KNOWLEDGE OF AND PERCEPTIONS ABOUT AGRICULTURAL COMMUNICATIONS COMPETENCIES AS PERCEIVED BY OKLAHOMA AGRICULTURAL EDUCATION TEACHERS

By

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Bachelor of Science

Oklahoma State University

Stillwater, Oklahoma

2003

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
MASTER OF SCIENCE
December 2007

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AGRICULTURAL COMMUNICATIONS

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ACKNOWLEDGMENTS

I have often heard the phrase “the shortest distance between two points is a straight line.” My personal master’s program was not the shortest path, as I chose to move to Iowa and work on my thesis component from a distance. However, I ultimately feel that was the direction God was leading me and the final result is better than if I had chosen to spend my time in Stillwater while working toward completion of my degree.

Many people have supported and assisted me in my journey, and I would like to give credit to them now.

To Dr. Shelly Sitton – thank you so much for your support and understanding while working with me. You are a wonderful adviser, mentor, and friend. Your direction and motivation to keep me on the right path while working through all my questions will never be forgotten. From the onset I respected and admired your ethics and abilities, and that only grew more over time.

To my committee – thank you Dr. Leising and Dr. Edwards. Your wealth of knowledge and understanding of research is greatly appreciated. My thesis was improved dramatically because of you.

To Melissa Mourer – thank you for opening my eyes to the agricultural communications master’s program and all the possibilities it encompasses. You were a wonderful resource and supportive friend for me throughout this process.

To Marci Moore – thank you for lending endless hours reading data results to me so I could quickly get it all into a spreadsheet. Your drive to get it completed in a timely manner and your organization assistance of all the instruments was a huge help and time-saver.

To my family – your love, support, and understanding while I made my decisions on how to proceed with my master's and with my career will be cherished forever. Family is one of the most important things in life, and I feel very blessed to have such a wonderful family, who I am honored to call friends, as well.

To my sister, and dear friend, Jennifer – your continuous reminders and questions of upcoming deadlines really assisted to motivate me when progress seemed slow, all the while reminding me that you were pushing me to get finished out of love. You were very supportive and helped keep me focused and driven, so for that, thank you.

Finally, I would like to thank my husband, Erik – thank you for being you. You were incredibly understanding and giving of time and anything else I needed while I was working toward completion of my degree. You constantly kept pushing me and supporting me when I didn't think I could get my thesis completed while being so far removed from the university. For this I owe the completion of my thesis to you.

Pursuing my master's has taught me many things about myself, both within and outside the classroom. I truly believe that anything can be accomplished if you just believe and work toward your goals.

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CHAPTER I

INTRODUCTION

Agricultural education has been a major part of the teaching and learning process since the birth of the country (National Research Council [NRC], 1988). Through informal education and communication, early farmers became more knowledgeable about agricultural issues. In 1733, Georgia colonists taught the first formal agriculture (National Research Council, 1988).

Teaching and learning in agriculture did not become a formal educational process until the signing of the Land Grant College Act or Morrill Act of 1862, which paved the way for agricultural education (Grant, Field, Green, & Rollin, 2000; National Research Council, 1988). The Morrill Act provided support for instruction in agriculture and mechanical arts by agricultural schools (True, 1929). It stressed the importance of comprehensive education, including agriculture and the practical arts (Grant et al., 2000).

Federally supported agricultural education programs emerged in 1917 with the passing of national vocational education or the Smith-Hughes Act (Phipps & Osborne, 1988). These authors explain that the Smith-Hughes Act helped to further define the federal role and included specific provisions for vocational agricultural education. The agricultural education programs created after the passing of the Smith-Hughes Act provided curriculum covering a wide range of topics. The curriculum prepared young people to be or work as farmers and was intended to be more relevant to rural students'

needs than the academic programs used in city schools (National Research Council, 1988). However, the programs did more than prepare farmers; they also helped to spread knowledge throughout farming regions about innovations in agriculture including new methods in management, soil and animal husbandry (National Research Council, 1988; Phipps & Osborne, 1988).

Another important development was the founding of the Future Farmers of America in 1928 (National Research Council, 1988). The FFA grew to become an integral part of high school agricultural education, allowing the opportunity for economic, political, and civic leadership (National Research Council, 1988).

Changes have continued throughout agricultural education and FFA; historically, vocational agriculture appealed to white male students in rural areas but these trends are now changing (National Research Council, 1988).

Original vocational agriculture programs were designed to prepare young people to be or to work as farmers and helped to spread knowledge about agricultural innovations and proper use of soil and animal husbandry (National Research Council, 1988). It is also noted that high school agricultural education programs are much different than they were in the early 1900's, as these programs are no longer just for boys. The focus of the program shifted, for example instead of studying farming techniques, topics such as genetic engineering, agricultural systems management, and aquaculture are being studied (Case & Whitaker, 1998). These authors also indicated that the instructional emphasis was now more agribusiness oriented instead of production agriculture or "farming."

Though changes were made, the NRC (1988) stated the content of agricultural education curriculum has failed to keep up with needs of modern agriculture. More flexibility in curriculum and program design requirements and in activities of the FFA was essential (National Research Council, 1988). New efforts were needed to reform secondary school agriculture programs to better prepare students for agricultural-sector growth industries (National Research Council, 1988).

Technological evolution during the last one-half century has transformed the nature and immensely broadened the range of agricultural occupations and professional careers (National Research Council, 1988).

Agricultural teacher education combines instruction *about* agriculture with instruction *in* agriculture (Reisch, 1986). This author notes that greater emphasis has been placed on communication skills, basic science, computers, mathematics, humanities and social sciences, international agricultural systems, problem-based instruction, and high-technology agriculture. The emphasis on traditional production agriculture began to shift during the 1960s and 1970s (Reisch, 1986).

An evaluation conducted by the National Research Council (1988) studied the success of reform in agricultural education programs. The NRC determined the success of the program is determined by several challenges, including educating teachers, evaluating programs, curriculum development, adequate resources, focus and content revision of FFA programs and activities, and creating a more flexible and adaptive legislative and budgetary framework.

Students of agricultural education programs should become well-versed and understand the basic principles of agriculture and communication (National Research

Council, 1988). As advancements were made throughout time and people become more removed from farm life, it is imperative agriculturalists are able to communicate effectively and efficiently what is happening in agriculture (National Research Council, 1988). Neither students nor Americans in general have a realistic view of agriculture's scope, career possibilities or involvement with scientific progress and the use of sophisticated biological, chemical, mechanical, and electronic technologies (National Research Council, 1988).

For students to gain adequate knowledge to reach their full communication potential, agricultural education teachers need to have the skills and knowledge base to teach the fundamentals of communication (Connors & Elliot, 1994).

Terry and Bailey-Evans (1995) stated the discipline of agricultural communications has become an important part of achieving the mission of agricultural education in and about agriculture. As the profession of agricultural communications continues to develop and refine its current mission in society, the academic programs must relate to this mission (Buck & Paulson, 1995).

Mass media and other "non-formal" methods of dissemination are valuable sources of information about many subjects, including agriculture (Terry & Bailey-Evans, 1995). The audience of the popular press, television, and radio far exceed the scope of influence of formal agricultural education programs on the elementary, secondary, post-secondary and adult levels (Terry & Bailey-Evans, 1995).

Just as agriculture and communication methods and objectives have changed, so have the competencies needed to become an agricultural communicator (Akers, 2000; Sprecker & Rudd, 1998). Studies such as Buck and Barrick's (1995) have been

conducted to determine the type of education needed for an agricultural communicator. University-level studies have been conducted to determine the curriculum/competency needs for students enrolled in agricultural communications programs (Sprecker & Rudd, 1997; Terry & Bailey-Evans, 1995). Although a study by Akers (2000) was conducted to determine curriculum needs of students enrolled in high school agricultural communications courses as perceived by industry professionals, a study has not assessed the knowledge of and perceptions about agricultural communications held by secondary agricultural education teachers in Oklahoma.

Problem

A lack of identified and validated knowledge of and perceptions about agricultural communications held by secondary agricultural education teachers in Oklahoma exists, knowledge that could guide the development of agricultural education curriculum for high school students.

Purpose

The purpose of this study was to determine Oklahoma agricultural education teachers' basic knowledge of and perceptions about agricultural communications, especially as they related to the secondary curriculum for agricultural education.

Objectives

To accomplish the purpose of the study, the researcher established the following objectives:

1. To describe selected personal and professional characteristics of Oklahoma agricultural education teachers;
2. To determine the importance of selected agricultural communications competencies, as perceived by Oklahoma agricultural education teachers;
3. To determine Oklahoma agricultural education teachers' perceived ability to teach selected agricultural communications competencies;
4. To determine Oklahoma agricultural education teachers' knowledge of agricultural communications as determined by a researcher-developed agricultural communications test; and
5. To describe the relationship between selected personal and professional characteristics of Oklahoma agricultural education teachers and their knowledge of agricultural communications.

Assumptions

For the purpose of this study, the following assumptions were accepted by the investigator:

1. Agricultural education teachers could provide accurate evaluations for agricultural communications curriculum taught in Oklahoma high schools.
2. The responses by agricultural education teachers were honest expressions of their opinions.

3. The secondary agricultural education teachers who participated in this study were a generalized representation of the teachers across the state.
4. No outside resources were used by the agricultural education teachers when completing the knowledge test.

Limitations

For the purpose of this study, the following limitations were identified:

1. Time restrictions of how the survey was administered did not affect agricultural education teachers' responses to the questionnaire.
2. Agricultural education is offered to high school students. This study focused only on the knowledge of and attitude toward agricultural communications from the agricultural educators' perspectives.

Definition of Terms

Agricultural Communications – Possessing the skills to communicate agricultural messages effectively to publics involved and not involved with agriculture. Involves a variety of communication specializations, such as journalism, advertising, public relations, etc. (Bailey-Evans, 1995).

Agricultural Education – "(1) The general, formal knowledge of agriculture. (2) The course of study (in college or university or a department of government) to prepare and assist teachers of agriculture in the secondary schools. (3) The term applied to the modern high school course dealing with agriculture. Also referred to as 'vocational agriculture education.' Generally refers to the curriculum or program in agricultural

education designed to offer students at the secondary level the opportunity to explore and prepare for agricultural occupations" (Herren & Donahue, 1991).

Attitudes – "A state of mind or feeling; DISPOSITION" (Webster's II New College Dictionary, 1995).

CIMC – Oklahoma Department of Career and Technology Education's Curriculum and Instructional Materials Center [CIMC].

Competency – Identifiable skills or abilities necessary for successful performance, including general skills and specific tasks, in an occupation a student might seek after the completion of a high school agricultural communications course. They should include general skills and specific tasks concerning their employment or occupation (Akers, 2000).

Curriculum - "(1) All the courses of study offered by an educational institution. (2) A course of study, often in a specialized field" (Webster's II New College Dictionary, 1995).

Oklahoma agricultural education districts – Oklahoma is divided into five districts, each administered an agricultural education program specialist who represents the district. The districts are divided geographically so there are a similar number of agricultural education programs in each district. The districts in Oklahoma have been the same for

approximately the past 20 to 30 years (K. Murray, personal communication, July 18, 2007).

Secondary agricultural education program – "Agricultural Education programs [that] are designed for junior high and high school students (grades 8 through 12) and adults" (Oklahoma Department of Career and Technology Education, n.d.)

Secondary agricultural education teachers – Individuals who are certified by the Oklahoma Department of Education to teach agricultural education in Oklahoma high schools (S. Sitton, personal communication, July 19, 2007)

Scope

The scope of this study included 431 Oklahoma secondary agricultural education teachers who intended to teach agricultural education during the 2006-2007 school year and who attended their respective district meetings during the 2006 CareerTech Summer Conference held in Tulsa, Oklahoma.

CHAPTER II

REVIEW OF LITERATURE

The purpose of this chapter is to present a literature review of agricultural education and communication curricula the researcher deemed relevant to this study. The review is divided into the following sections: (1) background and history of agricultural education; (2) background and history of agricultural communications; (3) relationship between agricultural education and agricultural communications; (4) theoretical framework; and (5) need for continuous review and improvement of curriculum.

Background and History of Agricultural Education

From the earliest time, it has been the idea that agricultural education instruction should be given in the common schools (True, 1929). The movement for agricultural schools and colleges in the United States was greatly associated with the growth of the natural sciences and their applications in Europe (True, 1929).

Some type of secondary agricultural education has been present in programs of public schools since the beginning of public education (Phipps & Osborne, 1988). These authors also noted that the first courses taught were academic, non-vocational courses.

Before the passage of the Smith-Hughes Act in 1917, the supervision of agricultural education for less-than-college age was the responsibility of local school districts and the public (True, 1929). Prior to 1917, only five states had provided

adequate supervision of agricultural education conducted with the aid of state funds (True, 1929). The nation-wide system of vocational education in agriculture was established under the Smith-Hughes Act of 1917, providing federally aided vocational education (Stimson & Lathrop, 1954). Tanner & Tanner (as cited in Hyslop-Margison, 1999) identified the Smith-Hughes Act specified particular vocational programs, created administrative procedures, and prescribed skill-based training programs for instruction in agriculture, trade and industries, and home economics.

Phipps and Osborne (1988) noted 30 states had established agricultural courses in their public schools prior to 1917. From the beginning of the operation of the Smith-Hughes Act, the number of secondary schools in which departments of vocational agriculture were established was greater than the number of special schools receiving federal aid (True, 1929). This author explained that in 1918 only about 170 special agricultural schools were in the United States, but 609 schools received Smith-Hughes funds and this number steadily increased until 1923 when there were 2,673 (True, 1929). The Smith-Hughes Act and subsequent acts were effective in promoting the establishment of courses of vocational education in agriculture (Phipps & Osborne, 1988).

In 1923, the schools ranged from small institutions in the open country to large high schools in villages or cities and employed only one teacher of agriculture (True, 1929). This author described that the departments of agriculture were in the nature of part-time schools of the occupational extension type, the instruction being designed to supplement the employment of the pupil on the home farm. As a result, attendance in vocational agricultural classes was students who participated in some form of farm work

(True, 1929). True (1929) noted that most generally the schools or departments offered two-, three- or four-year courses for 36 weeks in the year with one-half of the students' time given to non-vocational high school subjects; the work in vocational agriculture was accepted as part of the high school course, thus enabling the students to complete the vocational agricultural work to secure not only the agricultural certificate but also the diploma granted by the school. The agricultural instruction increasingly dealt with the agricultural needs of the local communities (True, 1929).

Although agricultural education made adjustments to match changes in production agriculture, until 1960 it remained a program aimed at teaching young males how to improve farming techniques (Akers, 2000). Vocational agriculture programs at the secondary and postsecondary levels have developed rapidly in agricultural occupations other than production agriculture, due to the encouragement from the Vocational Education Act of 1963 – and its subsequent amendments in 1968 and 1976 (Phipps & Osborne, 1988).

What is more, the Carl Perkins Act of 1984 provided funds for the first time specifically to support programs in agriculture (Phipps & Osborne, 1988). The Vocational Education Act of 1963 and its subsequent amendments and the Carl D. Perkins Act of 1984 worked together to broaden the objectives of vocational education in agriculture to include vocational education for persons pursuing all agriculturally oriented careers requiring knowledge and skill in agriculture, including but not limited to farming (Phipps & Osborne, 1988).

Phipps and Osborne (1988) stated vocational education is the best-known type of agricultural education. These authors defined vocational education in agriculture during this time as:

> . . . systematic instruction in agriculture at the elementary, secondary, postsecondary, or adult level for the purpose of preparing persons for initial entry or reentry into occupations in agriculture. Furthermore, vocational education in agriculture has long carried the additional aim of instruction leading to job creation, development, and entrepreneurship. Vocational education in agriculture may be designed for occupational awareness, exploration, orientation, or job preparation and creation, depending primarily upon the age of students enrolled. (p. 3)

In the late 20th century, agricultural education teachers began to expand Phipps and Osborne's definition of agricultural education (Akers, 2000). The NRC (1988) identified that agricultural education teachers should seek out and share high-quality software and curricular materials for agricultural management, planning and instructional applications. Private-sector assistance should be sought in developing new instructional modules, exercises, and software (National Research Council, 1988).

Grant, Field, Green, and Rollin (2000) stated "education in agriculture has an especially crucial mission: teaching tomorrow's farmers and ranchers how to feed the world. With creativity and innovation, mentors teach students how to produce enough for an increasing population" (p. 1684). The notion of agricultural literacy, since its inception, has been on the premise that every person should possess a minimum level of knowledge of the industry that produces and markets food needed for human survival (Frick, Birkenholz, & Machtmes, 1995).

Enrollments in secondary agricultural programs peaked during the 1970s and then began to decline, thus making recruitment into programs an important need going into the 21st century (Conroy, Kelsey, & Scanlon, 1998).

