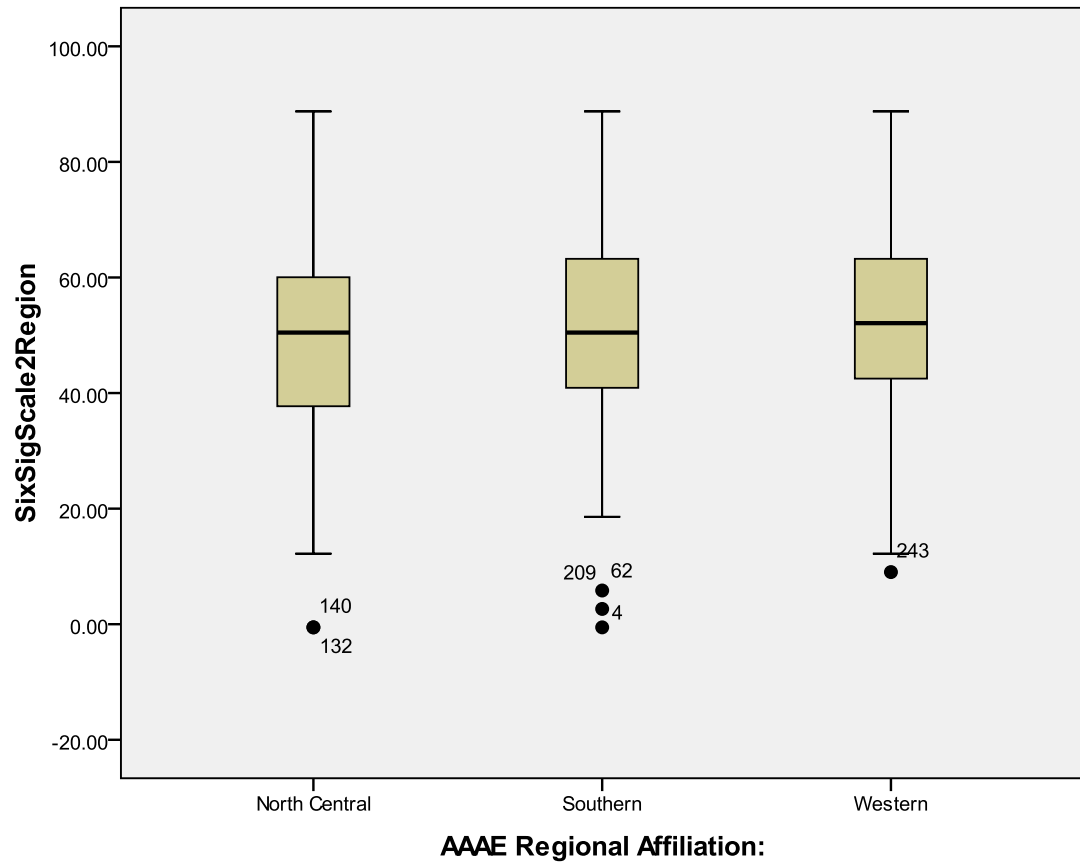


Figure 22. Boxstem plots of 6σ -scores by regional affiliation and collaboration and cooperation.

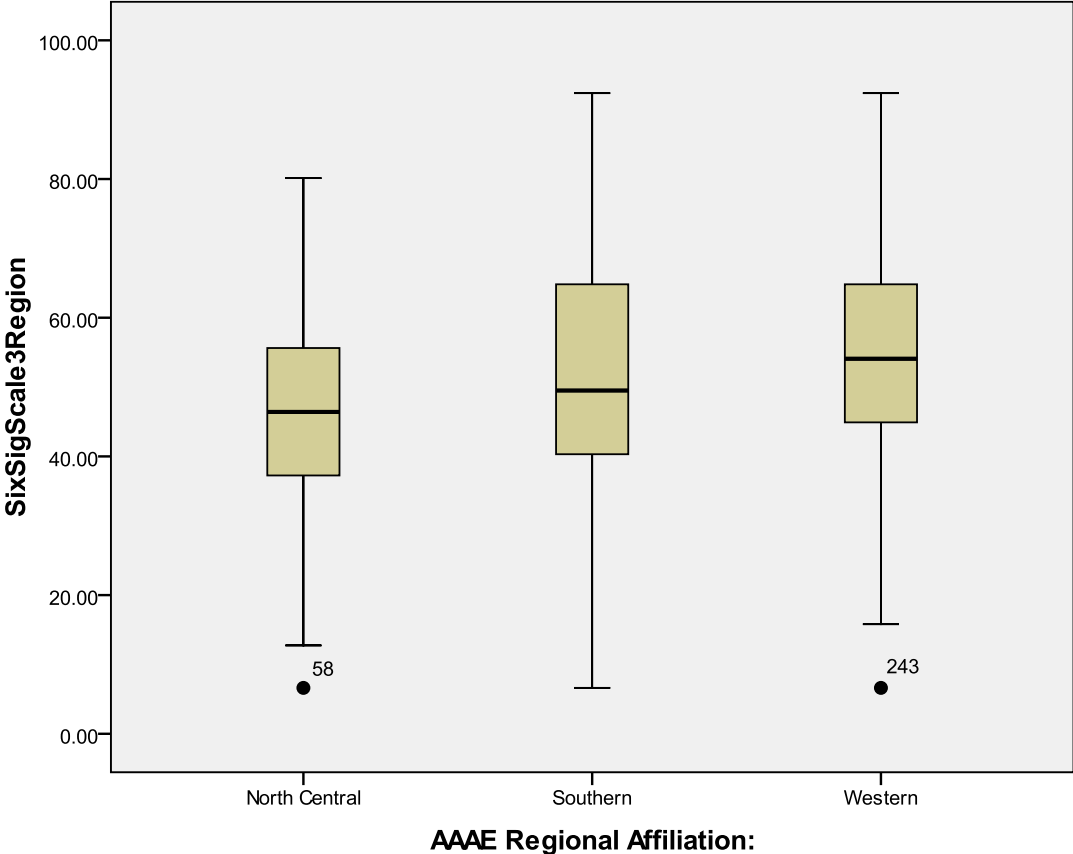


Figure 23. Boxstem plots of 6σ-scores by regional affiliation and standard of performance.

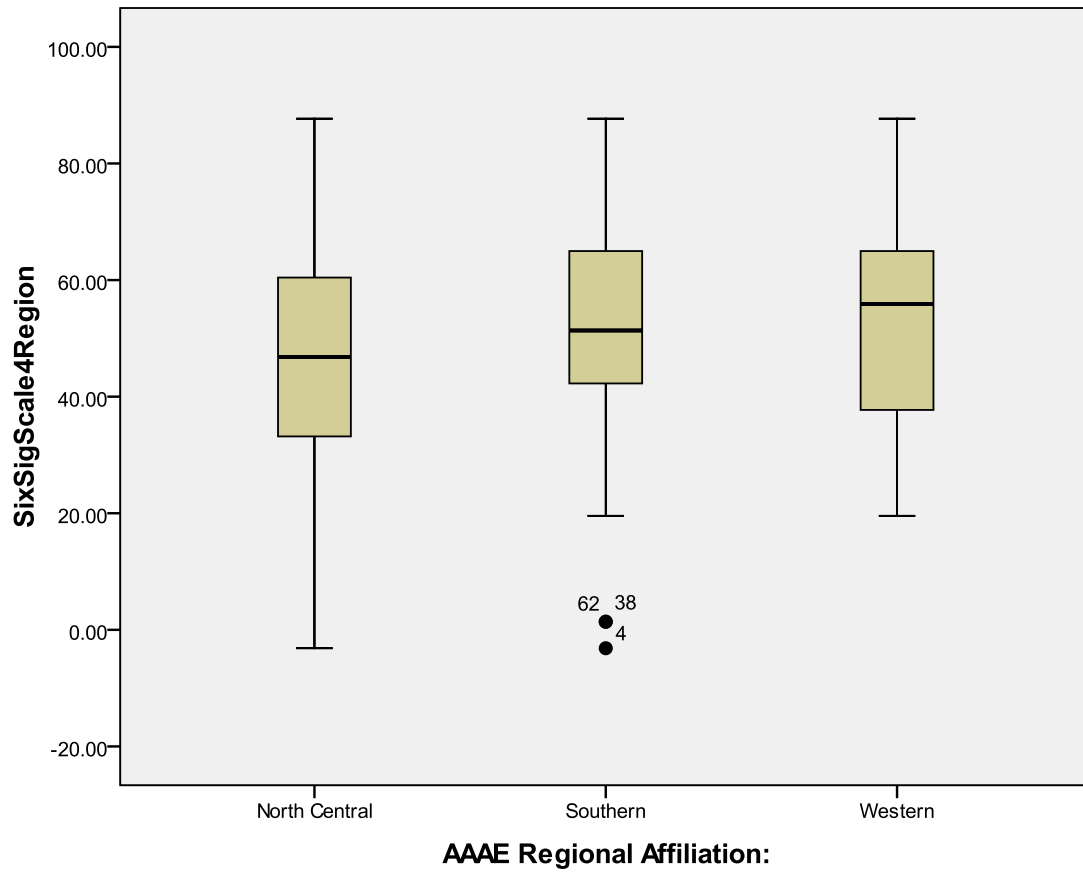


Figure 24. Boxstem plots of 6σ -scores by regional affiliation and collegiality.

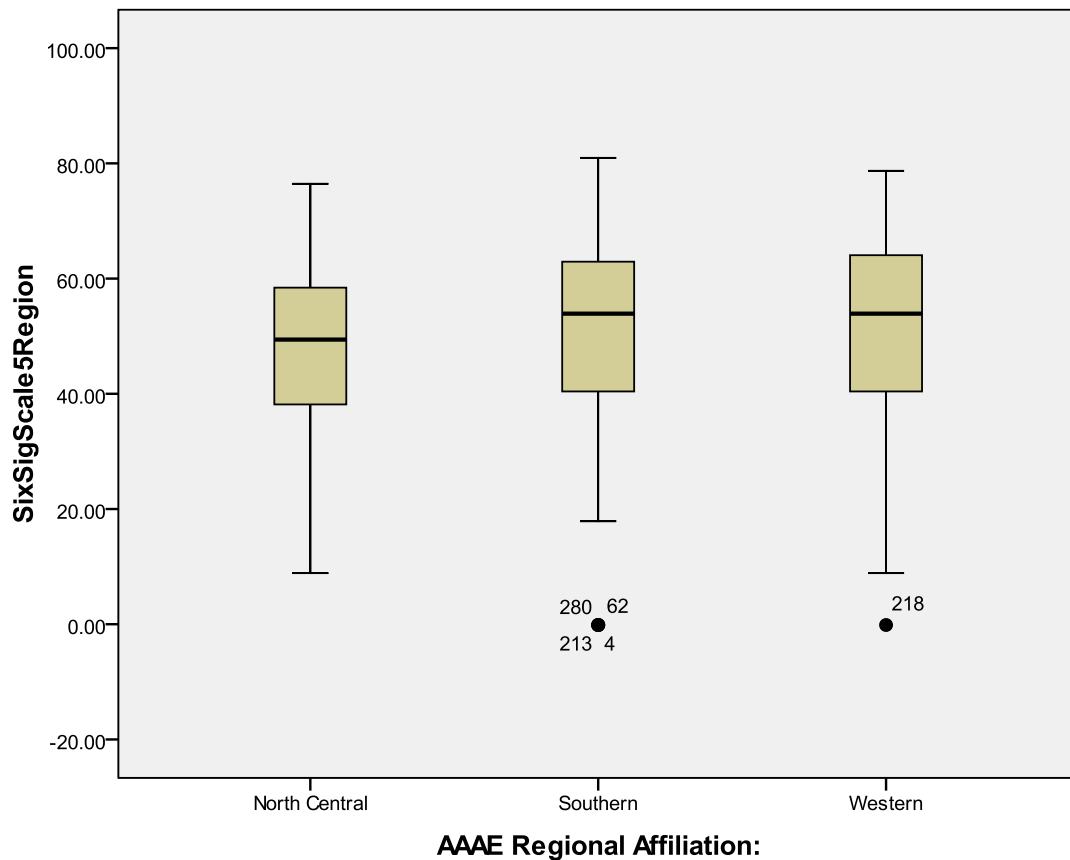


Figure 25. Boxstem plots of 6σ -scores by regional affiliation and organizational vision.

Mean 6σ scores associated with master's students, doctoral students, and emeritus professors were above the mean for all of the scales: organizational cohesion (see Figure 26), collaboration and cooperation (see Figure 27), standard performance (see Figure 28), collegiality (see Figure 29), organizational vision (see Figure 30). Mean scores associated with lecturers were below the mean for all of the scales except organizational cohesion. Mean 6σ scores associated with assistant professors, professors,

and other varied. Mean 6 σ scores associated with associate professors are below the mean for all of the scales.

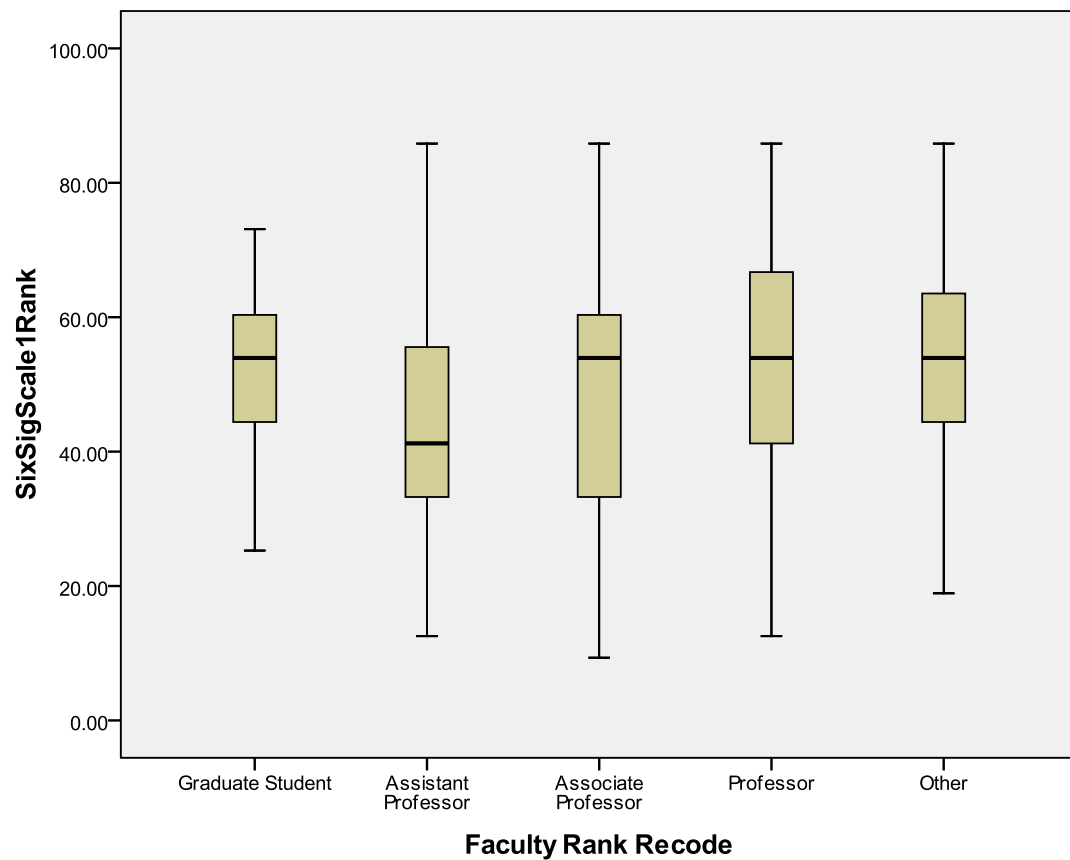


Figure 26. Boxstem plots of 6 σ -scores by academic position and organizational cohesion.

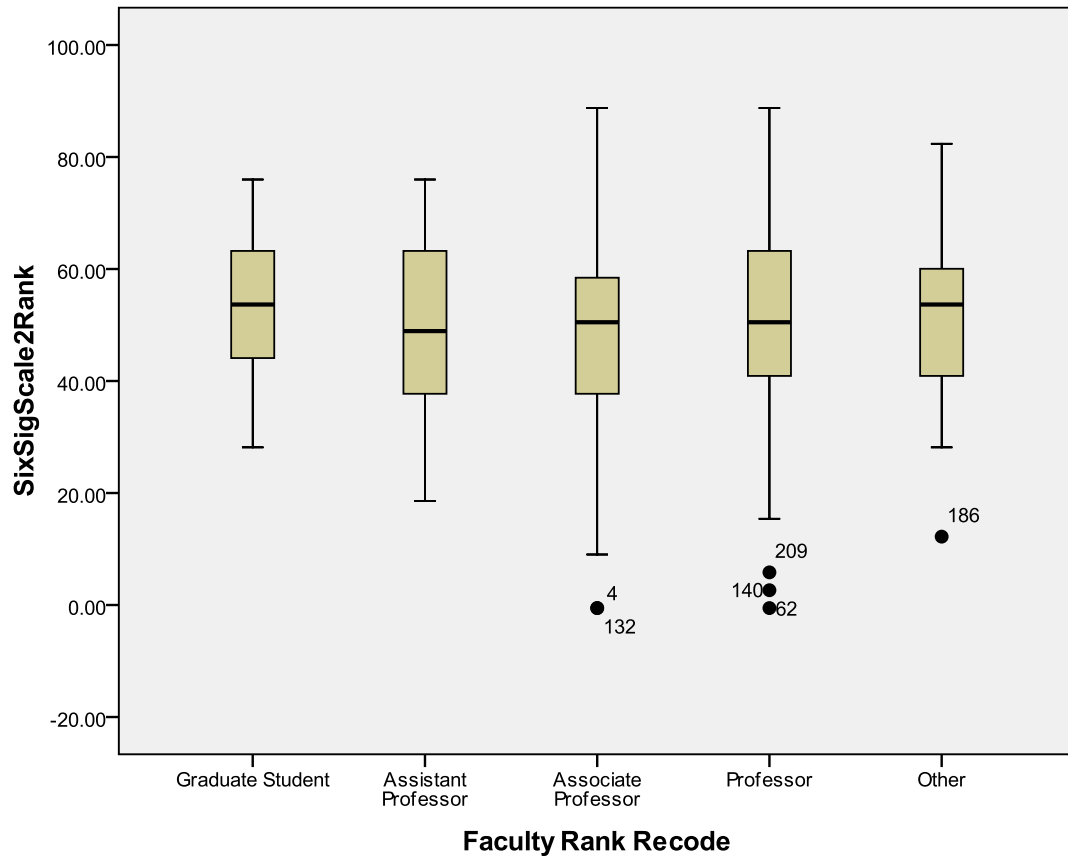


Figure 27. Boxstem plots of 6σ -scores by academic position and collaboration and cooperation.

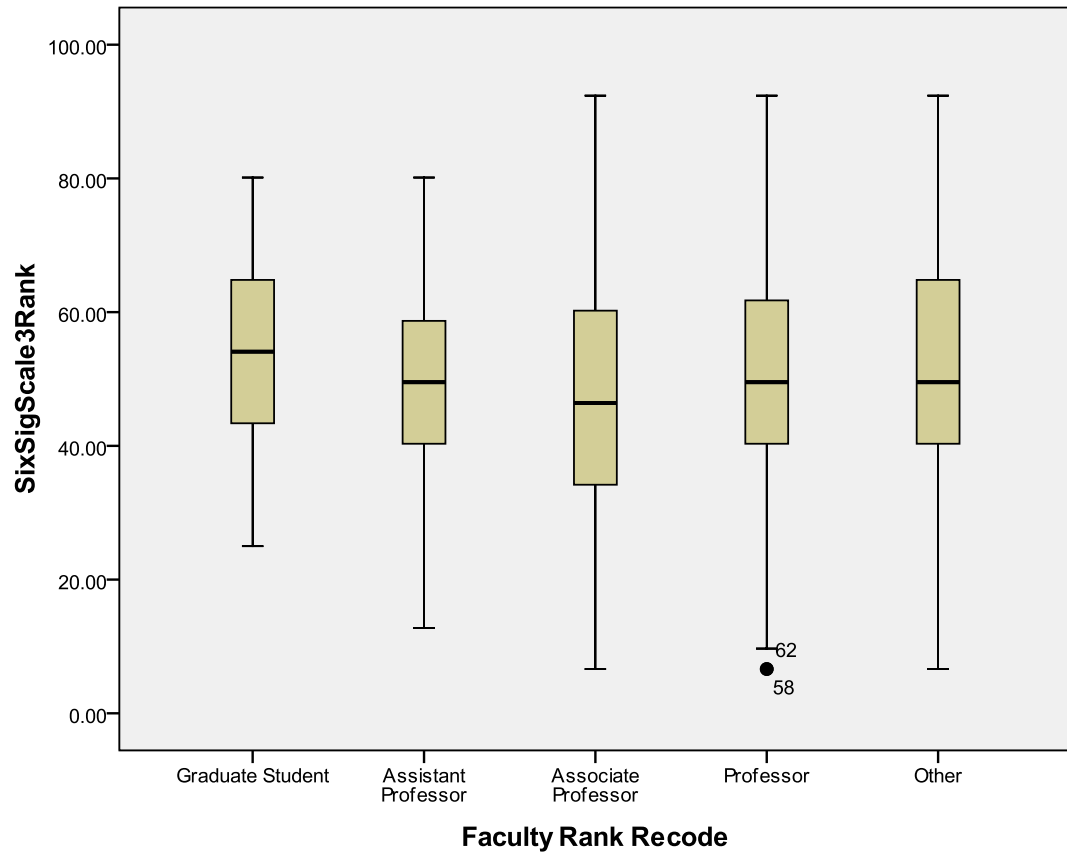


Figure 28. Boxstem plots of 6σ -scores by academic position and standard of performance.

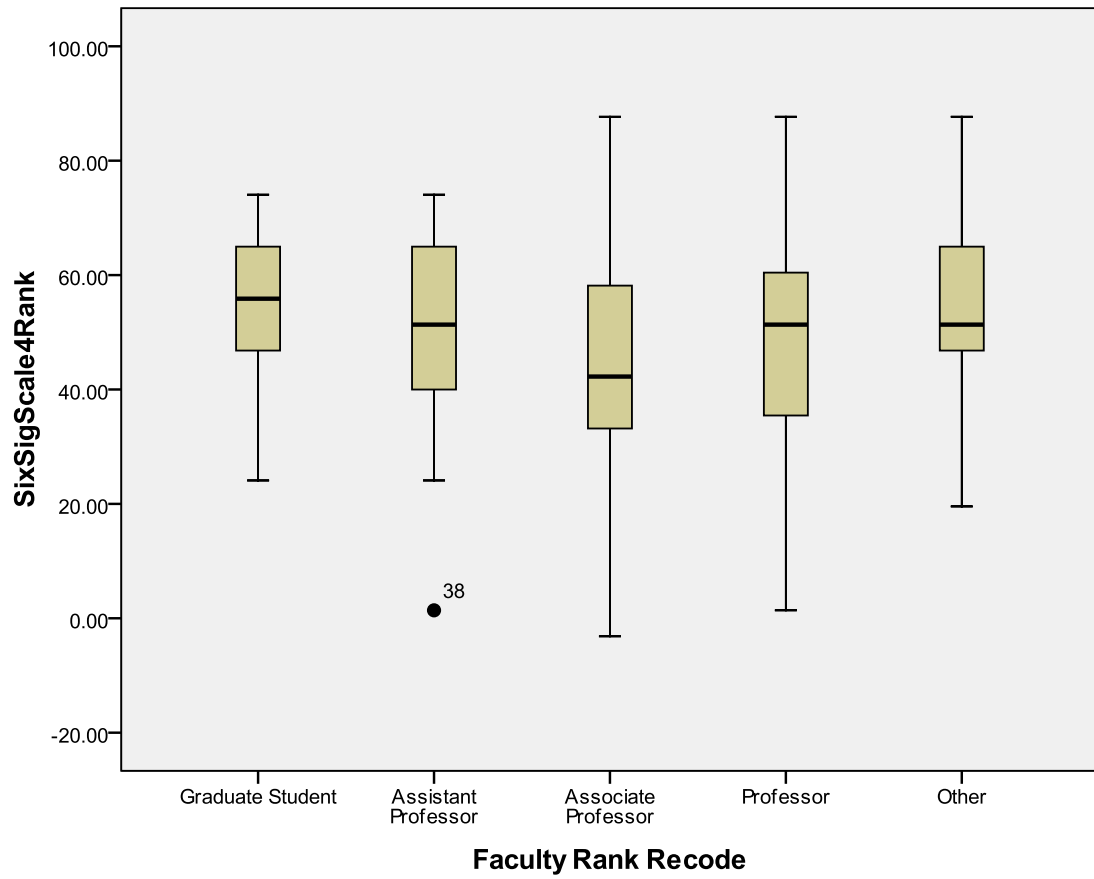


Figure 29. Boxstem plots of 6σ -scores by academic position and collegiality.