Herring (1995) predicted that agricultural education would face challenges in the future in the following areas: clientele, agricultural education mission, modernization of supervised agricultural education programs, teacher education programs, delivery systems, in-service education programs, tech-prep, reform of agricultural education instruction, and updating curriculum.

The agricultural education program faces challenges from the dynamics that are occurring in the educational and agricultural sectors of the nation, with the agricultural education program serving as the intersection between these two sectors (Stewart, Moore, & Flowers, 2004). These authors noted that knowing the environment and being able to adjust to changes occurring in agriculture and education is critical to the future growth and survival of the agricultural education program. The fundamental importance of agriculture into United States culture, history, and economy, and the increasing awareness of the scientific nature of agricultural technology, makes agriculture the premier content vehicle to tie academic disciplines together (Conroy et al., 1998).

Background and History of Agricultural Communications

Prior to the early- to mid-19th century, information concerning agriculture was passed from farmer to farmer by word of mouth (Boone, Meisenbach, & Tucker, 2000). During this time, the first mediated communications about agriculture in the United States started (Boone et al., 2000).

Burnett and Tucker (as cited in Tucker et al., 2003) identified by the 1900s, the agricultural communications craft had evolved into a highly competitive industry requiring knowledge of business practices and editorial skills as well as farming. In 1928,

the U.S. Congress published its first technical publication, which outlined the rearing of silk worms (Boone et al., 2000).

Although communication methods were changing and outgrowing the ability to pass information by word-of-mouth, courses in agricultural communication did not begin until the early 1900s (Buck & Paulson, 1995). These first agricultural communications programs were created to assist in communicating the information discovered at land grant universities (Duley, Jensen, & O'Brien, 1984).

The first course in agricultural journalism was offered by Iowa Sate University in 1905 (Duncan, 1957). A large part of the course work offered by newly established schools of journalism employed professional writers and editors from private industry (Tucker, Whaley, & Cano, 2003). These researchers also indicated a lack of resources and other pressing priorities in colleges of agriculture made the early agricultural journalism programs limited in scope. Despite modest beginnings, academic programs in agricultural communications grew in numbers and scope throughout the 1900s (Tucker et al., 2003).

A growth spurt occurred from 1908 to 1928 in the number of colleges that offered courses in agricultural journalism (Akers, 2000). After this initial growth, the number of agricultural communications programs slowed until the 1960s (Akers, 2000).

More than one-half of the agricultural communications programs that existed in 1984 began after 1961 and most originated with initial courses offered through agricultural education programs (Terry, Lockaby, & Bailey-Evans, 1995).

One of the prominent characteristics of the profession's early decades was the dynamic and influential leadership that helped define the field (Tucker et al., 2003).

These researchers indicated the early editors and writers who pioneered agricultural communications were not only outspoken leaders within the fledgling profession but also were leaders of agriculture and they relied on their reputations as well as their publications to argue for a number of important social and political causes aimed at improving farming both as a business and as a way of life.

According to Terry and Bailey-Evans (1995), agricultural communications programs were designed to fulfill two primary needs of graduates: 1) provide a strong basis of both technical agriculture and sources for agricultural information and 2) introduce methods of journalistic writing and other communications skills.

The agricultural communication programs, many of which were listed under other departments, continued to grow in numbers, became more of a multi-gender field, and sent scholars into the working industry with knowledge in a wide variety of areas; in addition, university faculty and staff continued to grow each semester (Tucker et al., 2003).

In 2002, approximately 30 programs in agricultural communications nationwide offered diverse curricula, including courses in journalism, broadcasting, public relations and Web-based communications (Irani & Scherler, 2002).

Agricultural communications programs are well established (Terry et al., 1994). Some programs have different names; some called agricultural communications others named agricultural journalism. The departments established prior to 1970 are referred to as journalism and those created after 1970 are named communications (Boone et al., 2000). A study by Deorfert and Cepica (as cited in Akers, 2000) reported most of the programs in the 1990s were identified with the term communication(s) rather than

journalism and more than 75% of these programs were housed in colleges of agriculture and related fields

Relationship between Agricultural Education and Agricultural Communications

Agricultural communicators are different from agricultural education teachers because they work in different environments (Boone et al., 2000).

Recently, several agricultural education teachers have noted the similarities between their discipline and agricultural journalism/agricultural communications, especially as it related to vocational agricultural education programs (Boone et al., 2000). These authors explained that these fields exhibit similarities with each other and with extension education, rural sociology and even agricultural economics, in that they are all social sciences grounded in agriculture; in the practical sense, these social sciences focus more on process than subject matter content. In the broader sense, these social sciences are interested in the processing, flow, utility and effects of knowledge about agriculture (Boone et al., 2000). In addition, Scanlon, Bruening, and Cordero (1996) identified that improvements in science, technology and communication have caused remarkable changes to occur in agricultural industries and related job fields.

Lee-Cooper and Weeks (1995) noted agriculture is in a constant state of change, bringing with it many concerns about the future of the agricultural industry. These authors also stated issues such as diversity in agricultural production, increasing international trade, and increasing environmental legislation and regulations create an environment in which agriculturists must be informed and equipped with the necessary knowledge and skills for them to be able to assume leadership responsibilities to address

the many challenges that face agriculture (Lee-Cooper, & Weeks, 1995). As more and more of the world's population moves from rural to urban areas, agriculture as a way of life is changing (Boone et al., 2000).

Agriculturalists have been forced to expand their realm of expertise to include areas of marketing, public relations, and public education (Foster, 1995). This author also noted agriculturalists are no longer isolated on the farm but instead are inducted into the main stream of society and must interact there positively. Agricultural education teachers are among those responsible for the development and training of future agriculturalists' abilities to deal with the general public (Foster, 1995).

The discipline of agricultural communications has become an important part of achieving the mission of agricultural education to provide education in and about agriculture (Terry & Bailey-Evans, 1995). A great need exists for individuals who are knowledgeable of the field of agriculture and possess the abilities and skills needed to communicate information about agriculture to others (Terry et al., 1995).

Theoretical Framework

Before curriculum and competencies can be reviewed, it is important to lay the theoretical framework serving as a basis for this study. Wiersma and Jurs (2005) stated that "a theory provides a framework for conducting research, and it can be used for synthesizing and explaining (through generalizations) research results" (p. 21).

A model presented by Dunkin and Biddle (1974) serves as the basic framework for this study and uses terminology suggested by Mitzel (1960).

According to Dunkin and Biddle (1974), four types of variables contribute to the teaching and learning process: presage variables, context variables, process variables and product variables (Figure 1).

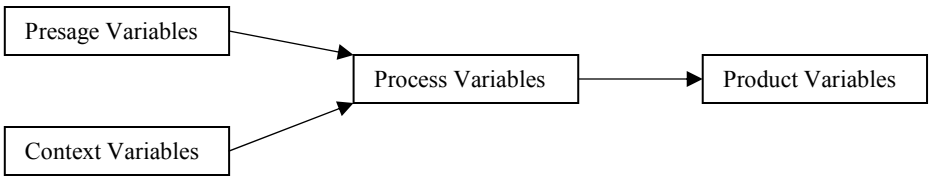

Figure 1. A Model for the Study of Classroom Teaching. Adapted from Dunkin and Biddle (1974).

Dunkin and Biddle (1974) defined context variables as "conditions to which the teacher must adjust – characteristics of the environment about which teachers, school administrators, and teacher-educators can do very little" (p. 41).

Process variables were identified by Dunkin and Biddle (1974) as "actual activities of classroom teaching – what teachers and pupils do in the classroom" (p. 44).

Product variables were identified by Dunkin and Biddle (1974) as dealing with the "outcome of teaching – those changes that come about in pupils as a result of their involvement in classroom activities with teachers and other pupils" (p. 46).

Presage variables "concern the characteristics of teachers that may be examined for their effects on the teaching process" (Dunkin & Biddle, 1974, p. 39).

Presage variables were relevant to this study because Oklahoma secondary agricultural education teachers were asked to report selected personal and professional characteristics. These variables may include, but are not limited to, teacher formative

experiences, teacher training experiences, and teacher properties (Dunkin & Biddle, 1974).

Teacher formative experiences "include every experience encountered prior to teacher training, and for older teachers subsequent experiences as well" (Dunkin & Biddle, 1974, p. 39). Teacher formative experiences relevant to this study included gender and years teaching agricultural education.

Teacher training experiences "include the college or university attended by the teacher, courses taken, the attitudes of instructors, experiences during practice teaching, and in-service and postgraduate education, if any" (Dunkin & Biddle, 1974, p. 39). These authors noted that these variables are studied more often than the other types of variables for their effects on teaching. Teacher training experiences relevant to this study included if respondents' degrees were earned from Oklahoma State University, and their highest degree earned.

Teacher properties "consist of the measurable personality characteristics the teacher takes with her into the teaching situation" (Dunkin & Biddle, 1974, p. 40). Dunkin and Biddle identify these variables to include items such as teaching skills, intelligence, motivations, and personality traits. Teacher properties relevant to this study included items such as whether the respondent was currently teaching agricultural communications, if the respondents were currently using the CIMC guides to assist with teaching their agricultural communications course, and how they responded to the instruments open-ended questions.

Examining these variables allowed the researcher to better understand characteristics that would assist in identifying agricultural education teachers who taught an agricultural communications course and their related experiences.

Need for Continuous Review and Improvement of Curriculum

Curriculum is a broad area of study, dealing not only with the content but also with the methods of teaching and learning (Food and Agricultural Organization of the United Nations, 1998). This author noted it deals also with the aims and objectives it plans to meet and with the ways in which its effectiveness is measured.

Curriculum in teacher education refers to the nature and amount of content of the preservice curriculum, including general education, professional education, and the teaching specialty (Swortzel, 1999).

Stewart et al. (2004) assessed that curriculum continues to be a central issue for education. It was debated at the beginning of the 20th century, and it is today at the beginning of the 21st century (Stewart et al., 2004).

As the profession of agricultural communications continues to develop and refine its mission in society, academic programs must relate to this mission (Buck & Paulson, 1995). These authors also wrote that the profession where the graduates will find professional positions must be examined continually. By doing that the programs' academic content will be refined, new knowledge to advise students realistically will be gained, and graduates produced will meet the expectations of the profession (Buck & Paulson, 1995).

Frick (1993) identified a list of agricultural education curriculum subject areas of highest priority to the future of middle-grades agricultural education: leadership/human relations; food safety/consumer relations; careers and future of agriculture; agricultural science and experimentation; agricultural vocabulary; and agricultural benefits to the world.

Terry et al. (1995) recommended job market analysis for agricultural communications careers should be conducted periodically, due to rapid developments of communications technologies and agricultural sciences. Sprecker (1996) said administrators and faculty would be wise to heed advice from instructors, practitioners, and alumni to ensure students are not only qualified to enter the workplace upon graduation but also are equipped to excel throughout their careers.

Swortzel (1998) concluded that:

> If teacher education is to make an impact in the future of public and higher education in agriculture, teacher educators will be responsible for providing the leadership to make such changes. As agricultural education continues to expand into nontraditional arenas, who will provide this leadership? Agricultural education departments/programs must make efforts to diversify their faculty by hiring individuals who can bring different areas of expertise to departments/programs to broaden the base of agricultural education and provide a range of opportunity to diversify and collaborate with other fields of education. (p. 71)

Since 1962, interest in research-related curriculum development has increased steadily and more attention has been given to the theoretical base of the research being conducted as well as to the use of rigorous research designs (Phipps & Evans, 1968). This author also noted rapid changes in the world of work because technological developments, new societal pressures, and recognition of existing problems have motivated research to guide curriculum development.

Smith's study (as cited in Lynch, 1997) began to outline technological, demographic, socioeconomic, and work force changes affecting society as a context for vocational education and vocational teacher education, commenting that the most visible changes were in technology, most notably from computers, related hardware, and subsequent communications systems. Murphy and Terry (1995) indicated the development and use of communications technologies and instructional systems taking place are certain to bring about change in education.

Studies are needed to summarize the findings in various occupational fields to determine whether a content common to all types and levels of work exists (Phipps & Evans, 1968).

Beck, Copa, and Pease (1991) identified that collaborative work between academic and vocational teachers did not mean they will ignore skills specific to each area. These authors explained that teachers and students who work together could sort what was important in the curriculum for the students' futures. This would "create richer learning processes, higher educational aims, and, ultimately, an uncommon education" (Beck, Copa, & Pease, 1991, p. 31).

Findlay (1992) noted people in decision-making positions should communicate specifically to agriculture teacher educators, cooperating teachers, student teachers, and college supervisors the agreed-upon competencies student teachers are expected to acquire during field-based experiences. This would provide more congruence among these persons who are involved in assessing the competence of preservice agricultural education teachers (Findlay, 1992).

Most curricula simply try to measure the achievement of learning goals – whether the students have learned the knowledge and developed the skills necessary to graduate (Rogers, 1999).

A greater emphasis on quality teaching and accountability at the local level now exists and agricultural education must make sure its curriculum is current and viable (Stewart et al., 2004). These authors also noted that educational leaders must assure that good curriculum is being taught and provide leadership and support to teachers to make sure this is occurring. The agricultural education profession should make efforts to help teachers deal effectively with administrators and work to assure that educational leaders know and understand the value of an agricultural education program (Stewart et al., 2004).

In a study by Osler (1994) that researched curriculum innovation in primary schools, one problem found was teacher awareness of the potential use of curriculum support materials. This stems partially from the general level of training and preparation teachers have received and partially from an initial failure to involve teachers in identifying their own needs (Osler, 1994).

This review of literature identified the need to assess agricultural education teachers' knowledge of agricultural communications as well as the teachers' perceptions about the curriculum they teach – including agricultural education materials and the agricultural communications curriculum. Therefore, the researcher investigated this identified need through the study's research objectives.

Summary

The review of literature indicated agricultural education and agricultural communication are linked in the educational system. Agricultural education has been a component of high school education since the 18th century. Many changes have been made to agricultural education and more changes will occur during the 21st century. As noted by Akers (2000), one important change in the program is continued emphasis on education about agriculture and conversational literacy about agriculture.

Many studies have been completed at the collegiate level to determine the curriculum recommendations for undergraduate students and even graduate students. Few studies have been completed to determine what the needs are for high school curriculum in the secondary agricultural education program concerning agricultural communications. A previous study completed by Akers (2000) had industry professional identify competencies perceived to be important by the time students completed high school.

This study sought to assess the knowledge of and perceptions about agricultural communications competencies as perceived by Oklahoma agricultural education teachers in Oklahoma for the purpose of informing those charged with developing agricultural communications curriculum and preparing instructors to teach it.

CHAPTER III

METHODOLOGY

This chapter describes the methods and procedures used in conducting this study. A population was specified and an instrument was developed to collect data that supported the purpose and objectives of the study.

Institutional Review Board

Because this study involved human subjects, federal regulation and Oklahoma State University policy requires all instruments be reviewed and approved before an investigator can begin his or her research. This requirement is to protect the rights of individuals involved in behavioral and biomedical research. This study and the instrument were reviewed by the OSU Office of University Research Services through the Institutional Review Board (IRB) and received permission to continue. This study was assigned the following IRB number: AG0638 (see Appendix A).

Purpose

The purpose of this study was to determine Oklahoma agricultural education teachers' basic knowledge of and perceptions about agricultural communications, especially as they related to the secondary curriculum for agricultural education.

Objectives

To accomplish the purpose of the study, the researcher established the following objectives:

1. To describe selected personal and professional characteristics of Oklahoma agricultural education teachers;
2. To determine the importance of selected agricultural communications competencies, as perceived by Oklahoma agricultural education teachers;
3. To determine Oklahoma agricultural education teachers' perceived ability to teach selected agricultural communications competencies;
4. To determine Oklahoma agricultural education teachers' knowledge of agricultural communications as determined by a researcher-developed agricultural communications test; and
5. To describe the relationship between selected personal and professional characteristics of Oklahoma agricultural education teachers and their knowledge of agricultural communications.

Research Design

This study, which was designed to determine the knowledge of and perceptions about agricultural communications as perceived by Oklahoma agricultural education teachers, is a descriptive-correlation study. This type of quantitative research involves making careful descriptions of educational phenomena (Gall, Borg, & Gall, 1996).

Population

The target population for this study included secondary agricultural education teachers throughout Oklahoma from all five districts ($N = 431$). The accessible population, which was derived from the target population, was all Oklahoma secondary agricultural education teachers who attended their respective district meeting at the 2006 CareerTech Summer Conference in Tulsa, Oklahoma. All teachers are required to attend the summer conference, and thus, attend their district meeting. The instrument for this study was presented to agricultural education teachers during the five district meetings. According to Dillman (2000), "most surveys have a certain amount of coverage error that cannot be precisely specified" (p. 197). The possible coverage error for this study would be the result of agricultural education teachers who were required to but did not attend the 2006 summer conference. Nonresponse error is "the result of people who respond to a survey being different from sampled individuals who did not respond, in a way relevant to the study" (Dillman, 2000, p. 11). The possible nonresponse error for this study would be those agricultural education teachers who attended their district meetings at the 2006 summer conference, but chose to not complete the instrument.