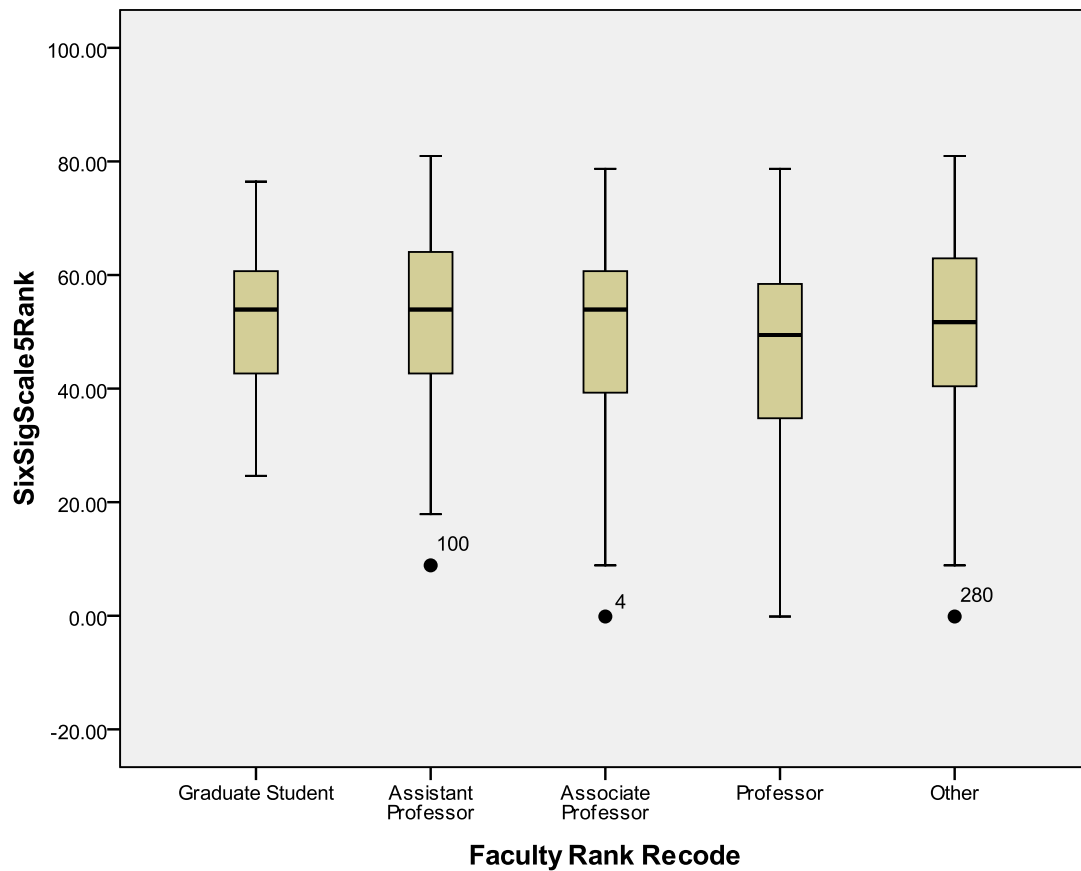


Figure 30. Boxstem plots of 6σ -scores by academic position and organizational vision.

Mean 6σ scores associated with AAAE members who attend the regional AAAE meeting every year were above the mean for all of the scales: organizational cohesion (see Figure 31), collaboration and cooperation (see Figure 32), standard performance (see Figure 33), collegiality (see Figure 34), and organizational vision (see Figure 35).

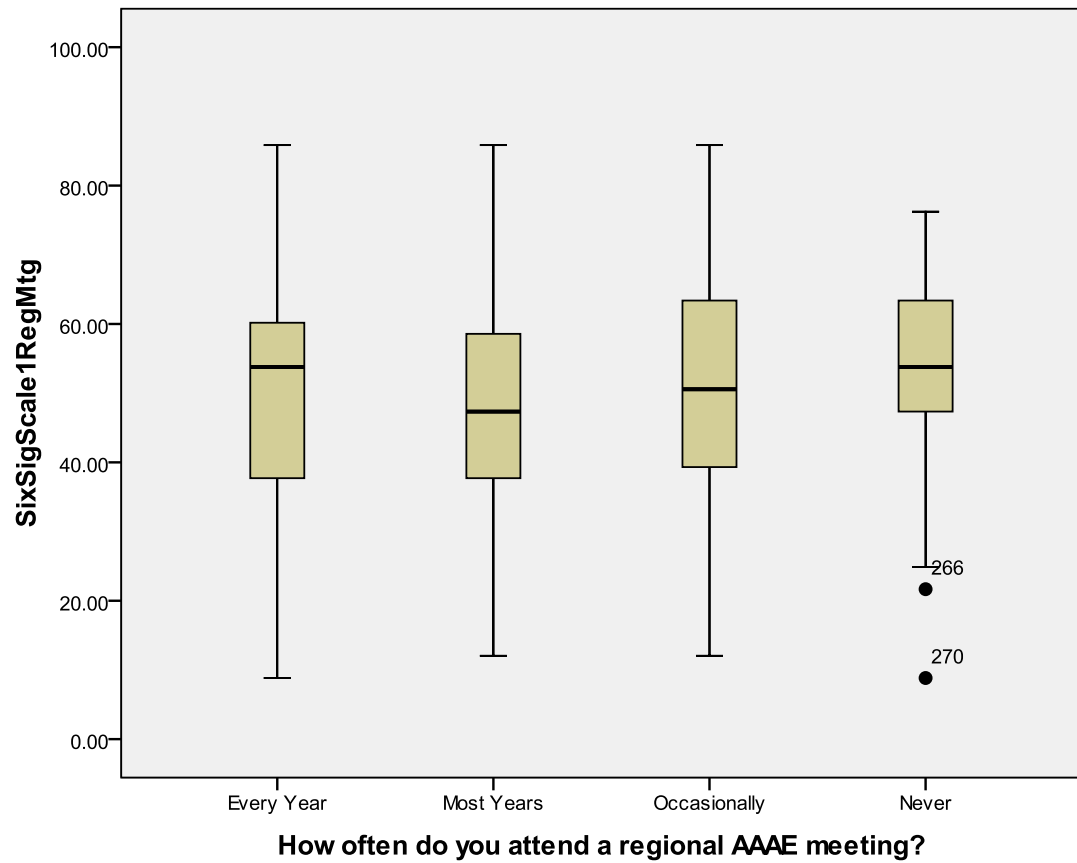


Figure 31. Boxstem plots of 6σ -scores by frequency of attendance at regional AAE meetings and organizational cohesiveness.

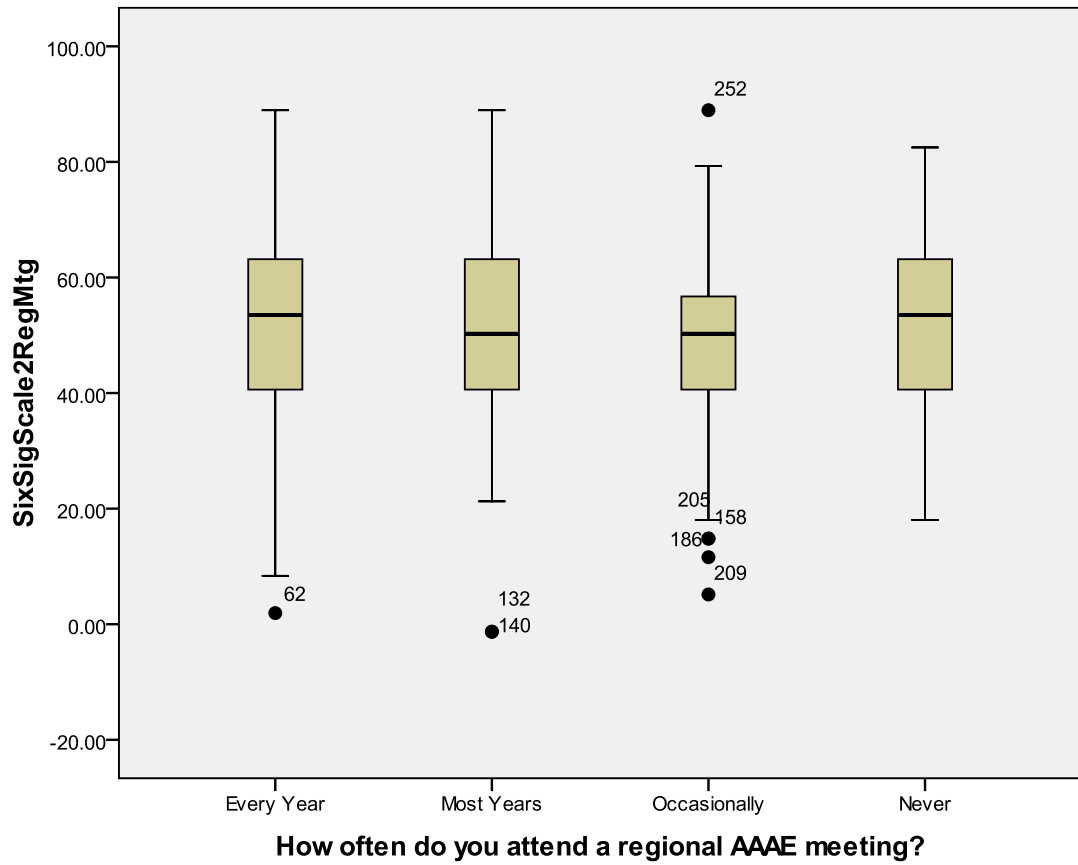


Figure 32. Boxstem plots of 6 σ -scores by frequency of attendance at regional AAAE meetings and collaboration and cooperation.

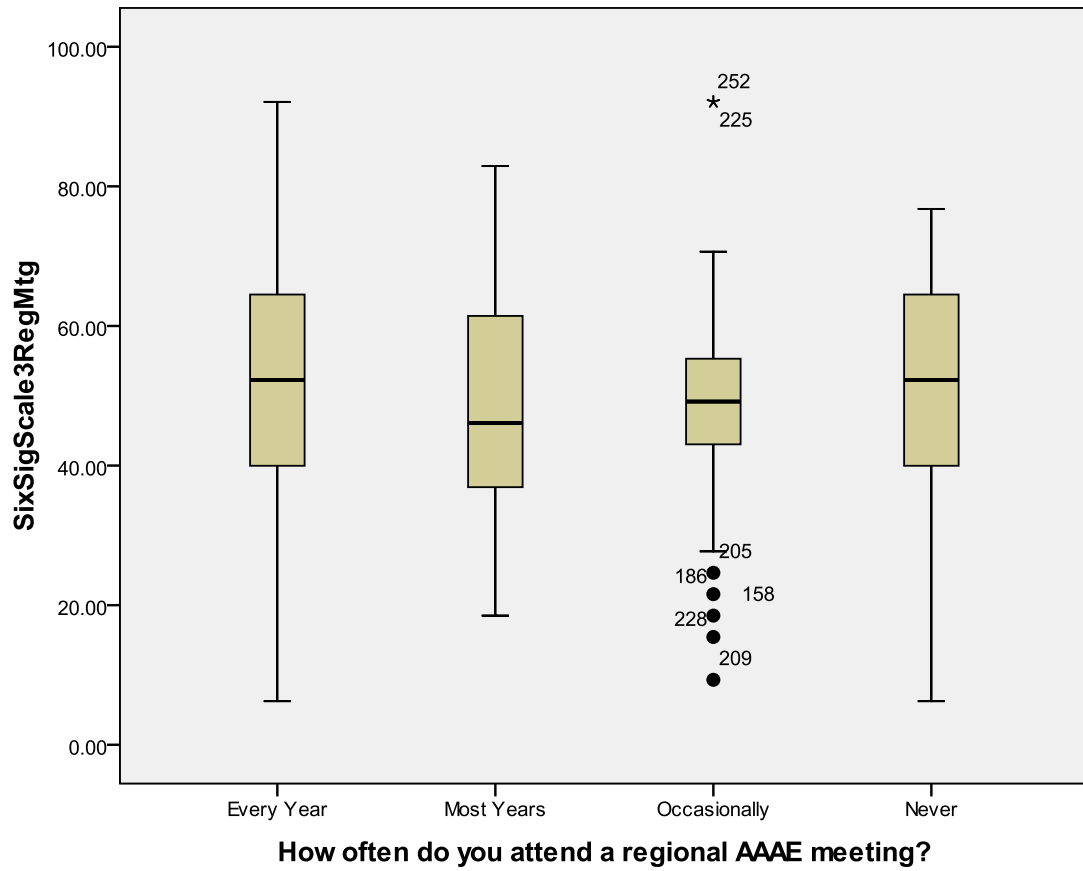


Figure 33. Boxstem plots of 6 σ -scores by frequency of attendance at regional AAE meetings and standard of performance.