The method used in this study was survey research. All agricultural education teachers who attended their district meeting at the conference were asked to complete the questionnaire because of their characteristics (Wiersma & Jurs, 2005); for example, they were teaching agricultural education within the state and they were available at the annual meeting. Based on these criteria this study used purposeful sampling. The goal of this type of sampling was to get results that were likely to be information-rich with respect to the purposes of the study (Gall et al., 1996).

Before the instrument was prepared state staff was contacted to arrange to administer the instrument at the 2006 CareerTech Summer Conference during the district meetings. Teacher respondents represented all five districts in Oklahoma (see Figure 2).

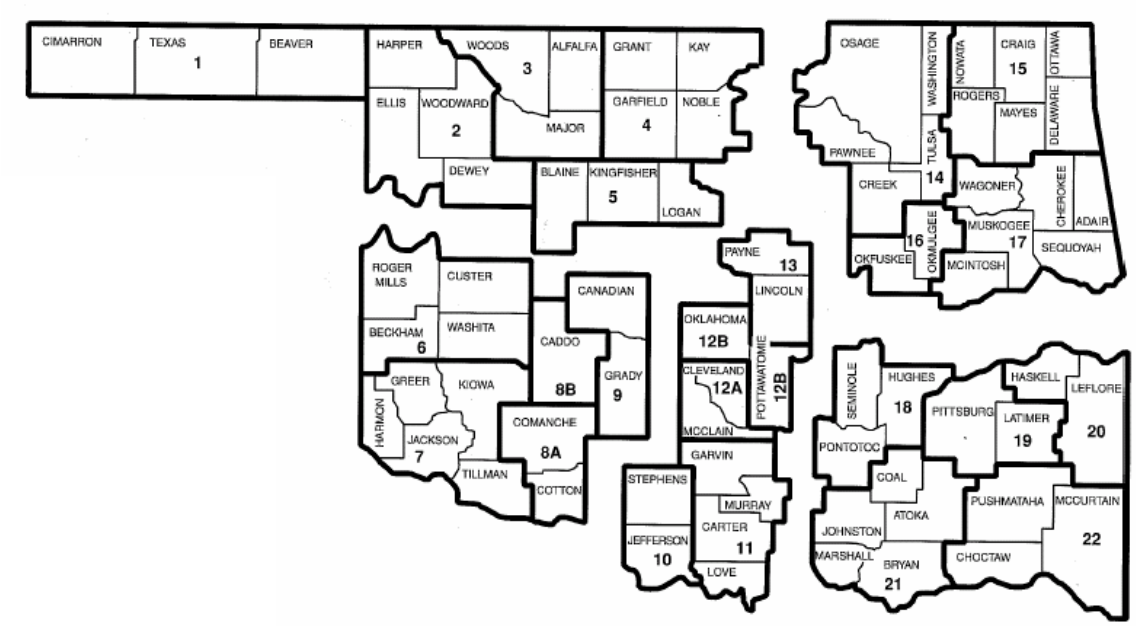

Figure2. Model of Oklahoma Agricultural Education Teachers' Districts in Oklahoma

Development of the Instrument

Several components were used when designing and validating the instrument. The instrument was designed by the researcher using the curriculum guides created by the Oklahoma Department of Career and Technology Education's Curriculum and Instructional Materials Center [CIMC] and the agricultural communications competencies identified by Akers (2000).

This instrument consisted of three parts: importance and perceived ability section, a knowledge test section, and a section pertaining to personal and professional characteristics of agricultural education teachers.

Part I: Importance and Perceived Ability

Since no instrument was readily available, an instrument was developed to assess the importance and perception of teaching ability of agricultural communications competencies as perceived by Oklahoma agricultural education teachers (see Appendix B).

To create Part I of the instrument, the researcher identified competencies potentially taught in a high school agricultural communications course in Oklahoma. This was completed by using the Akers (2000) study to identify the competencies and their topic areas that should be taught to high school students and by using the existing Curriculum and Instructional Materials Center curriculum guides. Thirty-one competencies identified by Akers (2000) were not included in this study's instrument because they did not have a correlating CIMC test question or because they were identified in the Akers (2000) study as being collegiate-level competencies (see Appendix C). The remaining 51 competencies were included as part of the instrument used for the pilot study.

The curriculum guides provided insight as to what agricultural communications constructs could be taught to high school students if the instructor teaching the class chose to use the guide. These curriculum guides are available to all high school

agricultural education teachers to use when teaching agricultural communications courses in Oklahoma.

After comparing competencies that should be taught in high school agricultural communications courses as identified by Akers (2000) and what competencies could be taught based on the CIMC curriculum guides, Akers' (2000) related topic areas were combined to create suggested five constructs to be confirmed by this study: 1) Communication Skills/Computer/Information Technology; 2) Communication History; 3) Research/Information Gathering/Writing; 4) Ethics/Leadership Development/Professional Development; and 5) Public Relations/Advertising/Marketing.

After determining the competencies to be used, the competencies were put into table format in the instrument and two summated rating scales were developed (See Appendix B). The instrument was constructed this way to make assessment on the identified agricultural communications competencies easier for the respondents to self-evaluate in a shorter amount of time.

On the left of each competency was a five-point summated rating scale that ranged from high importance to low importance (A = "High Importance," B = "Much Importance," C = "Some Importance," D = "Low Importance," and E = "No Importance"). The secondary agricultural education teacher was asked to indicate his or her perception of the level of importance of the specific agricultural communications competency for the high school agricultural education curriculum (see Appendix B).

The right side of this part of the instrument also contained a five-point summated rating scale for each competency. The scale ranged from high ability to no ability (A = "Very High Ability," B = "High Ability," C = "Average Ability," D = "Low Ability,"

and E = “No Ability”). This section was created to determine the respondents’ perceived ability in teaching the specific agricultural communications competency (see Appendix B).

Part II: Agricultural Communications Knowledge

This portion of the instrument was developed to ascertain secondary agricultural education teachers’ knowledge of agricultural communications. All questions were taken from the CIMC agricultural communications curriculum guides and represented the agricultural communications competencies assessed in the study.

In this section, the secondary agricultural education teachers were asked to answer the questions, which were presented in a closed-response (“multiple-choice”) test format (see Appendix B).

Because this portion of the survey was designed to assess the agricultural communications knowledge of secondary agricultural education teachers, the results expressed the level of knowledge each teacher held. Knowledge performance was based on the percentage of questions answered correctly. Percentage labels were assigned based on generally accepted academic performance descriptions: 100%-90%, “superior knowledge”; 89%-80%, “acceptable knowledge”; 79%-70%, “moderate knowledge”; 69%-60%, “minimal knowledge”; and less than 60% “unacceptably low knowledge” (Terry, Herring, & Larke, 1992).

Item selection procedures were performed so that there was no mastery level of performance. Accordingly, Gronlund (1998) stated “all items needed to adequately

describe performance. No attempt is made to alter item difficulty or to eliminate easy items to increase the spread of scores" (p. 28).

Part III: Personal and Professional Characteristics

In this section of the instrument, Oklahoma agricultural education teachers were asked to identify personal and professional characteristics through both open-ended and closed-ended questions, including items such as teaching experience, age, and education level (see Appendix B).

Validity and Reliability

Face and content validity were determined by a panel of experts. The panel of experts consisted of faculty in the Department of Agricultural Education, Communications, and 4-H Youth Development. The panel of experts reviewed the instrument and determined the questions asked were appropriate for use in the study.

A pilot test of the instrument was conducted at a meeting with agricultural education teachers from neighboring states of Oklahoma. Those asked to complete the pilot test were not part of the panel of experts. These individuals were asked to answer all questions to all three parts of the questionnaire. During the pilot tests, the participants were asked to give feedback or concerns that arose from the instrument, but they were not allowed to indicate suggestions changing the overall instrument layout. Test items were reviewed and restated according to results of the pilot test.

Following the completion of the pilot test, the researcher revised the instrument based on the reliability results and suggestions from those involved in the pilot test. Two

competencies were removed to increase Cronbach's alpha reliability to as near to 0.70 as possible. According to Gall, Borg, and Gall (1996), Cronbach's alpha is "a measure of the internal consistency of a test, based on the extent to which test-takers who answer a test item one way respond to items in the same way" (p. 757). Removing "Describe the communications model" changed the importance Cronbach's alpha to 0.717 and the ability Cronbach's alpha to 0.699. Removing "Identify the importance of an advertising campaign" increased the importance Cronbach's alpha to 0.757 and the ability Cronbach's alpha to 0.66. An additional competency, "Write a caption for photos," was removed because Akers' (2000) study did not determine an educational level for this competency and did not list it in the recommendations.

Data Collection and Analysis

Data were collected from Oklahoma secondary agricultural education teachers from all five administrative districts during the 2006 CareerTech Summer Conference in Tulsa, Oklahoma. All agricultural education teachers from the state of Oklahoma are required to attend the summer conference so for the purpose of this study it is assumed that all 431 educators were registered at the conference. All agricultural education teachers who attended the district meetings at the conference received an instrument and were asked to complete it.

Data collection was achieved during the five district meetings. To make the collection process possible, Oklahoma State University undergraduate and graduate students from the agricultural communications program assisted in administering the questionnaire using a formatted script (see Appendix D) in the district meetings. The

script was read to all districts as supplementary information to the informed consent statement (see Appendix E) that was included with each questionnaire.

Two copies of an informed consent statement were included with each instrument. The agricultural education teachers were asked to sign and date one copy and submit it, while keeping the other for their records. Each instrument and informed consent letter was coded. Keeping a numerical record allowed the researcher to identify the individuals by district and to ensure all consent letters were received. The coding also allowed for a count to be kept of the number of instruments that were missing after the completion of administering the instrument. Numbering the informed consent statements allowed the researcher to select randomly for five OSU caps that were distributed at Professional Improvement meetings in the fall of 2006. The caps were used as an incentive for respondents who completed the instrument. Dillman (2000) described that "promised incentives do not have nearly so great an effect on response, and have been shown to have no effect at all" (p. 153). The OSU cap incentive was meant as a thank-you token to respondents who completed the instrument. The selection of names from each district was completed by an individual volunteer who was not part of the research project.

Due to time limitations during the conference, agricultural education teachers had the option to complete the instrument after leaving if they did not complete it during the allotted time. Addressed envelopes were offered to anyone who wanted to take the instrument with them to complete and return later. After the completion of the conference, it was determined that 134 surveys were missing. Three instruments were received in the mail, meaning that 131 instruments were taken with the agricultural education teachers and not completed.

Throughout the five districts the response rate varied. The Northwest District has 72 agricultural education teachers and 66 questionnaires were returned, so the response rate for the Northwest District was 91.67%. The Southwest District has 81 agricultural education teachers and 32 questionnaires were returned, so the response rate for the Southwest District was 39.51%. The Central District has 82 agricultural education teachers and 69 questionnaires were returned, so the response rate was 84.15%. The Southeast District has 94 agricultural education teachers and 25 questionnaires were returned, so the response rate was 26.60%. The Northeast District has 102 agricultural education teachers and 46 questionnaires were returned, so the response rate was 45.10%. There are 431 Oklahoma agricultural education teachers and 238 questionnaires were returned, so the overall response rate was 55.22%.

For the purposes of this study, no agricultural educator was identified by name but by number of respondent. Data were entered by assigning a numerical value to each variable in the instrument. Responses were analyzed using SPSS© version 15.

A statistical analysis of the respondents' personal and professional characteristics was completed comparing it to the results of the knowledge test of the instrument. The purpose of completing this was to describe relationships or the correlations among selected variables. Correlation is the degree of relationship or association between two variables (Wiersma & Jurs, 2005).

After data were analyzed using SPSS version 15, the magnitude of correlations was described using Davis' (1971) descriptions. According to Davis (1971), correlations are considered "perfect" when $r = 1.0$; "very high" when $r = 0.77$ to 0.99; "substantial"

when $r = 0.50$ to 0.69; “moderate” when $r = 0.30$ to 0.49; “low” when $r = 0.10$ to 0.29; and “negligible” when $r = 0.01$ to 0.09.

CHAPTER IV

FINDINGS

This chapter serves to detail the findings of this study. Findings are categorized by objective.

Problem

A lack of identified and validated knowledge of and perceptions about agricultural communications held by secondary agricultural education teachers in Oklahoma exists, knowledge that could guide the development of agricultural education curriculum for high school students.

Purpose

The purpose of this study was to determine Oklahoma agricultural education teachers' basic knowledge of and perceptions about agricultural communications, especially as they related to the secondary curriculum for agricultural education.

Objectives

To accomplish the purpose of the study, the researcher established the following objectives:

1. To describe selected personal and professional characteristics of Oklahoma agricultural education teachers;
2. To determine the importance of selected agricultural communications competencies, as perceived by Oklahoma agricultural education teachers;
3. To determine Oklahoma agricultural education teachers' perceived ability to teach selected agricultural communications competencies;
4. To determine Oklahoma agricultural education teachers' knowledge of agricultural communications as determined by a researcher-developed agricultural communications test; and
5. To describe the relationship between selected personal and professional characteristics of Oklahoma agricultural education teachers and their knowledge of agricultural communications.

Findings of Objective 1

The first objective of this study was to describe the selected personal and professional characteristics of Oklahoma agricultural education teachers.

As noted in the methods chapter, the third portion of the instrument used to collect data to address this objective. Questions about personal and professional characteristics were asked to each respondent to gain knowledge of gender, degree of education, if the respondent was teaching prior to 1996, if the respondent attended OSU, in which district the respondent taught, how large the school was where the respondent taught, how many years the respondent had taught agricultural education, if the respondent was currently teaching an agricultural communications course, and if he or

she was teaching an agricultural communications course how long had he or she been teaching it. If respondents had taught agricultural communications, they were asked if they used the curriculum guides provided by CIMC. Two open-ended questions were asked at the end of the questionnaire to determine what resources were being used if the curriculum guides were not being used when teaching agricultural communications and to identify other suggestions for the researcher.

Agricultural education teachers' responses led to the following findings.

There were 218 respondents who answered the question of gender (Figure 3). Of those, 201 respondents (84.45%) were male and 17 respondents (7.14%) were female. Nonresponse to this question was 20 respondents (8.40%).

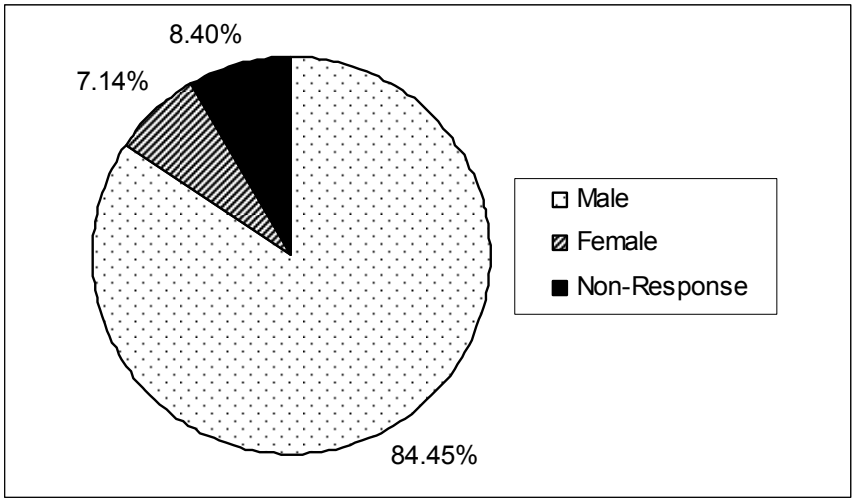

Figure 3. Proportion of male and female Oklahoma agricultural education teachers who participated in the study

Respondents were asked to indicate their highest degree earned (Figure 4). Three respondents (1.26%) held a doctoral degree, 49 (20.59%) had a master's degree, and 167 (70.17%) held only a bachelor's degree. Nineteen respondents (7.98%) did not answer the question.