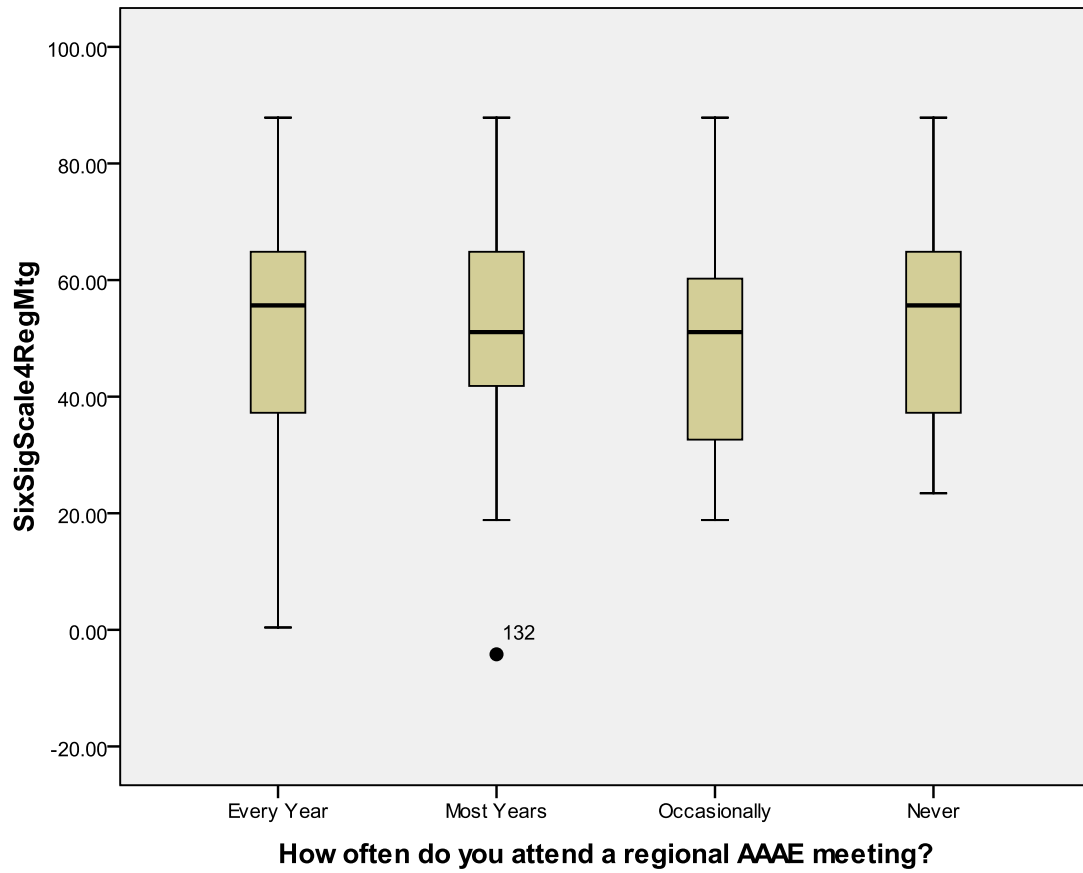


Figure 34. Boxstem plots of 6σ -scores by frequency of attendance at regional AAE meetings and collegiality.

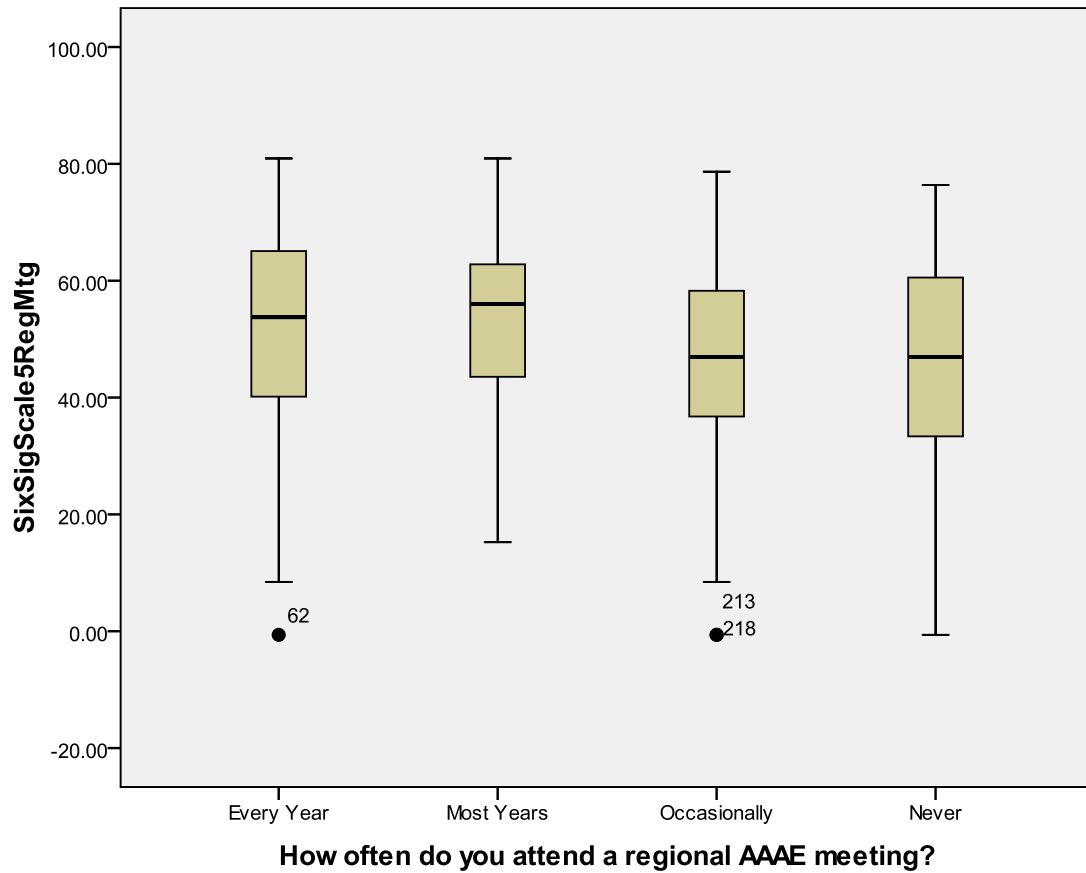


Figure 35. Boxstem plots of 6σ -scores by frequency of attendance at regional AAE meetings and organizational vision.

Mean 6σ scores associated with AAE members who attend the national AAE meeting occasionally were below the mean for all of the scales: organizational cohesion (see Figure 36), collaboration and cooperation (see Figure 37), standard performance (see Figure 38), collegiality (see Figure 39), and organizational vision (see Figure 40).

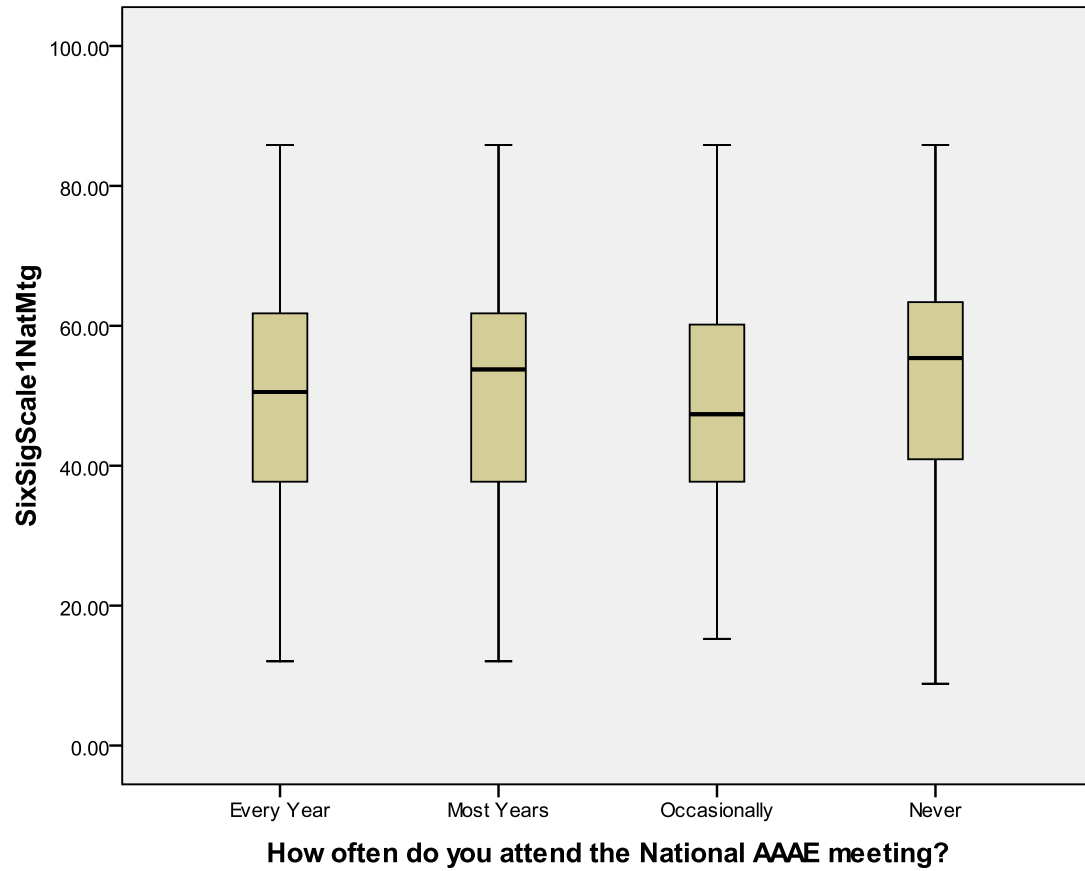


Figure 36. Boxstem plots of 6σ -scores by frequency of attendance at national AAE meetings and organizational cohesiveness.

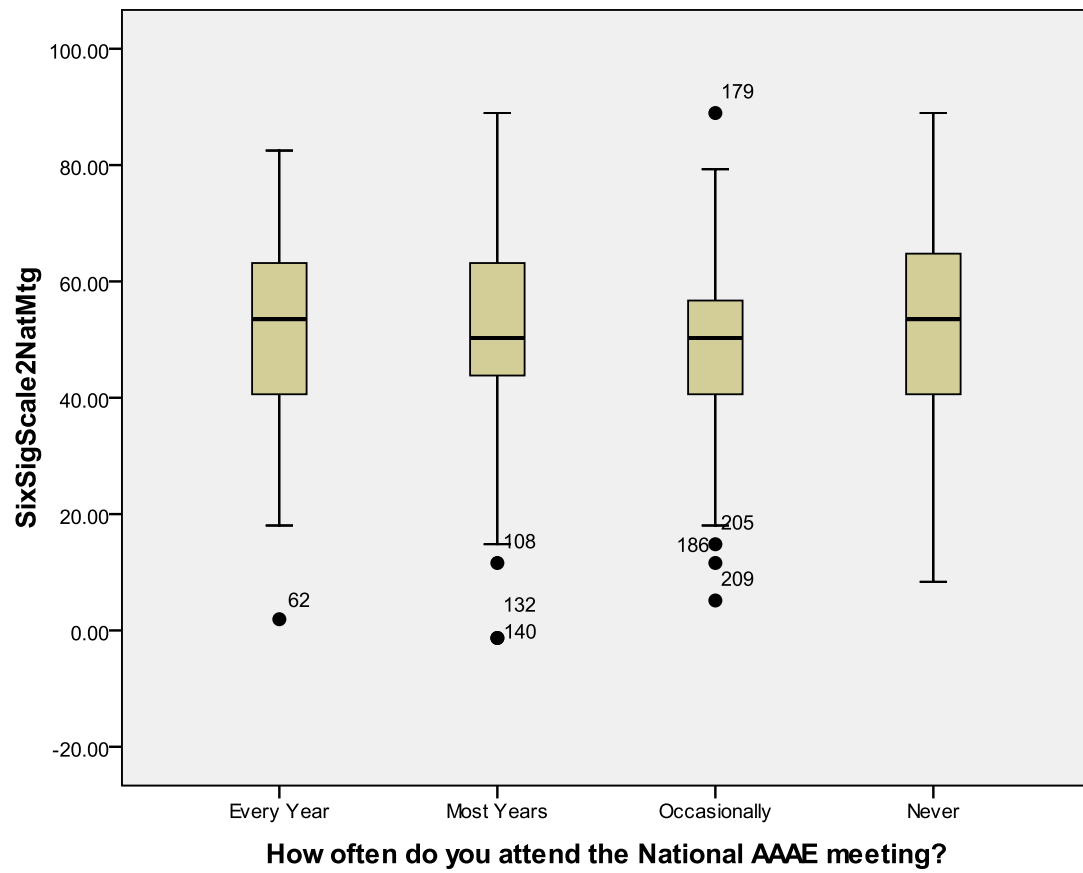


Figure 37. Boxstem plots of 6σ -scores by frequency of attendance at national AAE meetings and collaboration and cooperation.

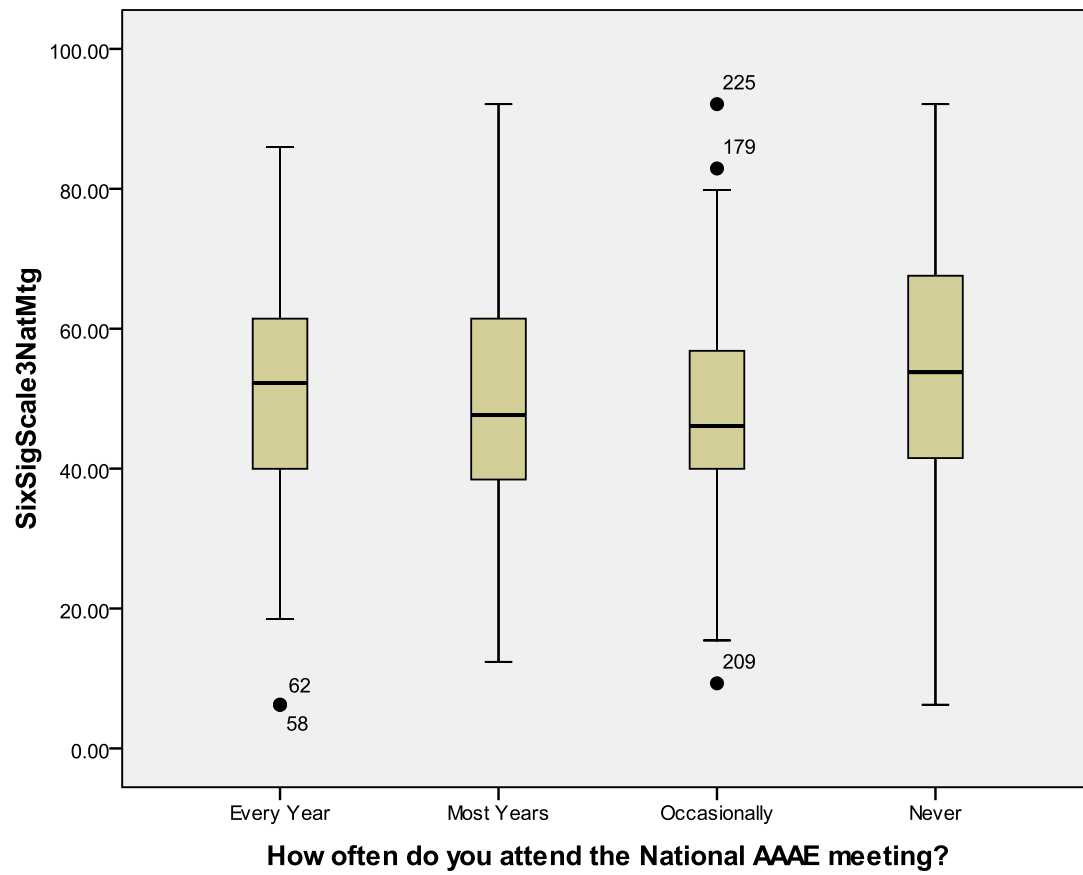


Figure 38. Boxstem plots of 6σ -scores by frequency of attendance at national AAEE meetings and standard of performance.

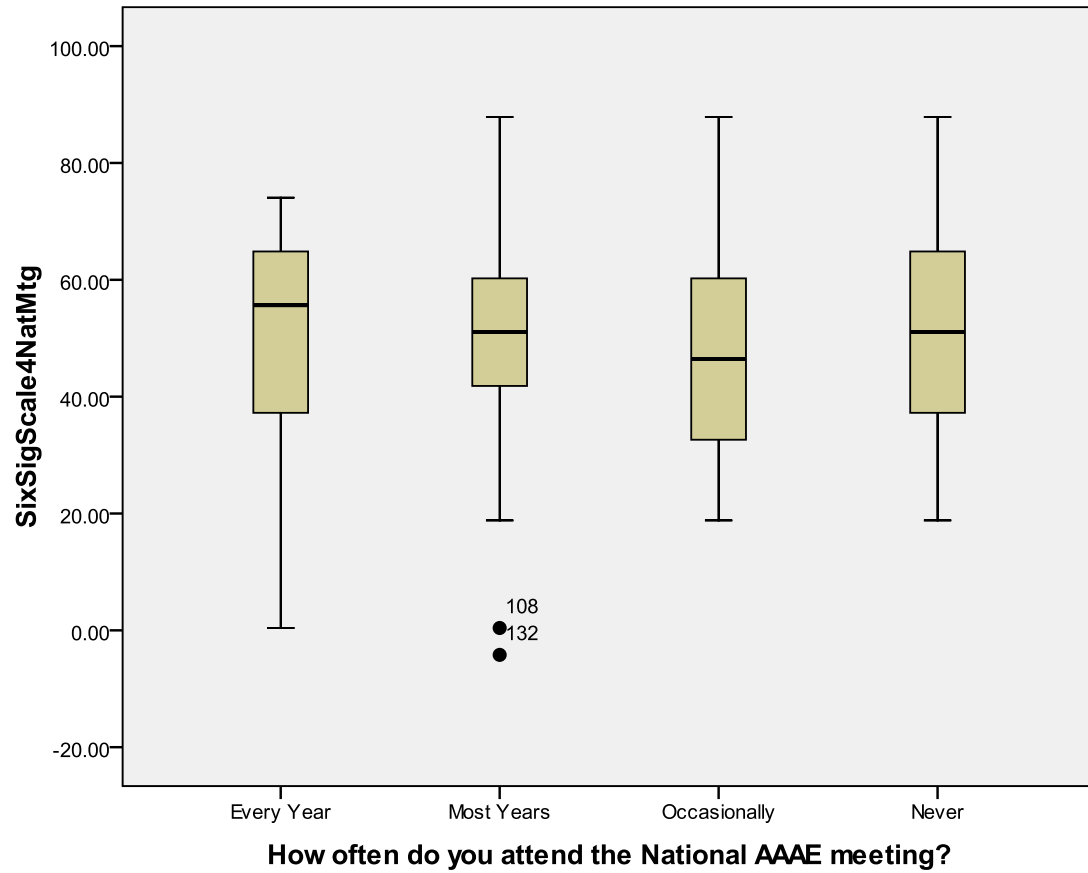


Figure 39. Boxstem plots of 6σ -scores by frequency of attendance at national AAE meetings and collegiality.

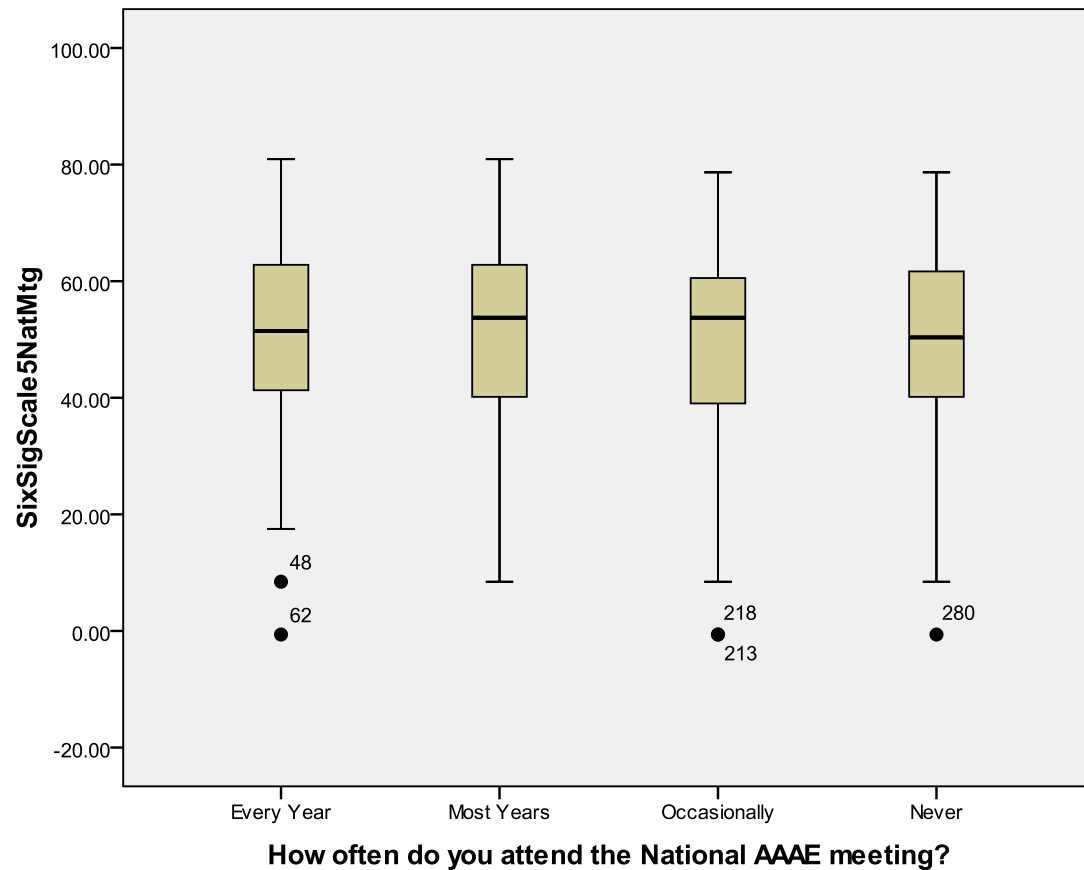


Figure 40. Boxstem plots of 6σ -scores by frequency of attendance at national AAAE meetings and organizational vision

Research Objective Three

The purpose of research objective three was to determine if differences existed in the organizational climate of the AAAE based on members' perceptions of the scales of

the OCI and the professional characteristics of AAAE members. The mean scores for the OCI scales by membership status were higher for dues-paying-members than non-dues-paying members. The ANOVA results indicated that significant difference existed between dues-paying-members and non-dues-paying-members for the OCI scale organizational vision.

Mean scores for AAAE members affiliated with the Western Region were highest for organizational cohesion, collaboration and cooperation, standard of performance, and collegiality. Mean scores for AAAE members affiliated with the Southern Region were highest for organizational vision. The ANOVA results indicated that significant difference existed between AAAE members affiliated with the North Central, Southern, and Western regions for the OCI scale collegiality (see Figure 41).