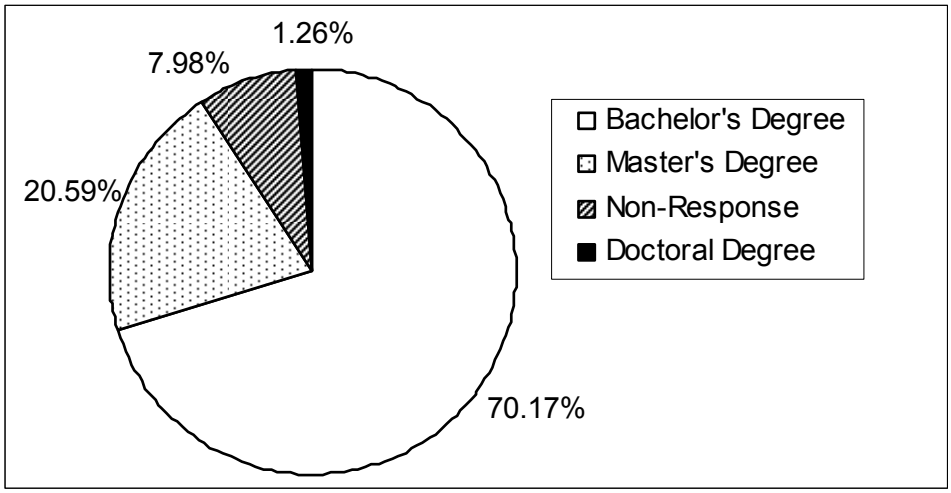

Figure 4. Oklahoma Agricultural Education Teachers' Highest Degree Earned

Respondents were asked if they were teaching high school agricultural education prior to 1996. One-hundred-seven (44.96%) responded they were and 112 (47.06%) responded they were not teaching prior to 1996. Nineteen (7.98%) respondents did not answer the question (Figure 5).

Respondents were asked if they received their education from OSU and, if not, where they received their degree; 191 respondents (80.25 %%) received their degree from OSU (Figure 6). Twenty-eight respondents (11.76%) did not receive their degree from OSU. Of these, one respondent (3.57%) received his or her degree from Southern Arkansas University, 12 (42.86%) received their degrees from Oklahoma Panhandle State University, and 15 (53.57%) did not respond (Figure 7).

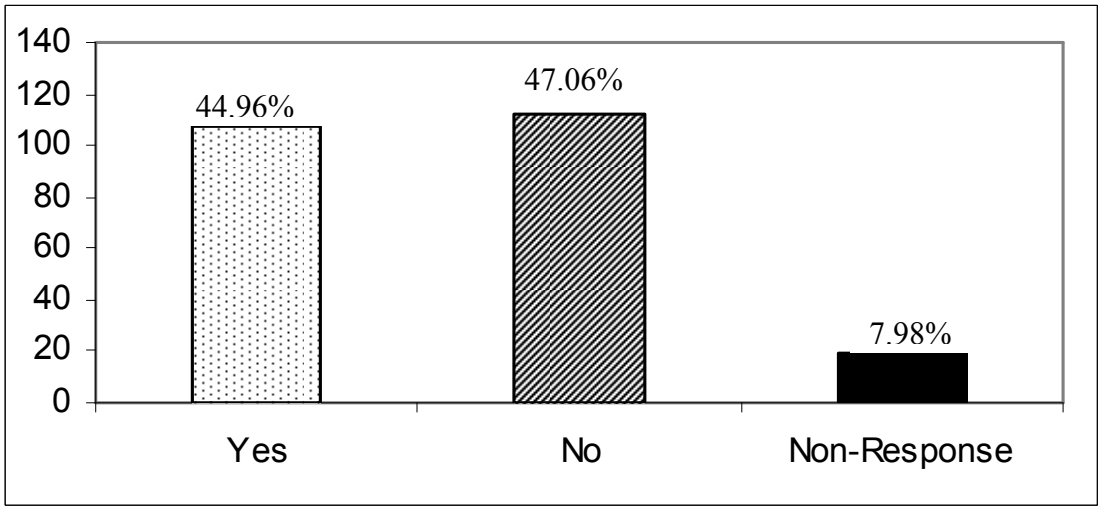

Figure 5. Oklahoma Agricultural Education Teachers Who Were Teaching Prior to 1996

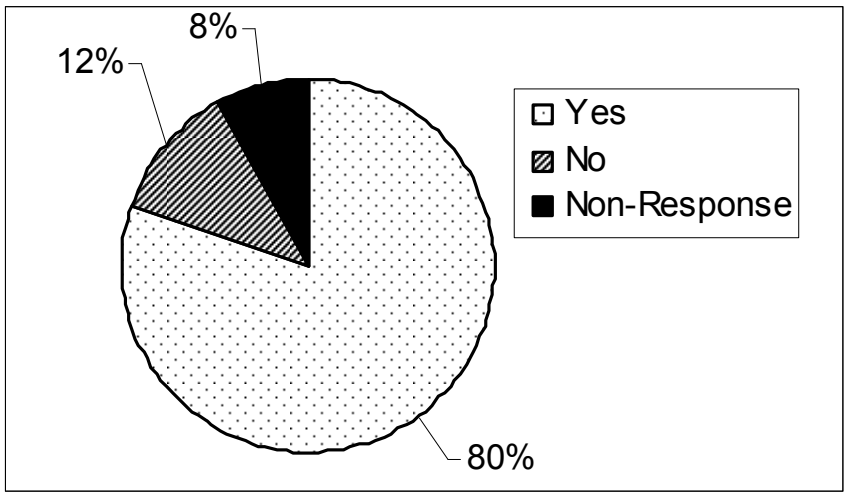

Figure 6. Oklahoma Agricultural Education Teachers Who Had Earned a Degree from Oklahoma State University

Respondents were asked to indicate in which district they teach (Figure 8). Twenty-six respondents (10.92%) taught in the Southwest District, 20 respondents

(8.40%) were employed in the Southeast District, 67 respondents (28.15%) taught in the Central District, 43 respondents (18.07%) were agricultural education teachers in the Northeast District, and 63 respondents (26.47%) taught in the Northwest District. Nineteen respondents (7.98%) did not answer the question.

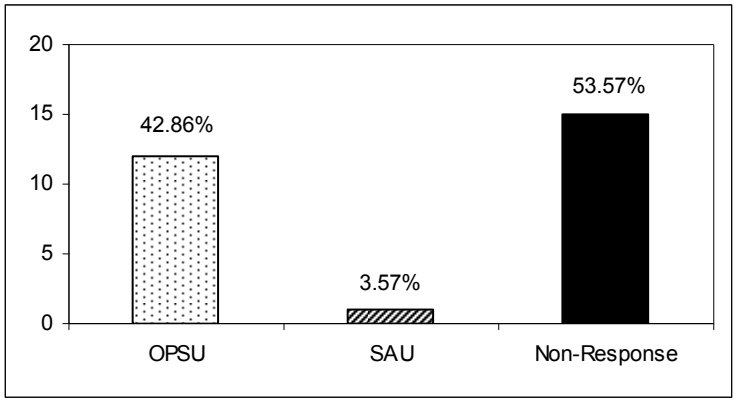

Figure 7. Oklahoma Agricultural Education Teachers Who Had Not Earned Their Degree From Oklahoma State University

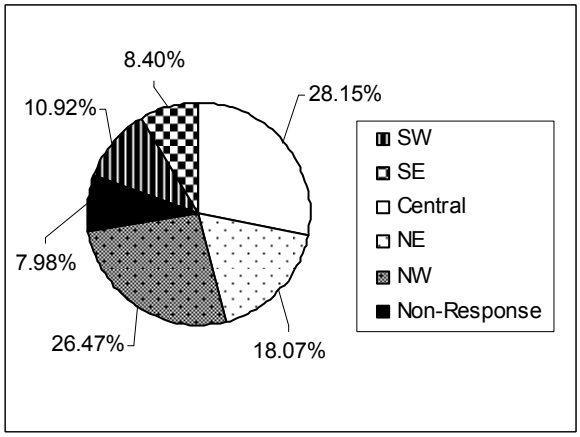

Figure 8. Participating Oklahoma Agricultural Education Teachers by Administrative District

Respondents were asked in what size school they teach (Figure 9). After exhausting multiple resources, the researcher determined a specific range of student numbers among class sizes was not available. The description used by the Oklahoma Secondary School Activities Association indicated school size is based on athletic programs that are available and schools are ranked based on an average daily membership of the school (E. Robinson, personal communication, July 18, 2007). The top 64 schools in the state, based on average daily membership at the school, are considered Class 6A-5A schools. The next 128 schools are Class 4A-3A schools, the next 160 schools are Class 2A-1A schools, and all remaining schools in the state are Class B-C sized schools (E. Robinson, personal communication, July 18, 2007).

Thirty-two respondents (13.45%) taught in a Class 6A-5A size school, 47 respondents (19.75%) were agricultural education teachers in a Class 4A-3A size school, 73 respondents (30.67%) staffed schools in a Class 2A-1A school, 62 (26.05%) taught in a Class B-C size school, and 24 (10.08%) did not answer the question.

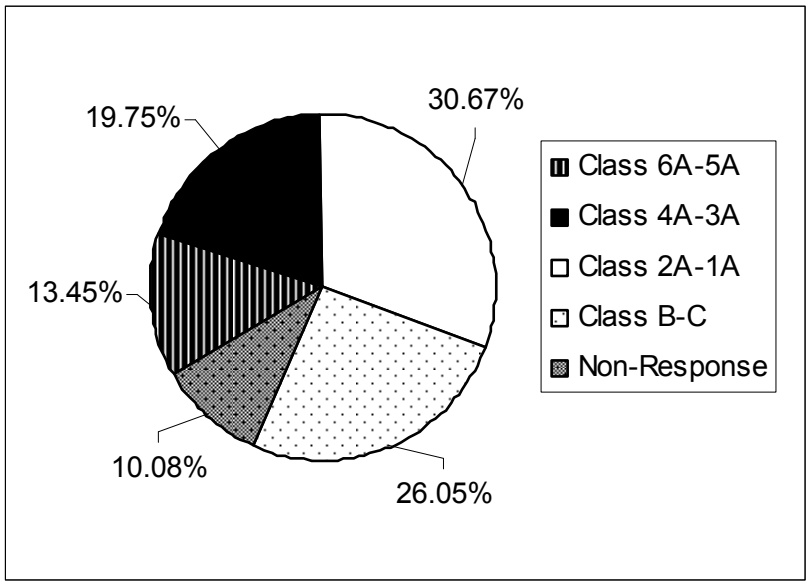

Figure 9. Oklahoma Agricultural Education Teachers' School Size Where They Taught

Respondents were asked to indicate how many years they had taught agricultural education (Figure 10). Seventy-six respondents (31.93%) had taught 1 to 5 years, 37 (15.55%) had taught 6 to 10 years, 21 (8.82%) had taught 11 to 15 years, 23 (9.66%) had taught 16 to 20 years, and 57 (23.95%) had taught 20+ years. Twenty-four respondents (10.08%) did not answer the question.

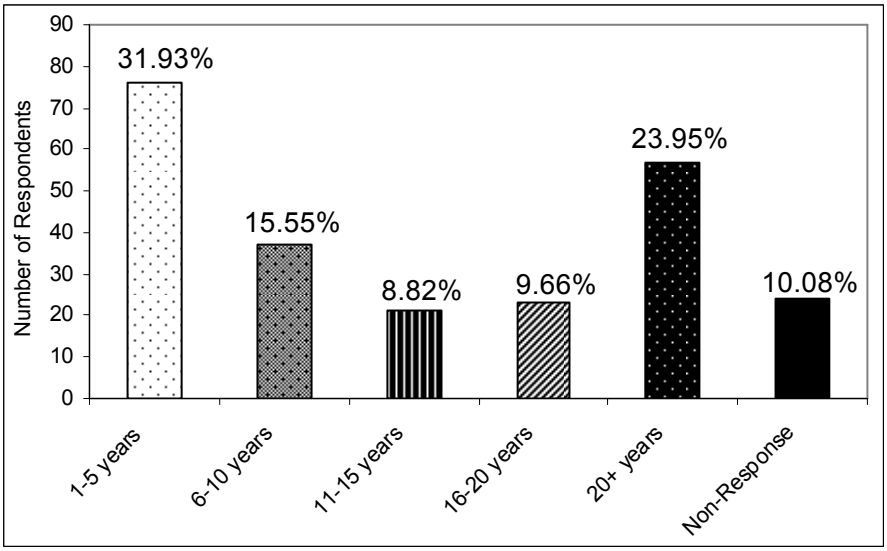

Figure 10. Oklahoma Agricultural Education Teachers' Years of Teaching Agricultural Education

Respondents were asked if they were currently teaching an agricultural communications course, and if so how many years they had taught agricultural communications. One-hundred and fifty-one respondents (63.45%) indicated that they were not currently teaching an agricultural communications course but 64 respondents (26.89%) did currently teach an agricultural communications course (Figure 11). Of the respondents who do teach an agricultural communications course (n = 64), 39 respondents(60.94%) have been teaching agricultural communications for one to two

years, 15 respondents (23.44%) have been teaching agricultural communications for three to four years, 12 respondents (18.75%) have been teaching agricultural communications for five to six years, two respondents (3.13%) have been teaching agricultural communications for seven to eight years, and no respondents (0.00%) have taught the course for more than nine years (Figure 12). Twenty-three respondents (28.57%) did not answer the question of whether or not they currently teach an agricultural communications course.

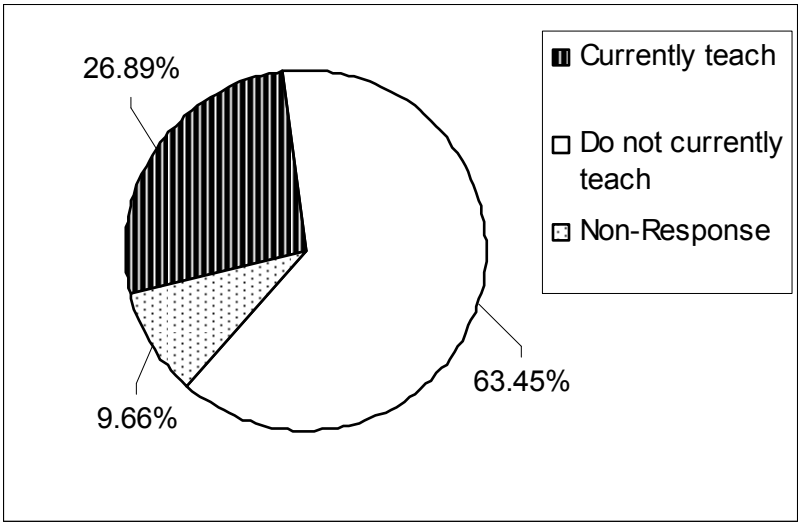

Figure 11. Oklahoma Agricultural Education Teachers Who Were Currently Teaching Agricultural Communications

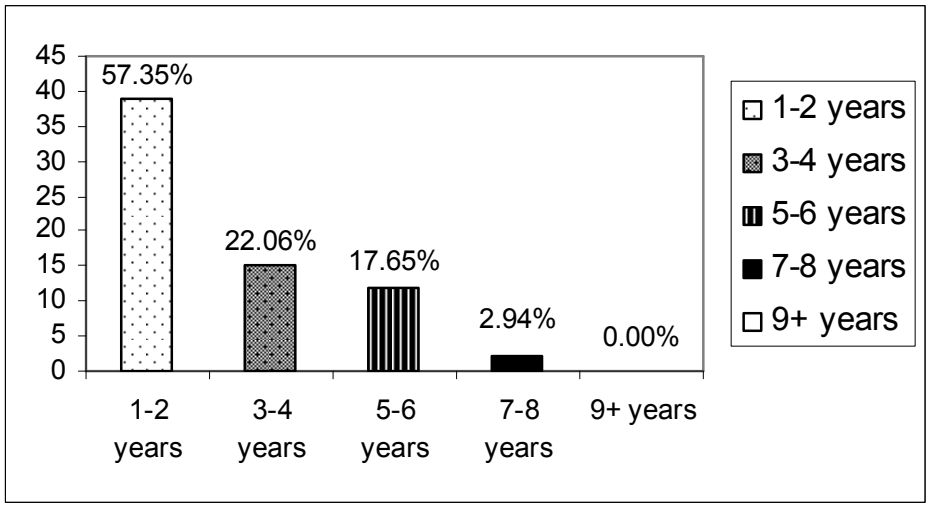

Figure 12. Number of Years Oklahoma Agricultural Education Teachers Who Were Currently Teaching Agricultural Communications Had Done So

If respondents teach or had taught agricultural communications, they were asked whether they use the curriculum guides provided by CIMC (Figure 13). Not all of these respondents had to be currently teaching an agricultural communications course. One-hundred and twenty respondents indicated they were teaching or had taught an agricultural communications course. Of the agricultural education teachers who indicated they had taught an agricultural communications course (n = 120), 71 respondents (59.17%) used the curriculum guides and 49 respondents (40.83%) did not or had not used the curriculum guides provided by CIMC.

Respondents who indicated they do not use the provided curriculum guides were asked what other resources were used for teaching the course. Comments such as "Self-made material" and "Delmar Publications" were mentioned. It was also noted that "the

Internet" and other outside resources such as "Information from Agricultural Communications courses taken at OSU" were used when teaching agricultural communications courses.