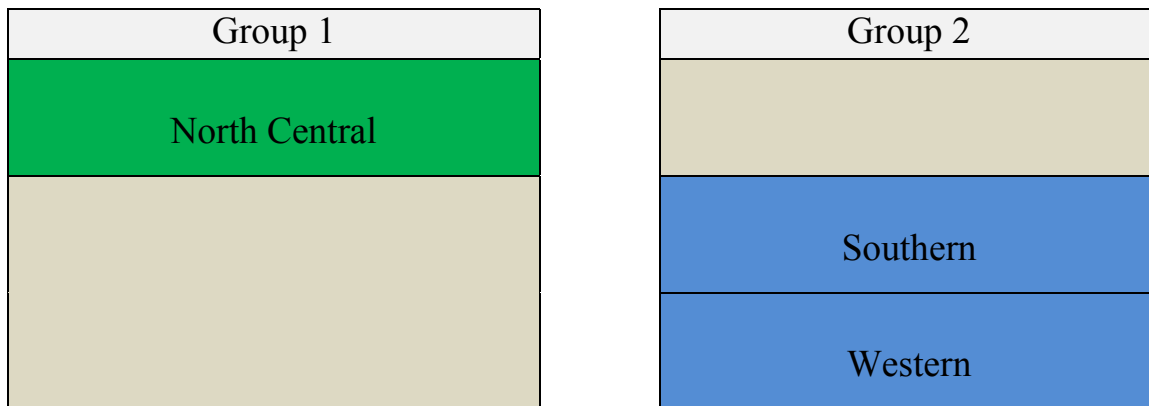


Figure 41. Results of the REGWF post hoc test for differences in collegiality by regional affiliation.

The highest mean score for the scale organizational cohesion was associated with others; whereas, the highest mean scores for the scale collaboration and cooperation, and standard of performance were associated with graduate students. Graduate students and other had the highest mean score for the scale collegiality. The highest mean score for the scale organizational vision was associated with assistant professors.

Observation of the results of the ANOVA allows one to determine that a significant difference existed between levels of academic position for the OCI scale organizational cohesion. Further observation of the results allows one to determine that there was a significant difference between graduate students, assistant professors, and associate professors, when compared to graduate students, associate professors, professors, and others based on their perceptions of the organizational cohesiveness scale (see Figure 42).

Group 1	Group 2
Graduate Students	Graduate Students
Assistant Professors	Assistant Professors
Associate Professors	
	Professors
	Others

Figure 42. Results of the REGWF post hoc test for differences in organizational cohesiveness by academic position.

There was also a significant difference between assistant professors, associate professors, and professors, when compared to graduate students, assistant professors, professors, and others based on their perceptions of the collegiality scale (see Figure 43).

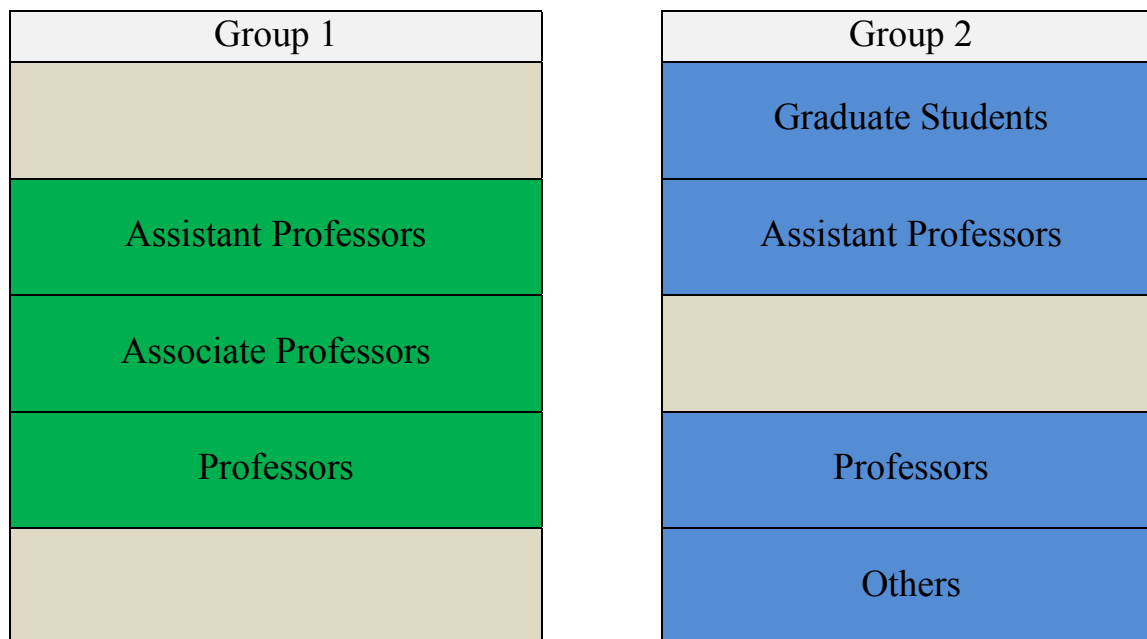


Figure 43. Results of the REGWF post hoc test for differences in collegiality by academic position.

Mean scores for AAAE members who never attended AAAE regional meetings were highest for organizational cohesion, collaboration and cooperation, standard of performance, and collegiality. Mean scores for AAAE members who attended AAAE regional meetings most years were highest for organizational vision. The ANOVA results indicated that there was a significant difference between AAAE members who attended AAAE meetings every year, occasionally, and never, when compared to AAAE members who attended AAAE meetings every year, most years, and never based on their perceptions of the organizational vision scale (see Figure 44).

Group 1	Group 2
Every Year	Every Year
	Most Years
Occasionally	
Never	Never

Figure 44. Results of the REGWF post hoc test for differences in organizational vision by frequency of attendance at regional AAAE meetings.

Mean scores for AAAE members who never attended AAAE national meetings were highest for organizational cohesion, collaboration and cooperation, and standard of performance. Mean scores for AAAE members who attended AAAE national meetings every year were highest for collegiality. Mean scores for AAAE members who attended AAAE national meetings most years were highest for organizational vision. The ANOVA results indicated that no significant differences existed between frequency of attendance at national AAAE meetings and the OCI scales.

Research Objective One

Conclusion

Nearly three-quarters of the membership of the AAAE is held by academic faculty in professorate ranks. Each of the five research priority areas was represented.

The Southern region was the largest region, representing nearly one-half of the total membership, followed by North Central and Western regions. Both the regional and national meetings are relevant and important to the membership.

Implications

It is unclear why some individuals are willing to pay dues to the AAAE, while others are not. Advantages to membership may be unclear to nonmembers or disadvantages are clear enough to non-dues-paying-members to not want to pay dues. The AAAE is a professional organization founded by individuals holding professor rank positions in departments of agricultural education. Although the scope of the organization includes the broader context of agricultural education, it makes sense that a majority of AAAE members hold professor-rank positions with research priority areas focused on more traditional agricultural education areas in secondary and post-secondary schools.

Given that a majority of the large post-secondary agricultural education programs are located in the general proximity of the Southeastern United States, it is not unexpected that the Southern region had the greatest number of members. One may speculate that with nearly one-half of the AAAE membership affiliated with the Southern region, the Southern region has a substantial influence on the direction of the AAAE. Each of the regions has demonstrated, through attendance at regional and national AAAE meetings, that some level of professional interaction with their colleagues is important. The specific reason for attendance is unclear.

Research Objective Two

Conclusion

Organizational vision was the scale with the highest scale mean score; whereas, standard of performance was the scale with the lowest scale mean. Mean 6σ scores of dues-paying members were consistently higher than those of non-dues-paying-members. Mean 6σ scores of AAAE members affiliated the North Central region were consistently lower than the mean scores of their colleagues from the Southern and Western regions. Mean 6σ scores associated with master's students, doctoral students, and emeritus professors were most frequently higher than AAAE members in the lecturer and professor ranks. The highest mean 6σ scores were associated with AAAE members who attended regional and national AAAE meetings on a more frequent basis.

Implications

The members of the AAAE appear to have some level of *buy-in* to the National Research Agenda. They also appear to believe that to some extent, it is important to work together and be supportive. However, AAAE members do not perceive standard of performance, essentially achieving excellence, as an association to be as important as other areas of the OCI.

Research Objective Three

Conclusion

Dues-paying-members and non-dues-paying-members do not perceive the organizational vision of the AAAE—essentially the NRA—in the same way. Perceptions

also differ across all of the scales by region; however, perceptions of collegiality were significantly different for those members affiliated with the North Central region.

The highest mean score for the scale organizational cohesion was associated with AAAE members who are not graduate students or hold professor-rank positions. Graduate students had the highest mean scores for the scale collaboration and cooperation, and standard of performance. Graduate students and other had the highest mean score for the scale collegiality. The highest mean score for the scale organizational vision was associated with assistant professors. Perceptions of organizational cohesion and collegiality differed between the academic positions.

The highest mean scores for organizational cohesion, collaboration and cooperation, standard of performance, and collegiality were associated with AAAE members who never attended AAAE regional meetings. The highest mean scores for organizational vision were associated with AAAE members who attended AAAE regional meetings most years. However, perceptions differed regarding organizational vision by frequency of attendance at regional AAAE meetings.

The highest mean scores for organizational cohesion, collaboration and cooperation, and standard of performance were associated with AAAE members who never attended AAAE national meetings. However, the highest mean scores for collegiality were associated with AAAE members who attended AAAE national meetings every year. The highest mean scores for organizational vision were associated with AAAE members who attended AAAE national meetings most years. However,

perceptions of the scales did not statistically differ based on frequency of attendance at national AAAE meetings.

Implications

Individuals who pay dues to the AAAE perceive the organizational vision and the NRA differently than those who do not. Perhaps that is why some individuals do not pay dues. Differences in perceptions of the scales by region may be an effect of geographic separation; however, the differences of perceptions of collegiality may be an indication that differences extend beyond geography. Do AAAE members in different regions perceive each other as colleagues? Do AAAE members believe they can only count on members in their own region? Can this be attributed to cultural differences?

It should not be unexpected that the regions differ statistically, because the regions vary based on observation as well. Hence, it is important to consider other possible scales that may influence regional differences. Based on the researcher's observations and involvement in each region, each region has a different structure to their meetings: North Central region is arguably the most formal region in their approach to research presentations during their regional meetings. However, the North Central region includes undergraduate activities into their schedule of programs (Bell, 2009). The Southern region is similar in the formality of their research presentations during their regional meetings; however, that should not be unexpected given that they meet along with the Southern Association of Agricultural Scientists (SAAS). SAAS is an organization of professional agricultural scientists—e.g. horticulturalists, soil scientists, animal scientists, etc.—who meet annually to present research (Legendre, 2010). SAAS

is unique in the scale and scope of their conference in comparison to the other Association of Agricultural Scientist regions. Hence, it is reasonable to assume that their collaborative meeting with the Southern region AAAE is a unique situation. The Western region is unique in that their regional meeting is coordinated to coincide with Region 1 of the National Association of Agricultural Educators (NAAE). The NAAE is a professional association of secondary agriculture teachers. The Western region is most likely the only region to meet with the group from which many of the AAAE members were at one point a member, given that the foundational members of the AAAE were former secondary agricultural educators. Beyond regional differences, one must also consider differences on level of academic position.

Observed differences in mean scores between academic positions may raise questions: Do graduate students and professors emeritus have the highest mean score for organizational cohesion because they are not in pursuit of tenure and promotion? Perhaps the tenure and promotion process is why assistant professors had the highest mean score for organizational vision. Do graduate students have the highest mean for collaboration and cooperation because they believe that to be the key to succeeding in graduate school or the profession? If so, why would that change when those graduate students become assistant professors? One may then question why graduate students have the highest mean score for standard of performance? There may be little question as to why graduate students have the highest mean score for collegiality: Perhaps graduate students see sticking-together as the best way to succeed? Why would individuals, categorized as *other*, share the highest mean score for collegiality?

It would seem logical that those AAAE members who attend meetings on a frequent basis would have the highest mean scores for the scales, because the meetings arguably provide opportunity to interact and network. Hence, one may question why those AAAE members who *never* attend regional or national meetings had the highest mean score for four of the five scales. Do members who never attend meetings have the highest mean scores because they are not aware of what occurs in the profession? It does make sense that the AAAE members who attend the national AAAE meetings every year have the highest mean score for organizational vision. What does not make sense is why AAAE members who never attend the national AAAE meetings have higher mean scores?