Table 1 identified the resources that were used by agricultural education teachers teaching an agricultural communications course but who did not use the provided CIMC curriculum guides.

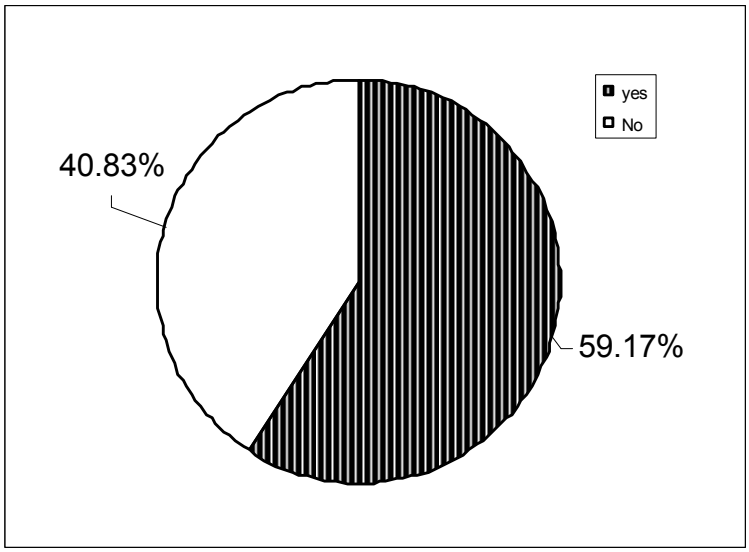

Figure 13. Oklahoma Agricultural Education Teachers Who Were Currently Teaching or Had Taught Agricultural Communications and Used the CIMC Curriculum Guides

Respondents were asked to give any other suggestions to the researcher their teaching agricultural communications. Comments about attending in-service such as "I would attend workshops/in-service on specific topics like Web design, photo editing, and video/slideshow creation" were mentioned. It was also mentioned that "more tools are needed" and "put the curriculum online."

Table 2 illustrates the themes and topical quotes that were provided by respondents as suggestions to the researcher.

Table 1

Oklahoma Agricultural Education Teachers' Resources for Those Who Were Not Using the CIMC Curriculum Guides to Teach an Agricultural Communications Course

Teachers' Open-ended Responses	Theme
"Internet"	Technology
"Web Sources"	
"Delmar Leadership"	Books
"National AgComm CDE Hand book"	
"Text from various companies"	
"Self-made"	Teacher-made
"My own material"	
"Ag comm. Information from classes taken at OSU"	
"Other people, teachers"	Other
"Whatever I can come up with"	
"Speeches"	

Table 2

Agricultural Communications Themes and Suggestions Provided by Oklahoma Agricultural Education Teachers

Teachers' Open-ended Responses	Theme
"Put the curriculum online"	Technology
"I would attend workshops/in-service on specific topics like web design, photo editing, video/slideshow creation"	Assistance/Professional Development

Teachers' Open-ended Responses	Theme
"Please put together Agricultural Communications workshops for teachers as summer in-service"	
"I need agricultural communications resources"	
"Help!"	
"More tools for teaching are needed"	Curriculum
The CIMC Curriculum does not meet the needs of my students…"	
"Make it easy to teach"	
"Suggest curriculum for teachers to use in classrooms"	

Findings of Objective 2

The second objective of this study was to determine the importance of selected agricultural communications competencies, as perceived by Oklahoma agricultural education teachers.

In this study, Oklahoma agricultural education teachers were asked to rate the importance of agricultural communications competencies using a five-point summated rating scale: A = "High Importance," B = "Much Importance," C = "Some Importance," D = "Low Importance," and E = "No Importance".

For the purpose of interpreting the results, the researcher used the following numerical scale: 5.00-4.50 = "High Importance," 4.49-3.50 = "Much Importance," 3.49-2.50 = "Some Importance," 2.49-1.50 = "Low Importance," and 1.49-1.00 = "No Importance" (Boone, Gartin, Boone, & Hughes, 2006).

This scale was used to determine respondents' perceptions of the importance of agricultural communications competencies that had the potential of being taught in secondary high school agricultural education.

Agricultural education teachers' perception of importance of communication skills and computer/information technology competencies are reported in Table 3.

Table 3

Importance of Communication Skills and Computer/Information Technology Competencies as Perceived by Oklahoma Agricultural Education Teachers

Competency	High (%)	Much (%)	Some (%)	Low (%)	None (%)	N.R. (%)	Mean	SD
Properly use a 35mm camera	20.59	34.03	34.03	7.56	2.10	1.68	3.68	0.94
Use e-mail properly	35.29	43.28	16.81	2.52	0.84	1.26	4.14	0.82
Properly use a digital camera	31.51	42.86	19.33	3.78	0.00	2.52	4.05	0.82
Properly use a video camera	18.91	44.12	29.41	3.78	1.26	2.52	3.77	0.86
Perform basic word processing	38.24	42.44	15.55	1.68	0.42	1.68	4.17	0.79
Utilize desktop publishing techniques	21.43	47.06	26.05	2.94	0.42	2.10	3.90	0.78
Identify appropriate file formats when using scanning programs	18.49	39.50	33.61	3.78	0.42	4.20	3.77	0.82

Competency	High (%)	Much (%)	Some (%)	Low (%)	None (%)	N.R. (%)	Mean	SD
Effectively scan a document	23.53	41.18	27.31	2.94	2.10	2.94	3.83	0.91
Create and design a Web page	25.63	37.39	26.89	6.72	0.84	2.52	3.84	0.93
Develop a multimedia presentation	26.05	44.96	24.37	2.10	0.00	2.52	3.96	0.76
Utilize graphic editing programs	14.71	37.39	38.24	7.14	0.00	2.52	3.60	0.84
Identify the steps in the printing/developing process	15.97	30.67	39.08	10.50	0.84	2.94	3.50	0.93
Construct*							3.84	0.58

Note. N.R. = no response; *Cronbach's alpha = 0.894

No communication skills and computer/information technology competencies were perceived by a majority of respondents to be of "high importance." The following competencies for communication skills and computer/information technology were perceived by respondents to be of "much importance": "Properly use a 35mm camera" (*M* = 3.68); "Use e-mail properly" (*M* = 4.14); "Properly use a digital camera" (*M* = 4.05); "Properly use a video camera" (*M* = 3.77); "Perform basic word processing" (*M* = 4.17); "Utilize desktop publishing techniques" (*M* = 3.90); "Identify appropriate file formats when using scanning programs" (*M* = 3.77); "Effectively scan a document" (*M* =

3.83); “Create and design a Web page” (*M* = 3.84); “Develop a multimedia presentation” (*M* = 3.96); “Utilize graphic editing programs” (*M* = 3.60); and “Identify the steps in the printing/developing process” (*M* = 3.50).

The overall mean for the communication skills and computer/information technology construct was 3.84 with a standard deviation of 0.58.

Agricultural education teachers’ perception of the importance of communication history competencies are reported in Table 4.

Table 4

Importance of Communication History Competencies as Perceived by Oklahoma Agricultural Education Teachers

Competency	High (%)	Much (%)	Some (%)	Low (%)	None (%)	N.R. (%)	Mean	SD
List qualities of an effective communicator	34.45	46.22	17.23	0.84	0.00	1.26	4.14	0.73
Identify barriers to effective communication	23.11	47.48	24.79	3.36	0.00	1.26	3.91	0.79
Demonstrate different methods of communication	29.83	46.64	19.75	0.42	0.42	2.94	4.07	0.75
Identify strategies to improve communications	26.05	8.74	20.59	2.52	0.00	2.10	4.00	0.77
Construct*							4.04	0.55

Note. N.R = no response; *Cronbach’s alpha = 0.714

No communication history competencies were perceived by a majority of respondents to be of "high importance." The following competencies for communication history were perceived by respondents to be of "much importance": "List qualities of an effective communicator" (M = 4.14); "Identify barriers to effective communication" (M = 3.91); "Demonstrate different methods of communication" (M = 4.07); and "Identify strategies to improve communications" (M = 4.00).

The overall mean for the communication history construct was 4.04 with a standard deviation of 0.55.

Results of the agricultural education teachers' perception of importance of competencies are illustrated in Table 5.

Table 5

Importance of Ethics, Leadership Development, and Professional Development Competencies as Perceived by Oklahoma Agricultural Education Teachers

Competency	High (%)	Much (%)	Some (%)	Low (%)	None (%)	N.R. (%)	Mean	SD
Demonstrate professional/business etiquette	42.44	44.12	11.76	0.42	0.00	1.26	4.31	0.68
Demonstrate a proper work ethic	59.66	30.67	7.98	0.84	0.00	1.26	4.50	0.69
Demonstrate listening skills	45.38	42.44	9.66	1.26	0.00	1.26	4.35	0.70
Speak intelligently before a group	59.66	29.41	7.56	2.10	0.00	1.26	4.49	0.73

Competency	High (%)	Much (%)	Some (%)	Low (%)	None (%)	N.R. (%)	Mean	SD
Interview for employment	55.04	34.87	6.30	2.52	0.00	1.26	4.44	0.74
Work in a team activity	42.02	44.12	12.18	0.42	0.00	1.26	4.30	0.68
Work under pressure	44.54	42.86	10.50	0.84	0.00	1.26	4.32	0.70
Identify the importance of correctly reporting the facts	36.13	44.96	15.97	1.68	0.42	0.84	4.16	0.76
Deliver a formal, oral presentation using clear enunciation, gesture, tone and vocabulary	53.36	35.29	9.24	1.26	0.00	0.84	4.42	0.70
Give an effective interview	31.93	48.32	16.81	0.84	0.42	1.68	4.12	0.75
Distinguish between right and wrong	61.34	26.47	9.24	1.26	0.00	1.68	4.49	0.73
Discuss the techniques and principles involved in public speaking	38.24	43.70	15.13	0.42	0.42	2.10	4.21	0.74
Prepare a 4-6 minute speech within a 30-minute preparation time	31.93	36.13	26.89	1.68	0.84	2.52	4.01	0.87
Construct*							4.32	0.49

Note. N.R. = no response; *Cronbach's alpha = 0.896

The following competency for ethics, leadership development, and professional development were perceived by respondents to be of "high importance": "Demonstrate a proper work ethic" (*M* = 4.50).

The following competencies for ethics, leadership development and professional development were perceived by respondents to be of "much importance": "Demonstrate professional/business etiquette" (*M* = 4.31); "Demonstrate listening skills" (*M* = 4.35); "Speak intelligently before a group" (*M* = 4.49); "Interview for employment" (*M* = 4.44); "Work in a team activity" (*M* = 4.30); "Work under pressure" (*M* = 4.32); "Identify the importance of correctly reporting the facts" (*M* = 4.16); "Deliver a formal, oral presentation using clear enunciation, gesture, tone and vocabulary" (*M* = 4.42); "Give an effective interview" (*M* = 4.12); "Distinguish between right and wrong" (*M* = 4.49); "Discuss the techniques and principles involved in public speaking" (*M* = 4.21); and "Prepare a 4-6 minute speech within a 30-minute preparation time" (*M* = 4.01).

The overall mean for the ethics, leadership development, and professional development construct was 4.32 with a standard deviation of 0.49.

Agricultural education teachers' perception of the importance of public relations, advertising, and marketing competencies are described in Table 6.

Table 6

Importance of Public Relations, Advertising, and Marketing Competencies as Perceived by Oklahoma Agricultural Education Teachers

Competency	High (%)	Much (%)	Some (%)	Low (%)	None (%)	N.R. (%)	Mean	SD
Discuss the role of public relations in agricultural companies	36.61	44.54	18.49	1.68	0.00	1.68	4.13	0.76
Discuss the role of public relations in farm organizations	27.31	45.80	22.27	2.94	0.00	1.68	4.01	0.78
Identify key elements of a public relations campaign	18.91	42.02	33.6	2.10	0.84	2.52	3.79	0.81
Demonstrate sales skills	26.47	41.18	28.15	1.68	0.00	2.52	3.95	0.78
Construct*							3.96	0.61

Note. N.R. = no response; *Cronbach's alpha = 0.743

No public relations, advertising, and marketing competencies were perceived by a majority of respondents to be of "high importance." The following competencies for public relations, advertising, and marketing were perceived by respondents to be of "much importance": "Discuss the role of public relations in agricultural companies" (*M* =

4.13); “Discuss the role of public relations in farm organizations” (*M* = 4.01); “Identify key elements of a public relations campaign” (*M* = 3.79); and “Demonstrate sales skills” (*M* = 3.95).

The overall mean for the public relations, advertising, and marketing construct was 3.96 with a standard deviation of 0.61.

Agricultural education teachers’ perception of importance of research, information gathering, and writing competencies are listed in Table 7.

Table 7

Importance of Research, Information Gathering, and Writing Competencies as Perceived by Oklahoma Agricultural Education Teachers

Competency	High (%)	Much (%)	Some (%)	Low (%)	None (%)	N.R. (%)	Mean	SD
Identify the components and format of news releases	21.01	43.70	30.67	3.36	0.42	0.84	3.82	0.81
Utilize correct grammar	56.30	34.45	7.56	0.84	0.00	0.84	4.48	0.67
Identify what makes a topic newsworthy	22.27	44.96	28.57	2.52	0.00	1.68	3.90	0.78
Identify biased information	23.95	48.32	24.79	2.10	0.00	0.84	3.95	0.77
Effectively interview a person	32.35	39.92	22.69	2.10	0.84	2.10	4.02	0.85
Write a news release	31.09	43.28	21.01	1.68	0.00	2.94	4.05	0.77

Competency	High (%)	Much (%)	Some (%)	Low (%)	None (%)	N.R. (%)	Mean	SD
Accurately proofread a document	36.97	44.96	15.13	0.84	0.00	2.10	4.22	0.72
Seek, gather and synthesize information	24.79	47.48	23.11	2.10	0.00	2.52	3.99	0.74
Write a feature story	21.43	42.44	31.51	2.52	0.00	2.10	3.82	0.78
Create a résumé	57.14	28.99	10.50	1.26	0.00	2.10	4.45	0.74
Write for broadcast	16.39	28.99	39.92	11.34	1.26	2.10	3.47	0.93
Effectively edit a story	17.23	44.54	28.99	5.46	0.42	3.36	3.75	0.83
Write a speech	40.76	45.80	10.50	0.84	0.00	2.10	4.28	0.70
Write for the Web	17.23	34.45	37.82	5.88	1.68	2.94	3.60	0.90
Utilize an Associated Press Stylebook	12.61	30.67	36.97	13.03	3.36	3.36	3.37	0.98
Construct*							3.96	0.50

Note. N.R. = no response; *Cronbach's alpha = 0.885

No research, information gathering, and writing competencies were perceived by a majority of respondents to be of "high importance." The following competencies for research, information gathering, and writing were perceived by respondents to be of "much importance": "Identify the components and format of news releases" (M = 3.82);

"Utilize correct grammar" (*M* = 4.48); "Identify what makes a topic newsworthy" (*M* = 3.90); "Identify biased information" (*M* = 3.95); "Effectively interview a person" (*M* = 4.02); "Write a news release" (*M* = 4.05); "Accurately proofread a document" (*M* = 4.22); "Seek, gather and synthesize information" (*M* = 3.99); "Write a feature story" (*M* = 3.82); "Create a résumé" (*M* = 4.45); "Effectively edit a story" (*M* = 3.75); "Write a speech" (*M* = 4.28); and "Write for the Web" (*M* = 3.60).

The following competencies for research, information gathering, and writing were perceived by respondents to be of "some importance": "Write for broadcast" (*M* = 3.47) and "Utilize an Associated Press Stylebook" (*M* = 3.37).

The overall mean for the research, information gathering, and writing construct was 3.96 with a standard deviation of 0.50.

Findings of Objective 3

The third objective of this study was to determine Oklahoma agricultural education teachers' perceived ability to teach selected agricultural communications competencies.

In this study, Oklahoma agricultural education teachers were asked to rate their perception of ability to teach agricultural communications competencies using a five-point summated rating scale: A = "Very High Ability," B = "High Ability," C = "Average Ability," D = "Low Ability," and E = "No Ability".

For the purpose of interpreting the results, the researcher used the following numerical scale: 5.00 - 4.50 = "Very High Ability," 4.49 - 3.50 = "High Ability," 3.49 -

2.50 = “Average Ability,” 2.49 - 1.50 = “Low Ability,” and 1.49 - 1.00 = “No Ability” (Boone et al., 2006).

This scale was used to determine each respondent’s perception of his or her ability to teach each competency that had the potential of being taught in secondary high school agricultural education.

Results of the agricultural education teachers’ perceptions of their ability to teach communication skills and computer/information technology competencies are reported in Table 8.