Recommendations for Practice

The climate of an organization can be relatively easy to change, but change in culture takes the full commitment of every leader within the organization for a sustained period of time (Hofstede, 1997). Furthermore, Graham's (Graham, 2007) idea that AAAE members are content with the idea that the "...same old things will work for the future..." (p. 2) should be of concern to the leadership of the AAAE. Graham's suggestion that AAAE members were slow to accept change, especially change that required individuals to meet different expectations, could be an underlying reason for the differences in perceptions of the organizational cohesiveness and collegiality by academic position. This is further concerning given the likelihood that younger faculty will model the old ways rather than create new ways (Graham, 2007).

Therefore, based on the organizational climate of the AAAE, the leadership of the AAAE should develop a long-term written plan to serve as a guide in the future development of the organization—a focused agenda (Graham, 2007) that goes beyond conducting research and the NRA (e.g. development of new answers, disseminating agricultural education research to practitioners, professional development goals, etc.)—a plan that initiates change to meet the needs of those being served by the AAAE (2007). Furthermore, the development of such a plan should include member input through frequent interaction (Anderson & West, 1999; Axelrod, 1984), to critically appraise and address potential weaknesses of the AAAE, and to achieve the best possible outcome, while embracing all members in the broader context of agricultural education (Briers, 2008). Moreover, the social network within the AAAE that allows the members of the organization to stay closely connected (Briers), should be used for the development of the new plan, and be approached in such a manner so that the membership has input; thereby reflecting that members have committed themselves to the venture and therefore share proportionately the gains and losses (Kogut, 1989).

It is recommended that the OCI should be used to measure change in the organizational climate of the AAAE over time, to provide the AAAE leadership with information that may better allow them to improve the functionality of the organization.

Recommendations for Further Research

The TCI was developed through numerous studies conducted outside the United States. AAAE members, as Americans, differ from the foreign populations that data were collected from to develop the TCI. It is unclear whether members of the AAAE

differ from the general population of the United States. It would not be illogical to derive that because educators account for a small portion of the general population and educators in an agricultural context are likely to account for an even lesser percentage of the general population, that agricultural educators are not representative enough of the general population in the United States to validate the OCI for use in the general population without further implementation and analysis. Therefore, it is recommended that the OCI be used for data collection in other domestic populations, so that it can become a refined instrument for measuring intraorganizational climate in the United States. Furthermore, the items associated with social desirability should be included in further assessment and adaptation of the OCI. Such future use may determine if social desirability are appropriate for inclusion.

Although the OCI was an output from this study, it is important to operationally define the scales. Qualitative research may provide deeper insight regarding how each of the scales affect and effect organizations. Duplication of this study would add further credibility to the OCI instrument. Implementation of a longitudinal study of the AAAE using the OCI would be beneficial to the organization and its members.

Recommendations for Further Inquiry

- Do members of the AAAE believe they have cultural differences based on professional characteristics or geographic location?
- Why do AAAE members not perceive standards of performance as an association to be as important as other areas of the OCI?

- Why do AAAE members who never attend the national AAAE meetings have higher mean scores for scales of the OCI than members who do attend the national AAAE meetings?
- Do the AAAE members' research priority areas, as defined in the NRA, have an effect on the scores of the OCI?
- Will the next NRA change AAAE members' perceptions of the scales associated with the OCI?

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APPENDIX A

Department Climate Inventory Questionnaire

INSTRUCTIONS

This questionnaire asks about the climate or atmosphere in your department. It asks about how people tend to work in the department, how frequently you interact, the department's goals, and how much practical support is given toward the implementation of new and improved ways of doing things. There are no 'right' or 'wrong' answers to any of the questions — it is more important that you give an accurate and honest response to each question. Do not spend too long on any one question. First reactions are usually the best. For each question, consider how your department generally tends to be or how you generally feel about the climate within your department. Please clearly circle one response per question.

The questionnaire will take about 15 minutes to complete. Your input is important to us, as the information you provide is very valuable. Your responses will remain confidential—no individual responses will be reported. Thank you.

Please return by Thursday, August 20, 2009 to Dr. Rutherford's mailbox.

Department Climate Inventory Questionnaire

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
PART 1 COMMUNICATION AND INNOVATION					
1 We generally share information in the department, rather than keeping it to ourselves.	1	2	3	4	5
2 Assistance in developing new ideas is readily available.	1	2	3	4	5
3 We influence each other.	1	2	3	4	5
4 The department always functions to the best of its capability.	1	2	3	4	5
5 We keep in regular contact with each other.	1	2	3	4	5
6 In this department, we take the time needed to develop new ideas.	1	2	3	4	5
7 In the department, people feel understood.	1	2	3	4	5
8 In the department, people feel accepted.	1	2	3	4	5
9 Everyone's view is listened to, even if it is in a minority.	1	2	3	4	5
10 People in the department never feel tense with one another.	1	2	3	4	5
11 The department is open to change.	1	2	3	4	5
12 The department is responsive to change.	1	2	3	4	5
13 People in the department cooperate in order to help develop new ideas.	1	2	3	4	5

14	Professionally, being part of this department is the most important thing for department members.	1	2	3	4	5
15	We have a 'we are in it together' attitude.	1	2	3	4	5
16	We interact frequently.	1	2	3	4	5
17	The department is significantly better than any other in the agricultural education field.	1	2	3	4	5
18	People keep each other informed about work-related issues in the department.	1	2	3	4	5
19	Members of the department <i>provide</i> resources to help the application of new ideas.	1	2	3	4	5

PART 1 COMMUNICATION AND INNOVATION		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
20	Members of the department <i>share</i> resources to help the application of new ideas.	1	2	3	4	5
21	There are consistently harmonious relationships between people in the department.	1	2	3	4	5
22	There is a lot of give-and-take.	1	2	3	4	5
23	We keep in touch with others as a department.	1	2	3	4	5
24	People in this department are always searching for new ways of looking at problems.	1	2	3	4	5
25	The department consistently achieves the highest targets with ease.	1	2	3	4	5
26	There are real attempts to share information throughout the department.	1	2	3	4	5
27	This department is always moving toward the development of new answers.	1	2	3	4	5
28	Department members provide practical support for new ideas and their application.	1	2	3	4	5
29	Members of the department meet frequently to talk <i>formally</i> .	1	2	3	4	5
30	Members of the department meet frequently to talk <i>informally</i> .	1	2	3	4	5

PART II OBJECTIVES	Not at all		Somewhat		Completely
31 How clear are you about the department goals?	1	2	3	4	5
32 To what extent do you think they are useful goals?	1	2	3	4	5
33 To what extent do you think they are appropriate goals?	1	2	3	4	5
34 How far are you in agreement with these goals?	1	2	3	4	5
35 To what extent do you think other department members agree with these goals?	1	2	3	4	5
36 To what extent do you think the department's goals are clearly understood by other members of the department?	1	2	3	4	5
37 To what extent do you think the department's goals can actually be achieved?	1	2	3	4	5
38 How worthwhile do you think these goals are to you?	1	2	3	4	5
39 How worthwhile do you think these goals are to the department?	1	2	3	4	5
40 How worthwhile do you think these goals are to the wider society?	1	2	3	4	5
41 To what extent do you think these goals are realistic?	1	2	3	4	5
42 To what extent do you think these goals can be attained?	1	2	3	4	5
43 To what extent do you think members of the department are committed to these goals?	1	2	3	4	5

PART III TASK STYLE	To a very little extent		To some extent		To a very great extent
44 Do your department colleagues provide <i>useful ideas</i> to enable you to do the job to the best of your ability?	1	2	3	4	5
45 Do your department colleagues provide <i>practical help</i> to enable you to do the job to the best of your ability?	1	2	3	4	5
46 Do you and your colleagues monitor each other so as to maintain a higher standard of work?	1	2	3	4	5
47 Are department members prepared to question the basis of what the department is doing?	1	2	3	4	5
48 Does the department critically appraise potential weaknesses in what it is doing in order to achieve the best possible outcome?	1	2	3	4	5
49 Do members of the department build on each other's ideas in order to achieve the best possible outcome?	1	2	3	4	5
50 Is there a real concern among department members that the department should achieve the highest standards of performance?	1	2	3	4	5
51 Does the department have clear criteria that members try to meet in order to achieve excellence as a department?	1	2	3	4	5

APPENDIX B

Colleagues,

As you may or not be aware, the *National Research Agenda* of the AAEE will undergo revision during 2010; thus, it is important to determine the level of the profession's support of the previous version of the document. The AAEE membership will serve as the frame for the study. In the next few days some of you will receive a personalized e-mail request to complete a brief online questionnaire. The leadership for this research is being provided by our colleagues at the University of Missouri and Texas A&M University.

Your response to this questionnaire is very important to the success of the study. Aggregate data will be provided to the committee making revisions to *the National Research Agenda*, which will aid them in determining if and where revisions are necessary in the document. I am certain that you will agree this is a goal worthy of your support.

Thank you for your time and consideration. It's only with the generous help of people like you that our research can be successful.

Lloyd

Lloyd Bell, Professor

College of Agricultural Sciences & Natural Resources

University of Nebraska-Lincoln

Lincoln, Nebraska 68583-0709

402-472-8739; LBell1@unl.edu

APPENDIX C

Subject: National Research Agenda of Agricultural Education and Communication - Feedback

Dear David,

Dr. Bell noted in his e-mail message to the profession yesterday that the National Research Agenda of Agricultural Education and Communication will undergo revision during 2010. As a part of that process, it is important to **determine the level of support** given by the profession to the 2007-2010 version of the [document](#). The AAAE membership serves as the frame for this. Your response to this questionnaire is very important to the success of the study. Aggregate data will be provided to the committee making revisions to the National Research Agenda, which will aid them in determining if and where revisions are necessary in the document. We are certain that you will agree this is a goal worthy of your support. Thus, we urge you to take 15 to 25 minutes to complete the electronic questionnaire by clicking on the link directly below.

Survey URL: <http://www.hostedsurvey.com/takesurvey.asp?c=TeamCl133551&rc=1>

Participation in this study is voluntary; in no way are you required to participate. However, you can help us very much by taking a few minutes to share your experiences and opinions about the AAAE and the National Research Agenda. Should you choose not to participate in this study, please reply to this e-mail message with "Not Participating" in the subject line so that we do not send you a follow up questionnaire. Persons who do not complete the online questionnaire **by Wednesday, November 4th**, will receive a reminder e-mail. Rest assured that your refusal to participate in this study will not affect your relationship with any school or university; it will not result in any penalty or loss of benefits to which you might otherwise be entitled. Thank you in advance for your prompt response. If you have any questions as you complete the questionnaire, please contact any of us at the phone numbers or e-mail addresses listed below. You may also contact the Texas A&M University Office of Research Compliance at (979) 458-1467 for further information concerning human participation in research studies.

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This email was sent to dacker@iastate.edu by torresr@missouri.edu.

If you have questions about this email or do not wish to receive additional emails, please reply or contact Billy McKim at bmckim@aged.tamu.edu.

APPENDIX D

Subject: National Research Agenda and AAAE

Dear David,

We recently asked for your input regarding the AAAE and the National Research Agenda. Unfortunately, we haven't heard from you. Dr. Bell and others have noted in their recent messages that the National Research Agenda of Agricultural Education and Communication will undergo revision during 2010. As a part of that process, it is important to **determine the level of support** given by the profession to the 2007-2010 version of the [document](#). Your response to this questionnaire is very important to the success of the study. Aggregate data will be provided to the committee making revisions to the National Research Agenda, which will aid them in determining if and where revisions are necessary in the document. We are certain that you will agree this is a goal worthy of your support. Thus, we urge you to take 15 to 25 minutes to complete the electronic questionnaire by clicking on the link directly below.

Survey URL: <http://www.hostedsurvey.com/takesurvey.asp?c=TeamCl133551&rc=1>

Participation in this study is voluntary; in no way are you required to participate. However, you can help us very much by taking a few minutes to share your experiences and opinions about the AAAE and the National Research Agenda. Should you choose not to participate in this study, please reply to this e-mail message with "Not Participating" in the subject line so that we do not send you a follow up questionnaire. Persons who do not complete the online questionnaire **by Tuesday, November 10th**, will receive a reminder e-mail. Rest assured that your refusal to participate in this study will not affect your relationship with any school or university; it will not result in any penalty or loss of benefits to which you might otherwise be entitled. Thank you in advance for your prompt response. If you have any questions as you complete the questionnaire, please contact any of us at the phone numbers or e-mail addresses listed below. You may also contact the Texas A&M University Office of Research Compliance at (979) 458-1467 for further information concerning human participation in research studies.