Table 8

Ability to Teach Communication Skills and Computer/Information Technology Competencies as Perceived by Oklahoma Agricultural Education Teachers

Competency	Very High (%)	High (%)	Average (%)	Low (%)	No (%)	N.R. (%)	Mean	SD
Properly use a 35mm camera	15.97	24.37	43.28	9.66	2.94	43.78	3.41	0.98
Use e-mail properly	23.95	29.83	35.71	5.04	1.68	3.78	3.71	0.95
Properly use a digital camera	13.03	29.83	42.44	9.66	1.26	3.78	3.45	0.86
Properly use a video camera	11.76	28.15	48.74	7.10	0.84	3.36	3.43	0.82
Perform basic word processing	16.81	34.87	38.24	6.30	0.84	2.94	3.62	0.87
Utilize desktop publishing techniques	7.56	26.05	46.64	13.87	2.94	2.94	3.22	0.89

Competency	Very High (%)	High (%)	Average (%)	Low (%)	No (%)	N.R. (%)	Mean	SD
Identify appropriate file formats when using scanning programs	8.82	19.33	47.90	17.65	3.36	2.94	3.12	0.94
Effectively scan a document	9.66	46.27	47.48	12.18	1.26	2.94	3.31	0.86
Create and design a Web page	8.40	13.45	39.08	19.33	16.39	3.36	2.76	1.14
Develop a multimedia presentation	6.72	28.99	42.86	13.87	3.78	3.78	3.20	0.92
Utilize graphic editing programs	2.52	18.07	40.76	24.79	9.66	4.20	2.76	0.96
Identify the steps in the printing/developing process	4.62	15.55	39.08	23.11	13.45	4.20	2.70	1.04
Construct*							3.24	0.66

Note. N.R. = no response; *Cronbach's alpha = 0.906

Respondents did not perceive themselves to have a "very high ability" to teach any of the communications skills and computer/information technology competencies. Respondents perceived themselves to have a "high ability" to teach the following competencies for communication skills and computer/information technology: "Use e-mail properly" (M = 3.71) and "Perform basic word processing" (M = 3.62).

Respondents perceived themselves to have an "average ability" to teach the following competencies for communication skills and computer/information technology: "Properly use a 35mm camera" (*M* = 3.41); "Properly use a digital camera" (*M* = 3.45); "Properly use a video camera" (*M* = 3.43); "Utilize desktop publishing techniques" (*M* = 3.22); "Identify appropriate file formats when using scanning programs" (*M* = 3.12); "Effectively scan a document" (*M* = 3.31); "Create and design a Web page" (*M* = 2.76); "Develop a multimedia presentation" (*M* = 3.20); "Utilize graphic editing programs" (*M* = 2.76); and "Identify the steps in the printing/ developing process" (*M* = 2.70).

The overall mean for communication skills and computer/information technology construct was 3.24 with a standard deviation of 0.66.

Results of the agricultural education teachers' perception of ability to teach communication history competencies are reported in Table 9.

Table 9

Ability to Teach Communication History Competencies as Perceived by Oklahoma Agricultural Education Teachers

Competency	Very High (%)	High (%)	Average (%)	Low (%)	No (%)	N.R. (%)	Mean	SD
List qualities of an effective communicator	11.34	45.38	36.97	2.94	0.00	3.36	3.67	0.72
Identify barriers to effective communication	10.50	33.64	46.22	5.88	0.00	3.78	3.51	0.77

Competency	Very High (%)	High (%)	Average (%)	Low (%)	No (%)	N.R. (%)	Mean	SD
Demonstrate different methods of communication	11.34	34.45	46.64	2.52	0.42	4.62	3.56	0.75
Identify strategies to improve communications	7.14	33.61	49.16	5.88	0.00	4.20	3.44	0.73
Construct*							3.54	0.56

Note. N.R. = no response; *Cronbach's alpha = 0.748

Respondents did not perceive themselves to have a "very high ability" to teach any communication history competencies. Respondents perceived themselves to have a "high ability" to teach the following competencies for communication history: "List qualities of an effective communicator" (M = 3.67); "Identify barriers to effective communication" (M = 3.51); and "Demonstrate different methods of communication" (M = 3.56).

Respondents perceived themselves to have an "average ability" to teach the following competency for communication history: "Identify strategies to improve communications" (M = 3.44).

The overall mean for the communication history construct was 3.54 with a standard deviation of 0.56.

Results of the agricultural education teachers' perception of ability to teach ethics, leadership development, and professional development competencies are described in Table 10.

Table 10

Ability to Teach Ethics, Leadership Development, and Professional Development Competencies as Perceived by Oklahoma Agricultural Education Teachers

Competency	Very High (%)	High (%)	Average (%)	Low (%)	No (%)	N.R. (%)	Mean	SD
Demonstrate professional/business etiquette	19.75	40.34	32.77	3.36	0.00	3.78	3.79	0.79
Demonstrate a proper work ethic	38.66	39.50	15.55	2.94	0.00	3.36	4.16	0.81
Demonstrate listening skills	21.01	43.28	28.15	2.10	0.84	4.62	3.86	0.80
Speak intelligently before a group	22.69	42.86	30.25	1.26	0.00	2.94	3.88	0.76
Interview for employment	20.59	45.80	28.15	1.26	0.00	4.20	3.89	0.74
Work in a team activity	22.27	42.44	27.73	3.78	0.00	3.78	3.87	0.78
Work under pressure	27.79	38.24	29.41	0.84	0.84	2.94	3.93	0.83
Identify the importance of correctly reporting the facts	20.59	34.03	37.82	4.20	0.42	2.94	3.74	0.84

Competency	Very High (%)	High (%)	Average (%)	Low (%)	No (%)	N.R. (%)	Mean	SD
Deliver a formal, oral presentation using clear enunciation, gesture, tone and vocabulary	19.33	39.08	34.45	3.78	0.00	3.36	3.78	0.79
Give an effective interview	16.81	36.55	38.66	2.52	0.84	4.62	3.70	0.81
Distinguish between right and wrong	42.86	26.47	24.79	2.52	0.00	3.36	4.13	0.89
Discuss the techniques and principles involved in public speaking	19.75	34.87	36.13	5.88	0.00	3.36	3.71	0.86
Prepare a 4-6 minute speech within a 30-minute preparation time	15.97	29.41	40.76	9.66	0.42	3.78	3.53	0.91
Construct*							3.84	0.59

Note. N.R. = no response; *Cronbach's alpha = 0.922

Respondents did not perceive themselves to have a "very high ability" to teach any of the ethics, leadership development, and professional development competencies. Respondents perceived themselves to have a "high ability" to teach the following competencies for ethics, leadership development, and professional development:

"Demonstrate professional/business etiquette" (*M* = 3.79); "Demonstrate a proper work ethic" (*M* = 4.16); "Demonstrate listening skills" (*M* = 3.86); "Speak intelligently before a group" (*M* = 3.88); "Interview for employment" (*M* = 3.89); "Work in a team activity" (*M* = 3.87); "Work under pressure" (*M* = 3.93); "Identify the importance of correctly reporting the facts" (*M* = 3.74); "Deliver a formal, oral presentation using clear, enunciation, gesture, tone and vocabulary" (*M* = 3.78); "Give an effective interview" (*M* = 3.70); "Distinguish between right and wrong" (*M* = 4.13); "Discuss the techniques and principles involved in public speaking" (*M* = 3.71) and "Prepare a 4-6 minute speech within a 30-minute preparation time" (*M* = 3.53) .

The overall mean for the ethics, leadership development, and professional development construct was 3.84 with a standard deviation of 0.59.

Results of the agricultural education teachers' perception of ability to teach public relations, advertising, and marketing competencies are reported in Table 11.

Table 11

Ability to Teach Public Relations, Advertising, and Marketing Competencies as Perceived by Oklahoma Agricultural Education Teachers

Competency	Very High (%)	High (%)	Average (%)	Low (%)	No (%)	N.R. (%)	Mean	SD
Discuss the role of public relations in agricultural companies	15.55	29.41	43.70	5.46	0.84	5.04	3.57	0.87

Competency	Very High (%)	High (%)	Average (%)	Low (%)	No (%)	N.R. (%)	Mean	SD
Discuss the role of public relations in farm organizations	7.98	39.08	42.86	6.30	0.84	2.94	3.48	0.77
Identify key elements of a public relations campaign	6.72	27.73	50.84	8.82	3.52	3.36	3.27	0.82
Demonstrate sales skills	10.92	36.13	38.66	8.40	2.10	3.78	3.47	0.89
Construct*							3.45	0.64

Note. N.R. = no response; *Cronbach's alpha = 0.761

Respondents did not perceive themselves to have a "very high ability" to teach any of the public relations, advertising, and marketing competencies. Respondents perceived themselves as having a "high ability" to teach the following competency for public relations, advertising, and marketing: "Discuss the role of public relations in agricultural companies" (M = 3.57).

Respondents perceived themselves as having an "average ability" to teach the following competencies for public relations, advertising, and marketing: "Discuss the role of public relations in farm organizations" (M = 3.48); "Identify key elements of a public relations campaign" (M = 3.27); and, "Demonstrate sales skills" (M = 3.47).

The overall mean for the research, information gathering, and writing construct was 3.45 with a standard deviation of 0.64.

Results of the agricultural education teachers' perception of ability to research, information gathering, and writing competencies are reported in Table 12.

Table 12

Ability to Teach Research, Information Gathering, and Writing Competencies as Perceived by Oklahoma Agricultural Education Teachers

Competency	Very High (%)	High (%)	Average (%)	Low (%)	No (%)	N.R. (%)	Mean	SD
Identify the components and format of news releases	5.46	24.79	53.36	11.76	1.68	2.94	3.25	0.79
Utilize correct grammar	12.18	34.87	44.12	5.04	0.00	3.78	3.56	0.77
Identify what makes a topic newsworthy	9.24	35.71	43.70	6.30	0.84	4.20	3.48	0.77
Identify biased information	10.50	35.71	44.54	5.46	0.42	3.36	3.53	0.79
Effectively interview a person	12.61	36.13	41.60	4.20	0.84	4.62	3.60	0.82
Write a news release	10.50	31.51	45.80	7.98	0.42	3.78	3.47	0.81
Accurately proofread a document	10.50	31.93	44.54	9.24	0.42	3.36	3.46	0.83

Competency	Very High (%)	High (%)	Average (%)	Low (%)	No (%)	N.R. (%)	Mean	SD
Seek, gather and synthesize information	11.34	31.09	47.06	6.72	0.42	3.36	3.48	0.80
Write a feature story	8.82	10.92	51.26	10.92	0.84	2.94	3.29	0.80
Create a résumé	22.27	38.24	31.51	3.78	0.84	3.36	3.80	0.86
Write for broadcast	5.46	19.33	44.96	20.59	6.72	2.94	3.00	0.95
Effectively edit a story	6.72	26.89	47.06	13.45	2.10	3.78	3.26	0.84
Write a speech	19.33	34.03	36.97	5.04	0.42	4.20	3.69	0.86
Write for the Web	2.52	16.39	40.34	26.47	10.50	3.78	2.75	0.97
Utilize an Associated Press Stylebook	5.88	11.76	34.03	29.83	14.71	3.78	2.66	1.09
Construct*							3.35	0.54

Note. N.R. = no response; *Cronbach's alpha = 0.903

Respondents did not perceive themselves to have a "very high ability" to teach any research, information gathering, and writing competencies. Respondents perceived themselves to have a "high ability" to teach the following competencies for research, information gathering, and writing: "Utilize correct grammar" (M = 3.56); "Identify

biased information" (*M* = 3.53); "Effectively interview a person" (*M* = 3.60); "Create a résumé" (*M* = 3.80); and, "Write a speech" (*M* = 3.69).

Respondents perceived themselves to have an "average ability" to teach the following competencies for research, information gathering, and writing: "Identify the components and format of news releases" (*M* = 3.25); "Identify what makes a topic newsworthy" (*M* = 3.48); "Write a news release" (*M* = 3.47); "Accurately proofread a document" (*M* = 3.46); "Seek, gather and synthesize information" (*M* = 3.48); "Write a feature story" (*M* = 3.29); "Write for broadcast" (*M* = 3.00); "Effectively edit a story" (*M* = 3.26); "Write for the Web" (*M* = 2.75); and, Utilize an Associated Press Stylebook" (*M* = 2.66).

The overall mean for the public relations, advertising, and marketing construct was 3.35 with a standard deviation of 0.54.

Findings of Objective 4

The fourth objective of this study was to determine Oklahoma agricultural education teachers' knowledge of agricultural communications as determined by a researcher-developed agricultural communications test.

The purpose of the knowledge test was to determine how well the agricultural education teachers understood the agricultural communications subject content. All knowledge test questions were derived from the CIMC curriculum guides available to all agricultural education teachers in Oklahoma.

The findings from this objective were evaluated three ways. First, the overall passing scores (60% or greater) for all respondents were identified by construct. Second,

overall test results were evaluated and categorized by grade. Third, each competency within the constructs was evaluated as to whether the question was answered correctly or incorrectly by respondents.

For each question, 238 responses were possible. Because this portion of the survey was designed to assess the agricultural communications knowledge of secondary agricultural education teachers, the results expressed the level of knowledge each teacher held. Knowledge performance was based on the percentage of questions answered correctly. Percentage labels were assigned based on generally accepted academic performance descriptions: 100%-90%, "superior knowledge"; 89%-80%, "acceptable knowledge"; 79%-70%, "moderate knowledge"; 69%-60%, "minimal knowledge"; and less than 60% "unacceptably low knowledge" (Terry, Herring, & Larke, 1992).

Knowledge scores for agricultural communications constructs as answered by the respondents are described in Table 13.

Table 13

Knowledge Scores for Agricultural Communications Constructs as Responded by Oklahoma Agricultural Education Teachers

Construct	Correct	Incorrect	N.R.
Communication Skills and Computer/Information Technology	37.18%	48.11%	14.71%
Communication History	40.13%	49.26%	10.61%
Ethics, Leadership Development and Professional Development	59.37%	32.45%	8.18%

Construct	Correct	Incorrect	N.R.
Public Relations, Advertising, and Marketing	45.59%	43.70%	10.71%
Research, Information Gathering and Writing	55.91%	34.43%	9.66%

Note. N.R. = no response

No construct received an overall average that received a "passing grade." The ethics/leadership development/professional development construct had the highest percentage of correct answers with 59.37%. The research/information gathering/writing construct had the second highest percentage of correct answers with 55.91%. Public relations/advertising/marketing had 45.59% of answers that were correct for the construct. Communications history had 40.13% of the answers correct for the construct. The communications skills/computer/information technology construct had the lowest percentage of correct answers with 37.18% correct.

Agricultural communications competencies knowledge test scores achieved by Oklahoma agricultural education teachers are presented in Table 14. The high test score, average test score and low test score on the knowledge test are found in Table 15.

Table 14

Oklahoma Agricultural Education Teachers' Grade Distribution for Agricultural Communication Knowledge Test

Grade	A	B	C	D	F
Respondents	0	1	22	69	146

Table 15

Oklahoma Agricultural Education Teachers' Highest, Mean, and Lowest Knowledge Test Scores

Highest test score	Mean test score	Lowest test score
85.4%	51.7%	2.1%

Knowledge score results for Oklahoma agricultural education teachers' responses to agricultural communications competencies resulted in 92 of 238 total respondents passing the examination. No respondents received an "A." One respondent, the highest test score, received a grade of "B" with 85.4% on the knowledge test. Twenty-two

respondents received a “C”, 69 respondents received a “D”, and 146 respondents failed the test. The mean knowledge test score of all agricultural communications competencies was 51.7%. The lowest knowledge test score was 2.1%.

Results of the agricultural education teachers’ knowledge test of communication skills and computer/information technology competencies are illustrated in Table 16.

Table 16

Knowledge Test Results for Communication Skills and Computer/Information Technology Competencies Achieved by Oklahoma Agricultural Education Teachers

Competency	Correct	Incorrect	N.R.
Properly use a 35mm camera	26.89%	65.13%	7.98%
Use e-mail properly	52.94%	39.08%	7.98%
Properly use a digital camera	61.34%	26.89%	11.76%
Properly use a video camera	36.55%	50.42%	13.03%
Perform basic word processing	43.70%	37.39%	18.91%
Utilize desktop publishing techniques	24.37%	62.18%	13.45%
Identify appropriate file formats when using scanning programs	41.18%	41.60%	17.23%
Effectively scan a document	26.89%	57.98%	15.13%
Create and design a Web page	50.84%	34.03%	15.13%
Develop a multimedia presentation	25.63%	57.14%	17.23%

Competency	Correct	Incorrect	N.R.
Utilize graphic editing programs	42.02%	41.60%	16.39%
Identify the steps in the printing/developing process	13.87%	63.87%	22.27%

Note. Correct = Percent of responses that were answered correctly; Incorrect = Percent of responses that were answered incorrectly; N.R. = percent of no response

The knowledge test question related to the following competency for communication skills and computer/information technology was answered correctly by 60% or more of respondents: “Properly use a digital camera” (61.34%).