Tim H. Murphy	Tracy Rutherford	Robert M. Torres	Billy McKim
Professor	Associate Professor	Professor	Graduate Student
Department of Agricultural Leadership, Education, and Communications	Department of Agricultural Leadership, Education, and Communications	Department of Agricultural Education	Department of Agricultural Leadership, Education, and Communications
Texas A&M University	Texas A&M University	University of Missouri	Texas A&M University
tmurphy@tamu.edu	trutherford@tamu.edu	torresr@missouri.edu	bmckim@aged.tamu.edu
(979) 862-3419	(979) 458-2744	(573) 884-7376	(979) 845-0794

This email was sent to dacker@iastate.edu by tmurphy@tamu.edu.

If you have questions about this email or do not wish to receive additional emails, please reply or contact Billy McKim at bmckim@aged.tamu.edu.

APPENDIX E

Subject: National Research Agenda and AAAE

Dear David,

We recently asked for your input regarding the AAAE and the National Research Agenda. Unfortunately, we haven't heard from you. Dr. Bell and others noted in their recent messages that the National Research Agenda of Agricultural Education and Communication will undergo revision during 2010. As a part of that process, it is important to **determine the level of support** given by the profession to the 2007-2010 version of the [document](#). Many of our colleagues have already responded, but your response to this questionnaire is very important to the success of the study. Aggregate data will be provided to the committee making revisions to the National Research Agenda, which will aid them in determining if and where revisions are necessary in the document. We are certain that you will agree this is a goal worthy of your support. Thus, we urge you to take 15 to 25 minutes to complete the electronic questionnaire by clicking on the link directly below.

Survey URL: <http://www.hostedsurvey.com/takesurvey.asp?c=TeamCI133551&rc=1>

Participation in this study is voluntary; in no way are you required to participate. However, you can help us very much by taking a few minutes to share your experiences and opinions about the AAAE and the National Research Agenda. Should you choose not to participate in this study, please reply to this e-mail message with "Not Participating" in the subject line so that we do not send you a follow up questionnaire. Persons who do not complete the online questionnaire **by Monday, November 16th**, will receive a reminder e-mail. Your refusal to participate in this study will not affect your relationship with any school or university; it will not result in any penalty or loss of benefits to which you might otherwise be entitled. Thank you in advance for your response. If you have any questions as you complete the questionnaire, please contact any of us at the phone numbers or e-mail addresses listed below. You may also contact the Texas A&M University Office of Research Compliance at (979) 458-1467 for further information concerning human participation in research studies.

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This email was sent to dacker@iastate.edu by trutherford@tamu.edu.

If you have questions about this email or do not wish to receive additional emails, please reply or contact Billy McKim at bmckim@aged.tamu.edu

APPENDIX F

Organization Climate Inventory for AAE

You have been selected to participate in this survey because of your affiliation with the American Association for Agricultural Education (AAAE). Your response to this questionnaire is very important to the success of the study. Aggregate data will be provided to the committee making revisions to the National Research Agenda, which will aid them in determining if and where revisions are necessary in the document.

This questionnaire asks about the climate or atmosphere in the AAAE. It asks about how people tend to work in the AAAE, how frequently you interact, the National Research Agenda priorities, and how much practical support is given toward the implementation of new and improved ways of doing things. There are no 'right' or 'wrong' answers to any of the questions – it is more important that you give an accurate and honest response to each question. Do not spend too long on any one question. First reactions are usually the best. For each question, consider how the AAAE generally tends to be or how you generally feel about the climate within the AAAE.

The questionnaire will take about 15 to 25 minutes to complete. Your input is important to us, as the information you provide is very valuable. Your responses will remain confidential—no individual responses will be reported. Thank you.

If you need assistance or have questions while taking this survey, please contact:

Billy McKim
bmckim@aged.tamu.edu
(979) 845-0794

PREVIEW / TEST MODE

Your Responses Will Not Be Permanently Saved.

Contact your survey administrator if you were directed to this INACTIVE version of the survey.

[Begin Survey](#)

PART II OBJECTIVES

For each question, consider how the AAAE generally tends to be or how you generally feel about the climate within the AAAE. Please choose one response per question.

	Not at all		Somewhat		Completely
How clear are you about the <i>National Research Agenda Priorities</i> ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent do you think the <i>National Research Agenda</i> priorities are useful priorities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent do you think the <i>National Research Agenda</i> priorities are appropriate priorities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent are you in agreement with the <i>National Research Agenda</i> priorities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent do you think other AAAE members agree with the <i>National Research Agenda</i> priorities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent do you think the <i>National Research Agenda</i> priorities are clearly understood by other members of the AAAE?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent do you think the <i>National Research Agenda</i> priorities can actually be achieved?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How worthwhile do you think the <i>National Research Agenda</i> priorities are to you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How worthwhile do you think the <i>National Research Agenda</i> priorities are to the AAAE?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How worthwhile do you think the <i>National Research Agenda</i> priorities are to the wider society?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent do you think the <i>National Research Agenda</i> priorities are realistic?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent do you think the <i>National Research Agenda</i> priorities can be attained?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent do you think members of the AAAE are committed to the <i>National Research Agenda</i> priorities ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PART III TASK STYLE

For each question, consider how the AAAE generally tends to be or how you generally feel about the climate within the AAAE. Please choose one response per question.

	To a very little extent	To some extent	To a very great extent		
Do your AAAE colleagues provide <i>useful ideas</i> to enable you to do the job to the best of your ability?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do your AAAE colleagues provide <i>practical help</i> to enable you to do the job to the best of your ability?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you and your AAAE colleagues monitor each other so as to maintain a higher standard of work?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are AAAE members prepared to question what the AAAE is doing?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Does the AAAE critically appraise potential weaknesses in what it is doing in order to achieve the best possible outcome?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do members of the AAAE build on each other's ideas in order to achieve the best possible outcome?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is there a real concern among AAAE members that the AAAE should achieve the highest standards of performance?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Does the AAAE provide a clear criterion that members try to meet in order to achieve excellence as an association?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PART IV

For this section please indicate your answer by selecting the response that most accurately describes you.

What best describes your current position?

- Master's Graduate Student
- Doctoral Graduate Student
- Lecturer
- Assistant Professor
- Associate Professor
- Professor
- Professor Emeritus
- Other

Which Research Priority Area(s) best describe your research efforts? (select all that apply)

- Agricultural Communications
- Agricultural Leadership
- Agricultural Education in Domestic and International Settings: Extension and Outreach
- Agricultural Education in University and Postsecondary Settings
- Agricultural Education in Schools

AAAE Regional Affiliation:

- North Central
- Southern
- Western

Are you a current dues-paying member of AAAE?

- Yes
- No

APPENDIX G

Frequencies and Percentages of Items of the Organizational Cohesion Scale

Item	1		2		3		4		5	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
In the AAAE, people feel accepted.	18	6.4	60	21.2	66	23.3	116	41.0	23	8.1
The AAAE is open to change.	28	9.9	77	27.2	79	27.9	84	29.7	15	5.3
Everyone’s view is listened to, even if it is in a minority.	21	7.4	81	28.6	64	22.6	95	33.6	22	7.8
The AAAE is responsive to change.	27	9.5	73	25.8	88	31.1	82	29.0	13	4.6
In the AAAE, people feel understood.	13	4.6	45	15.9	100	35.3	112	39.6	13	4.6
We have a ‘we are in it together’ attitude.	11	3.9	46	16.3	86	30.4	109	38.5	31	11.0

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

APPENDIX H

Frequencies and Percentages of Items of the Collaboration and Cooperation Scale

Item	1		2		3		4		5	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Members of the AAAE <i>provide</i> resources to help apply new ideas.	10	3.5	61	21.6	93	32.9	106	37.5	13	4.6
Members of the AAAE <i>share</i> resources to help apply new ideas.	10	3.5	44	15.5	88	31.1	123	43.5	18	6.4
Assistance in developing new ideas is readily available.	7	2.5	46	16.3	84	29.7	122	43.1	24	8.5
AAAE members provide practical support for new ideas and their application.	12	4.2	55	19.4	100	35.3	105	37.1	11	3.9
People in the AAAE cooperate in order to help develop new ideas.	10	3.5	32	11.3	80	28.3	140	49.5	21	7.4
There is a lot of give-and-take.	12	4.2	49	17.3	114	40.3	93	32.9	15	5.3
People in the AAAE are always searching for new ways of looking at problems.	17	6.0	52	18.4	100	35.3	102	36.0	12	4.2

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

APPENDIX I

Frequencies and Percentages of Items of the Standards of Performance Scale

Item	1		2		3		4		5	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Does the AAAE critically appraise potential weaknesses in what it is doing in order to achieve the best possible outcome?	34	12.0	78	27.6	107	37.8	57	20.1	7	2.5
Are AAAE members prepared to question what the AAAE is doing?	32	11.3	65	23.0	94	33.2	77	27.2	15	5.3
Do members of the AAAE build on each other's ideas in order to achieve the best possible outcome?	14	4.9	45	15.9	123	43.5	83	29.3	18	6.4
Is there a real concern among AAAE members that the AAAE should achieve the highest standards of performance?	12	4.2	36	12.7	92	32.5	112	39.6	31	11.0
Do you and your AAAE colleagues monitor each other so as to maintain a higher standard of work?	37	13.1	67	23.7	93	32.9	71	25.1	15	5.3
Does the AAAE provide a clear criterion that members try to meet in order to achieve excellence as an association?	29	10.20	47	16.6	121	42.8	75	26.5	11	3.9

Note: Scale: 1 = To a very little extent ; 3 = To some extent; 5 = To a very great extent

APPENDIX J

Frequencies and Percentages of Items of the Collegiality Scale

Item	1		2		3		4		5	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
We interact frequently.	7	2.5	63	22.3	70	24.7	128	45.2	15	5.3
We keep in regular contact with each other.	5	1.8	43	15.2	71	25.1	144	50.9	20	7.1
We keep in touch with others in the association.	6	2.1	44	15.5	78	27.6	133	47.0	22	7.8
Members of the AAAE meet frequently to talk <i>formally</i> .	8	2.8	63	22.3	74	26.1	120	42.4	18	6.4
Members of the AAAE meet frequently to talk <i>informally</i> .	13	4.6	65	23.0	93	32.9	89	31.4	23	8.1
People keep each other informed about work-related issues in the AAAE.	7	2.5	60	21.2	83	29.3	120	42.4	13	4.6

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

APPENDIX K

Frequencies and Percentages of Items of the Vision Scale

Item	1		2		3		4		5	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
To what extent do you think the <i>National Research Agenda</i> priorities are realistic?	9	3.2	36	12.7	88	31.1	118	41.7	32	11.3
How worthwhile do you think the <i>National Research Agenda</i> priorities are to you?	16	5.7	37	13.1	82	29.0	103	36.4	45	15.9
To what extent are you in agreement with the <i>National Research Agenda</i> priorities?	8	2.8	26	9.2	90	31.8	125	44.2	34	12.0
To what extent do you think the <i>National Research Agenda</i> priorities are useful priorities?	8	2.8	28	9.9	83	29.3	114	40.3	50	17.7
To what extent do you think the <i>National Research Agenda</i> priorities can be attained?	12	4.2	32	11.3	99	35.0	117	41.3	23	8.1
To what extent do you think the <i>National Research Agenda</i> priorities are appropriate priorities?	9	3.2	25	8.8	86	30.4	126	44.5	37	13.1
How worthwhile do you think the <i>National Research Agenda</i> priorities are to the wider society?	19	6.7	52	18.4	86	30.4	92	32.5	34	12.0
To what extent do you think the <i>National Research Agenda</i> priorities can actually be achieved?	8	2.8	42	14.8	99	35.0	119	42.0	15	5.3
How worthwhile do you think the <i>National Research Agenda</i> priorities are to the AAAE?	8	2.8	21	7.4	70	24.7	124	43.8	60	21.2

Note: Scale: 1 = Not at all ; 3 = Somewhat; 5 = Completely

VITA

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