The knowledge questions related to the following competencies for communication skills and computer/information technology were answered correctly by fewer than 60% of respondents: “Properly use a 35mm camera” (26.89%); “Use e-mail properly” (52.94%); “Properly use a video camera” (36.55%); “Perform basic word processing” (43.70%); “Utilize desktop publishing techniques” (24.37%); “Identify appropriate file formats when using scanning programs” (41.18%); “Effectively scan a document” (26.89%); “Create and design a web page” (50.84%); “Develop a multimedia presentation” (25.63%); “Utilize graphic editing programs” (42.02%); and, “Identify the steps in the printing/developing process” (13.87%).

Results of the agricultural education teachers’ knowledge test of communication history competencies are reported in Table 17.

Table 17

Knowledge Test Results for Communication History Competencies Achieved by Oklahoma Agricultural Education Teachers

Competency	Correct	Incorrect	N.R.
List qualities of an effective communicator	15.13%	77.31%	7.56%
Identify barriers to effective communication	65.13%	23.11%	11.76%
Demonstrate different methods of communication	45.38%	45.38%	9.24%
Identify strategies to improve communications	34.87%	51.26%	13.87%

Note. Correct = Percent of responses that were answered correctly; Incorrect = Percent of responses that were answered incorrectly; N.R. = percent of no response

The knowledge question related to the following competency for communication history was answered correctly by 60% or more of respondents: "Identify barriers to effective communication" (65.13%).

The knowledge test questions related to the following competencies for communication history were answered correctly by fewer than 60% of respondents: "List qualities of an effective communicator" (15.13%); "Demonstrate different methods of communication" (45.38%); and, "Identify strategies to improve communications" (34.87%).

Results of the agricultural education teachers' knowledge examination of ethics, leadership development, and professional development competencies are reported in Table 18.

Table 18

Knowledge Test Results for Ethics, Leadership Development, and Professional Development Competencies Achieved by Oklahoma Agricultural Education Teachers

Competency	Correct	Incorrect	N.R.
Demonstrate professional/business etiquette	83.61%	12.18%	4.20%
Demonstrate a proper work ethic	48.74%	46.22%	5.04%
Demonstrate listening skills	79.41%	16.39%	4.20%
Speak intelligently before a group	50.84%	40.76%	8.40%
Interview for employment	83.19%	8.82%	7.98%
Work in a team activity	58.40%	31.93%	9.66%
Work under pressure	38.66%	52.52%	8.82%
Identify the importance of correctly reporting the facts	54.20%	36.13%	9.66%
Deliver a formal, oral presentation using clear enunciation, gesture, tone and vocabulary	73.53%	18.91%	7.56%
Give an effective interview	49.58%	42.02%	8.40%

Competency	Correct	Incorrect	N.R.
Distinguish between right and wrong	76.05%	14.29%	9.66%
Discuss the techniques and principles involved in public speaking	12.61%	75.63%	11.76%
Prepare a 4-6 minute speech within a 30-minute preparation time	63.03%	26.05%	10.92%

Note. Correct = Percent of responses that were answered correctly; Incorrect = Percent of responses that were answered incorrectly; N.R. = percent of no response

The knowledge questions related to the following competencies for ethics, leadership development, and professional development were answered correctly by 60% or more of respondents: "Demonstrate professional/business etiquette" (83.61%); "Demonstrate listening skills" (79.41%); "Interview for employment" (83.19%); "Deliver a formal, oral presentation using clear enunciation, gesture, tone and vocabulary" (73.53%); "Distinguish between right and wrong" (76.05%); and, "Prepare a 4-6 minute speech within a 30-minute preparation time" (63.03%).

The knowledge examination questions related to the following competencies for ethics, leadership development, and professional development were answered correctly by fewer than 60% of respondents: "Demonstrate a proper work ethic" (48.74%); "Speak intelligently before a group" (50.84%); "Work in a team activity" (58.40%); Work in a

team activity" (38.66%); "Identify the importance of correctly reporting the facts" (54.20%); "Give an effective interview" (49.58%); and "Discuss the techniques and principles involved in public speaking" (12.61%).

Results of the agricultural education teachers' knowledge test of public relations, advertising, and marketing competencies are reported in Table 19.

Table 19

Knowledge Test Results for Public Relations, Advertising, and Marketing Competencies as Achieved by Oklahoma Agricultural Education Teachers

Competency	Correct	Incorrect	N.R.
Discuss the role of public relations in agricultural companies	52.10%	40.34%	7.56%
Discuss the role of public relations in farm organizations	52.52%	40.76%	6.72%
Identify key elements of a public relations campaign	32.77%	54.62%	12.61%
Demonstrate sales skills	44.96%	39.08%	15.97%

Note. Correct = Percent of responses that were answered correctly; Incorrect = Percent of responses that were answered incorrectly; N.R. = percent of no response

No knowledge test questions related to the competencies for public relations, advertising, and marketing were answered correctly by 60% or more of respondents.

The knowledge questions related to the following competencies for public relations, advertising, and marketing were answered correctly by fewer than 60% of respondents: “Discuss the role of public relations in agricultural companies” (52.10%); “Discuss the role of public relations in farm organizations” (52.52%); “Identify key elements of a public relations campaign” (32.77%); and, “Demonstrate sales skills” (44.96%).

Results of the agricultural education teachers’ knowledge test of research, information gathering, and writing competencies are reported in Table 20.

Table 20

Knowledge Test Results for Research, Information Gathering, and Writing Competencies as Achieved by Oklahoma Agricultural Education Teachers

Competency	Correct	Incorrect	N.R.
Identify the components and format of news releases	81.93%	14.29%	3.78%
Utilize correct grammar	86.55%	9.24%	4.20%
Identify what makes a topic newsworthy	25.63%	70.59%	3.78%
Identify biased information	15.97%	79.83%	4.20%
Effectively interview a person	77.73%	15.13%	7.14%
Write a news release	84.45%	7.56%	7.98%
Accurately proofread a document	59.24%	31.93%	8.82%

Competency	Correct	Incorrect	N.R.
Seek, gather and synthesize information	63.87%	27.73%	8.40%
Write a feature story	61.34%	26.89%	11.76%
Create a résumé	50.00%	36.55%	13.45%
Write for broadcast	69.33%	18.49%	12.18%
Effectively edit a story	18.07%	67.23%	14.71%
Write a speech	42.44%	45.38%	12.18%
Write for the web	44.54%	40.76%	14.71%
Utilize an Associated Press Stylebook	57.56%	24.79%	17.65%

Note. Correct = Percent of responses that were answered correctly; Incorrect = Percent of responses that were answered incorrectly; N.R. = percent of no response

The knowledge questions related to the following competencies for research, information gathering, and writing were answered correctly by 60% or more of respondents: "Identify the components and format of news releases" (81.93%); "Utilize correct grammar" (86.55%); "Effectively interview a person" (77.73%); "Write a news release" (84.45%); "Seek, gather and synthesize information" (63.87%); "Write a feature story" (61.34%); and, "Write for broadcast" (69.33%).

The knowledge test questions related to the following competencies for research, information gathering, and writing were answered correctly by fewer than 60% of

respondents: “Identify what makes a topic newsworthy” (25.63%); “Identify biased information” (15.97%); “Accurately proofread a document” (59.24%); “Create a résumé” (50.00%); “Effectively edit a story” (18.07%); “Write a speech” (42.44%); “Write for the Web” (44.54%); and, “Utilize an Associated Press Stylebook” (57.56%).

Findings of Objective 5

The fifth objective of this study was to describe the relationships between selected personal and professional characteristics of Oklahoma agricultural education teachers and their knowledge of agricultural communications.

To achieve the findings for this objective, correlations between selected characteristics of Oklahoma agricultural education teachers and agricultural communications knowledge test scores were calculated.

Characteristics of Oklahoma agricultural education teachers were the independent variables and their knowledge scores were the dependent variable. Table 21 describes these relationships.

Table 21

Relationships Between Selected Characteristics of Oklahoma Agricultural Education Teachers and Their Levels of Knowledge for Agricultural Communications

Independent Variables	Dependent Variable	Interpretation
Education Level (ordinal)	0.051_{rs}	Positive & Negligible
Teaching prior to 1996 (nominal)	0.139_{r}^{*}	Positive & Low
OSU received degree (nominal)	-0.018_{r}	Negative & Negligible

Independent Variables	Dependent Variable	Interpretation
School size (ordinal)	0.088_{rs}	Positive & Negligible
Years teaching (ordinal)	-0.173_{rs}^{**}	Negative & Low
Teach agricultural communications now (nominal)	0.003_{r}	Positive & Negligible
Use CIMC curriculum guides (nominal)	-0.041_{r}	Negative & Negligible
Years teach agricultural communications (ordinal)	0.261_{rs}	Positive & Low

Note. r = Pearson Product Moment Correlation; rs = Spearman's rank order coefficient; $^{*} = p < 0.05$; $^{**} = p < 0.01$

The relationships between respondents' test scores and five personal and professional characteristics were negligible (see Table 21); however, a "low" relationship existed between knowledge test score and three measures of teaching experience: years teaching agricultural education, years teaching agricultural communications, and having taught prior to 1996.

Respondents who currently taught an agricultural communications course did not score any better on the knowledge portion of the instrument.

Further, a positive and moderate relationship existed ($r_s = 0.323$; $p < 0.01$) between the years of teaching agricultural communications and the teacher's education level. The longer a respondent reported teaching agricultural communications the more likely he or she was to have acquired education beyond a baccalaureate degree.

A positive and moderate relationship ($r_s = 0.401$; $p < 0.01$) existed between the years the respondent has been teaching agricultural education and the years he or she had been teaching agricultural communications. The longer a teacher had taught secondary agricultural education the more years they had taught agricultural communications.

A low and negative relationship ($r = -0.215$; $p < 0.01$) existed between the use of CIMC curriculum materials and whether the teacher earned a degree from Oklahoma State University.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter serves to provide a summary of findings, conclusions and recommendations relevant to this study.

Problem

A lack of identified and validated knowledge of and perceptions about agricultural communications held by secondary agricultural education teachers in Oklahoma exists, knowledge that could guide the development of agricultural education curriculum for high school students.

Purpose

The purpose of this study was to determine Oklahoma agricultural education teachers' basic knowledge of and perceptions about agricultural communications, especially as they related to the secondary curriculum for agricultural education.

Objectives

To accomplish the purpose of the study, the researcher established the following objectives:

1. To describe selected personal and professional characteristics of Oklahoma agricultural education teachers;
2. To determine the importance of selected agricultural communications competencies, as perceived by Oklahoma agricultural education teachers;
3. To determine Oklahoma agricultural education teachers' perceived ability to teach selected agricultural communications competencies;
4. To determine Oklahoma agricultural education teachers' knowledge of agricultural communications as determined by a researcher-developed agricultural communications test; and
5. To describe the relationship between selected personal and professional characteristics of Oklahoma agricultural education teachers and their knowledge of agricultural communications.

Summary of Findings

Once data collection had been completed at the 2006 CareerTech Summer Conference, 238 agricultural education teachers from all five districts in Oklahoma had responded. There were 431 agricultural education teachers in Oklahoma in 2006, meaning the overall response rate 55.2%.

Selected Personal and Professional Characteristics of Oklahoma Agricultural Education Teachers

The majority of teachers were males (84.45%).

The majority of respondents held only a bachelor's degree (70.17%). The majority of respondents teaching agricultural education in Oklahoma received their degree from OSU (80.25%).

The number of respondents who began teaching prior to 1996 and after 1996 were nearly equally distributed. One-hundred-seven (44.96%) responded they were and 112 (47.06%) responded they were not teaching prior to 1996.

The Central District had the largest percentage of agricultural education teachers who responded (28.15%) and the Northwest District had the second largest number of agricultural education teachers who responded (26.47%). The Northeast District had 18.07% of agricultural education teachers and the Southwest District has 10.92%. The Southeast District has the lowest number of agricultural education teachers who responded (8.40%). The Class 2A-1A size school had the largest percentage of agricultural education teachers (30.67%).

The largest percentage of respondents indicated they had taught agricultural education courses for one to five years (31.93%). The second largest percentage of respondents had taught 20+ years (23.95%).

The majority of respondents did not currently teach an agricultural communications course (60.59%). The largest portion of agricultural education teachers who had taught an agricultural communications course had done so for one to two years (57.35%).

Most respondents who teach or have taught agricultural communication used the curriculum guides provided by CIMC.

The results of the open-ended questions indicated that respondents who did not use the CIMC curriculum guides get their resources to teach agricultural communications from various locations, including books, web sites, and self-made materials. It was also suggested that more assistance is needed to teach agricultural communications curriculum, the layout of the curriculum is an issue and delivery in a computer-assisted manner needs to be considered.

Importance of Competencies to be Taught to High School Students

No communication skills and computer/information technology competencies; communication history competencies; public relations, advertising, and marketing competencies; or research, information gathering, and writing competencies were perceived by a majority of respondents to be of "high importance."

The following competency for ethics, leadership development, and professional development were perceived by respondents to be of "high importance": "Demonstrate a proper work ethic."

The following competencies for research, information gathering, and writing were perceived by respondents to be of "some importance": "Write for broadcast" and "Utilize an Associated Press Stylebook."

All other competencies were perceived by respondents to be of "much importance."

All five agricultural communications constructs were perceived by respondents as being of "much importance."

Agricultural Education Teachers' Perceptions of Their Ability to Teach Agricultural Communications Competencies

Agricultural education teachers did not perceive they held a "very high ability" to teach any agricultural communications competencies for the five constructs investigated.

Respondents perceived themselves as having a "high ability" to teach two competencies in the communication skills and computer/information technology construct and three competencies in the communication history construct. Respondents perceived they had a "high ability" to teach 13 ethics, leadership development, and professional development competencies. They also perceived having "high ability" to teach one public relations, advertising, and marketing competency as well as five research, information gathering, and writing competencies.

Overall construct means indicated that respondents held a perception of "high ability" to teach competencies in communication history. Respondents had a perception of "average ability" to teach competencies in communication skills/computer/information technology, ethics/leadership development/professional development, public relations/advertising/marketing construct, and research/information gathering/writing.

Knowledge Test Results for Oklahoma Agricultural Education Teachers

No agricultural communications construct received an overall average that would have received a "passing" grade. Knowledge score results for Oklahoma agricultural

education teachers responses to agricultural communications competencies resulted in less than half of respondents "passing" the examination portion of the instrument.

The ethics/leadership development/professional development construct had the highest percentage of correct answers with 59.37%. The research/information gathering/writing construct had the second highest percentage of correct answers with 55.91%. Pubic relations/advertising/marketing had 45.59% of answers that were correct for the construct. Communications history had 40.13% of the answers correct for the construct. The communications skills/computer/information technology construct had the lowest percentage of correct answers with 37.18% correct.

Knowledge score results for Oklahoma agricultural education teachers' responses to agricultural communications competencies resulted in 92 out of 238 total respondents passing the examination. No respondents received an "A." One respondent, the highest test score, received a grade of "B" with a score of 85.4% on the knowledge test. Twenty-two respondents received a "C," 69 respondents received a "D," and 146 respondents failed the examination. The average knowledge test score of all agricultural communications competencies was 51.7%. The lowest knowledge test score was 2.1%.

One knowledge test question related to the communication skills and computer/information technology competency was answered correctly by 60% or more of respondents. Eleven knowledge questions related to the communication skills and computer/information technology competencies were answered correctly by fewer than 60% of respondents.

One knowledge test questions related to the communication history competency was answered correctly by 60% or more of respondents. Three knowledge survey

questions related to the communications history competency were answered correctly by fewer than 60% of respondents.

Six knowledge test questions related to the ethics, leadership development, and professional development competencies were answered correctly by 60% or more of respondents. Seven knowledge questions related to the ethics, leadership development, and professional development competencies were answered correctly by less than 60% of respondents.

No knowledge test questions related to the competencies for public relations, advertising, and marketing were answered correctly by 60% or more of respondents. Four knowledge test questions related to public relations, advertising, and marketing competencies were answered correctly by fewer than 60% of respondents.

Seven knowledge examination questions related to the research, information gathering, and writing competencies were answered correctly by 60% or more of respondents. Eight knowledge test questions related to the research, information gathering, and writing competencies were answered correctly by fewer than 60% of respondents.

Conclusions

The conclusions for this study are based on the researcher's interpretations of data and should not be generalized to populations other than the group studied. Chapter 1 limitations also should be taken into consideration.

Based on the findings from the study, the researcher makes the following conclusions:

1. Oklahoma agricultural education teachers are male, have a bachelor's degree earned at Oklahoma State University, and most did not teach agricultural communications courses, and started their teaching careers after 1996.
2. Agricultural education teachers who teach an agricultural communications course have taught the course for fewer than two years, most used the Curriculum and Instructional Materials Center curriculum guides.
3. Oklahoma agricultural education teachers perceived that 46 agricultural communications competencies in five construct areas held much importance for the high school agricultural education curriculum, which provides results similar to the research conducted by Akers (2000).
4. Oklahoma agricultural education teachers perceived themselves to have high ability to teach ethics, leadership development, and professional development competencies and communications history competencies, and perceived their ability to teach communications history competencies, public relations, advertising, and marketing competencies, and research, information gathering, and writing competencies as only average.
5. Based on knowledge test scores, Oklahoma agricultural education teachers did not have adequate knowledge to teach agricultural communications courses, which was not congruent with teachers' perceptions of their abilities.
6. Oklahoma agricultural education teachers who teach an agricultural communications course were not more knowledgeable about agricultural communications than those who had not taught the course; however, a

teacher's knowledge of agricultural communications increases the more often he or she teaches the course.

7. Oklahoma agricultural education teachers who began teaching after 1996 had a greater knowledge of agricultural communications than those who began teaching prior to 1996.

Recommendations

The following recommendations are based on the findings and conclusions of this study:

1. CIMC curriculum guides are not used by all Oklahoma agricultural education teachers who are teaching agricultural communications courses. Core agricultural communications competencies should be established so uniformity in teaching agricultural communications courses can be accomplished and requisite curriculum materials recommended.
2. More research is needed to determine other states agricultural education teachers' perceptions of agricultural communications competencies that were perceived in this study as having much importance.
3. More research is needed to determine perceptions of important agricultural communications competencies by groups other than secondary agricultural education teachers, such as agricultural communications faculty, agricultural education teacher education faculty, and state agricultural education program staff.

4. To increase knowledge of agricultural communications competencies in the five construct areas, in-service, summer courses or other professional development activities should be provided for agricultural education teachers who are teaching or wish to teach an agricultural communications course.
5. More agricultural communications courses should be made available to agricultural education majors at the collegiate level to continue to increase aspiring agricultural education teachers' knowledge of agricultural communications competencies.

Implications

A large number and variety of agricultural communications competencies were identified in this research as being important. While it may be impossible for every secondary agricultural education student to study each of these areas in depth, it is important students be provided an introduction to the various areas of agricultural communications identified in this study as important.

CIMC curriculum guides need to remove competencies that are collegiate level (e.g., see Akers, 2000). Collegiate level competencies do not need to be included in high school curriculum (see Appendix C).

A standard for teaching agricultural communications needs to be set to increase the quality and consistency of agricultural communications courses being taught to high school students to broaden their knowledge base, especially as it may relate to future career opportunities in agriculture.

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APPENDIX A

Institutional Review Board Approval Form

Oklahoma State University Institutional Review Board

Date:	Wednesday, July 19, 2006
IRB Application No	AG0638
Proposal Title:	Knowledge of and Attitudes Toward Agricultural Communications Competencies as Perceived by Oklahoma Agricultural Education Teachers
Reviewed and Processed as:	Exempt

Status Recommended by Reviewer(s): Approved **Protocol Expires: 7/18/2007**

Principal Investigator(s

Stephanie Hanson
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Stillwater, OK 74078

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The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

☑ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 415 Whitehurst (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,

Sue C Jacobs

Sue C. Jacobs, Chair
Institutional Review Board

APPENDIX B

Instrument

Directions: For each competency listed we are asking that you do two things. First, indicate your level of importance about each competency. The level of importance is pertaining to the competency being taught in secondary high school agricultural education. Please circle your level for each competency. Second, indicate your level of ability to teach the corresponding competency. Please score the level of importance and the level of ability separately as they are unrelated sections. Circle only one level of importance and one level of ability for each competency.

High Importance	Much Importance	Some Importance	Low Importance	No Importance		Very High Ability	High Ability	Average Ability	Low Ability	No Ability
A	B	C	D	E	Identify the components and format of news releases	A	B	C	D	E
A	B	C	D	E	Utilize correct grammar	A	B	C	D	E
A	B	C	D	E	Identify what makes a topic newsworthy	A	B	C	D	E
A	B	C	D	E	List qualities of an effective communicator	A	B	C	D	E
A	B	C	D	E	Demonstrate professional/business etiquette	A	B	C	D	E
A	B	C	D	E	Demonstrate a proper work ethic	A	B	C	D	E
A	B	C	D	E	Demonstrate listening skills	A	B	C	D	E
A	B	C	D	E	Identify biased information	A	B	C	D	E
A	B	C	D	E	Discuss the role of public relations in agricultural companies	A	B	C	D	E
A	B	C	D	E	Speak intelligently before a group	A	B	C	D	E
A	B	C	D	E	Properly use a 35mm camera	A	B	C	D	E
A	B	C	D	E	Effectively interview a person	A	B	C	D	E
A	B	C	D	E	Use e-mail properly	A	B	C	D	E
A	B	C	D	E	Identify barriers to effective communication	A	B	C	D	E
A	B	C	D	E	Interview for employment	A	B	C	D	E
A	B	C	D	E	Work in a team activity	A	B	C	D	E
A	B	C	D	E	Work under pressure	A	B	C	D	E
A	B	C	D	E	Identify the importance of correctly reporting the facts	A	B	C	D	E
A	B	C	D	E	Deliver a formal, oral presentation using clear enunciation, gesture, tone and vocabulary	A	B	C	D	E

	High Importance	Much Importance	Some Importance	Low Importance	No Importance		Very High Ability	High Ability	Average Ability	Low Ability	No Ability
	A	B	C	D	E	Discuss the role of public relations in farm organizations	A	B	C	D	E
	A	B	C	D	E	Give an effective interview	A	B	C	D	E
	A	B	C	D	E	Properly use a digital camera	A	B	C	D	E
	A	B	C	D	E	Demonstrate different methods of communication	A	B	C	D	E
	A	B	C	D	E	Write a news release	A	B	C	D	E
	A	B	C	D	E	Accurately proofread a document	A	B	C	D	E
	A	B	C	D	E	Seek, gather and synthesize information	A	B	C	D	E
	A	B	C	D	E	Distinguish between right and wrong	A	B	C	D	E
	A	B	C	D	E	Properly use a video camera	A	B	C	D	E
	A	B	C	D	E	Write a feature story	A	B	C	D	E
	A	B	C	D	E	Perform basic word processing	A	B	C	D	E
	A	B	C	D	E	Identify key elements of a public relations campaign	A	B	C	D	E
	A	B	C	D	E	Utilize desktop publishing techniques	A	B	C	D	E
	A	B	C	D	E	Identify appropriate file formats when using scanning programs	A	B	C	D	E
	A	B	C	D	E	Create a resume	A	B	C	D	E
	A	B	C	D	E	Discuss the techniques and principles involved in public speaking	A	B	C	D	E
	A	B	C	D	E	Effectively scan a document	A	B	C	D	E
	A	B	C	D	E	Write for broadcast	A	B	C	D	E
	A	B	C	D	E	Effectively edit a story	A	B	C	D	E
	A	B	C	D	E	Write a speech	A	B	C	D	E
	A	B	C	D	E	Identify strategies to improve communications	A	B	C	D	E
	A	B	C	D	E	Prepare a 4-6 minute speech within a 30-minute preparation time	A	B	C	D	E
	A	B	C	D	E	Create and design a web page	A	B	C	D	E

High Importance	Much Importance	Some Importance	Low Importance	No Importance		Very High Ability	High Ability	Average Ability	Low Ability	No Ability
A	B	C	D	E	Develop a multimedia presentation	A	B	C	D	E
A	B	C	D	E	Write for the web	A	B	C	D	E
A	B	C	D	E	Demonstrate sales skills	A	B	C	D	E
A	B	C	D	E	Utilize graphic editing programs	A	B	C	D	E
A	B	C	D	E	Utilize an Associated Press Stylebook	A	B	C	D	E
A	B	C	D	E	Identify the steps in the printing/developing process	A	B	C	D	E

Directions: For each numbered item below circle the answer you believe to be correct. There is only one correct answer for each question. Answers can be circled directly on the test.

1. One element in a press release is the time and day news is to be published.
   A. True
   B. False

2. Three trophies won last year. We won three trophies we were the best
   in the state.
   The previous sentences were:
   A. Complete
   B. Incomplete

3. There are four elements of news: what, when, where, and who.
   A. True
   B. False

4. A physical barrier within the sender or receiver is called _____.
   A. physical noise
   B. physiological noise
   C. psychological noise
   D. semantic noise

5. Use standard English in speaking and writing.
   A. True
   B. False

6. Avoid questioning organizational policies.
   A. True
   B. False

7. The first step in the listening process is _____.
   A. understanding
   B. hearing
   C. analyzing
   D. responding

8. To determine if the idea is biased, identify _____.
   A. conclusions
   B. emotions
   C. ideas
   D. issues
   E. stereotypes

9. The purpose of public relations includes all of the following except _____.
   A. helping protect an organization's reputation and image
   B. managing publicity
   C. maintaining the goodwill an organization has established
   D. concealing information about an organization's plans and policies.

10. The main reasons why organizations hire public relations specialists include all of the following, except _____.
   A. to help protect an organization's image
   B. to conduct media campaigns
   C. to develop contingency plans to shift blame during a crisis
   D. to turn a problem into an asset

11. Relating ideas, instructions, or messages to an audience is called:
   A. small group communication
   B. interpersonal communication
   C. intrapersonal communication
   D. public speaking

12. A dark room is considered camera equipment that is useful to photojournalists.
   A. True
   B. False

13. When interviewing sit in the chair nearest the door.
   A. True
   B. False

14. E-mail addresses are privileged information and cannot be bought, sold, or otherwise shared for commercial purposes.
   A. True
   B. False

15. Cognitive dissonance causes tension or mental unease because an individual holds beliefs, attitudes, or ideas that are inconsistent with one another.
   A. True
   B. False

16. Arrive at an interview five to ten minutes early.
   A. True
   B. False

17. Understanding roles on the team involves all except _____.
   A. being willing to lead or follow
   B. considering individual preferences
   C. disciplining members as needed
   D. knowing individual personalities

18. Start your day off with your favorite tasks.
   A. True
   B. False

19. _____ uses loaded words.
   A. Fact
   B. Inference
   C. Opinion

20. Speak as loudly as you can so you can be heard when presenting speeches.
   A. True
   B. False

21. When giving an interview make sure the person being interviewed begins with an ice-breaker.
   A. True
   B. False

22. The _____ format is best suited for photographs, drawing, and other images with complex color transitions.
   A. JPG
   B. GIF
   C. PNG
   D. EPS

23. When your company president outlines the plans to handle a crisis, what type of communication is being used?
   A. professional communication
   B. leadership communication
   C. casual business communication
   D. inappropriate communication

24. The information in a news release should be newsworthy and truthful.
   A. True
   B. False

25. Proofing your copy will help you _____.
    A. avoid unintended meanings
    B. get a new perspective
    C. produce an accurate, complete copy
    D. question your objective

26. Reserve _____ until you have examined all evidence.
    A. aspects
    B. beliefs
    C. experiences
    D. judgments
    E. sources

27. Use company equipment at home.
    A. True
    B. False

28. A digital number recorded on a videotape for editing purposes is called a(n) _____.
    A. transition
    B. EDL
    C. time code
    D. timeline

29. A human interest story differs from a hard-news story by:
    A. including the six elements
    B. crediting the writer
    C. focusing on feelings and characteristics
    D. being released by a syndicate

30. _____ is an easy-to-use graphical user interface that works on non-Macintosh computers.
    A. Mac OS
    B. Windows
    C. Linux
    D. UNIX

31. When implementing a PR plan, you are _____.
    A. thinking about possible solutions
    B. defining a problem
    C. contemplating a strategy
    D. taking action

32. Printing that goes off the edge of the page is called a _____.
    A. bleed
    B. gutter
    C. moire pattern
    D. spread

33. _____ can take scanned pages of text and convert them into text you can edit in a word processor.
    A. Drawing projects
    B. OCR software programs
    C. Painting programs
    D. Photo editing programs

34. Educational information in a resume includes all except _____.
    A. awards received
    B. dates attended each school
    C. names and addresses of schools attended
    D. scores on standardized tests

35. All of the following are purposes of public speaking except _____.
    A. to entertain
    B. to inform
    C. to interact
    D. to make special occasions
    E. to persuade

36. If contrast is set too low, the image looks surreal, with colors going from extreme dark to light.
    A. True
    B. False

37. The first step when writing radio news is to determine the purpose of the story.
    A. True
    B. False

38. Reading the story for sensitive issues will help you _____.
    A. avoid unintended meanings
    B. get a new perspective
    C. produce an accurate, complete copy
    D. question your objective

39. The body of a speech must have a minimum of four points.
    A. True
    B. False

40. Physical, physiological, psychological, and semantic are all types of _____
    A. feedbacks
    B. messages
    C. noises
    D. senders

41. The extemporaneous speaker uses _____ to reference points and statistics.
    A. brief notes
    B. preparation
    C. words

42. When designing web pages, use big fonts sparingly and never use them in body text.
    A. True
    B. False

43. When designing an electronic presentation, _____ fonts are generally considered to be the easiest to read.
    A. script
    B. sans serif
    C. italic
    D. artistic

44. All web copy should be written at a 4th grade reading level.
    A. True
    B. False

45. Attempting to obtain a commitment to purchase from the prospect is the step of _____.
    A. closing
    B. handling objections
    C. presentation
    D. post-approach

46. _____ images are made up of tiny dots, called pixels, and can be edited by changing or erasing individual pixels.
    A. Flash
    B. EPS
    C. Bitmap
    D. Vector

47. The AP *Style Guide* encourages the use of the present tense.
    A. True
    B. False

48. Which of the following printing processes is the newest and the pre dominant method used today?
    A. gravure
    B. letterpress
    C. offset lithography
    D. block printing

Please answer the following questions to provide the researchers with information about you

What is your gender?
    A. Male
    B. Female

What is your highest degree?
    A. Bachelor's
    B. Master's
    C. Doctorate

Where you teaching high school agricultural education prior to 1996?
    A. Yes
    B. No

Did you receive your education from Oklahoma State University?
    A. Yes
    B. No
    If no, where did you receive your degree? _____

In which of the five Oklahoma districts do you teach?
    A. Southwest
    B. Southeast
    C. Central
    D. Northeast
    E. Northwest

What size is the school in which you teach?

A. Class 6A - 5A
B. Class 4A - 3A
C. Class 2A - 1A
D. Class B - C

How many years have you taught agricultural education?

A. 1 - 5 years
B. 6 - 10 years
C. 11 - 15 years
D. 16 - 20 years
E. 20 or more years

Do you currently teach an agricultural communications course?

A. Yes
B. No

If yes, how many years have you taught agricultural communications?

A. 1 - 2 years
B. 3 - 4 years
C. 5 - 6 years
D. 7 - 8 years
E. 9 or more years

If you teach or have taught agricultural communications, do you use the curriculum guides provided by CIMC?

A. Yes
B. No

If you teach agricultural communications but do not use the provided curriculum guides what resources do you use for teaching the course?

_____

_____

Please give any other suggestions to the researcher

_____

_____

_____

APPENDIX C

Removed competencies identified by Akers (2000)

Competency	Topic Area Identified by Akers (2000)	Reason Competency was Removed
Describe the communications model	Communication History	Reliability
Identify the importance of an advertising campaign	Public Relations/Advertising/ Marketing	Reliability
Write a caption for photos	Writing	No education level and not in the recommendations
Prepare a public relations campaign	Public Relations/Advertising/ Marketing	Collegiate competency
Deliver a radio broadcast	Communication Skills	Collegiate competency
Deliver a TV broadcast	Communication Skills	Collegiate competency
Discuss the role of public relations in advertising agencies	Public Relations/Advertising/ Marketing	Collegiate competency
Utilize a nonlinear video-editing program	Computer/Information Technology	Collegiate competency
Determine whether a topic would be best covered a news article or feature article	Writing	No CIMC test question
Identify various professional communication organizations	Professional Development	No CIMC test question
Utilize correct parliamentary procedure	Leadership Development	No CIMC test question
Discuss libel law	Legislative Issues	No CIMC test question
Discuss the Freedom of Information Act	Legislative Issues	No CIMC test question
Describe the history of agricultural communications	Communication History	No CIMC test question
Interpret statistics	Research/Information Gathering	No CIMC test question
Identify the basics of corporate communications	Public Relations/Advertising/ Marketing	No CIMC test question
Define media literacy, basic elements and techniques	Communication History	No CIMC test question
Interpret the basic of the commodities market	Public Relations/Advertising/ Marketing	No CIMC test question
Apply common sense logic to an economic trend analysis	Public Relations/Advertising/ Marketing	No CIMC test question
Analyze and apply technical	Research/Information	No CIMC test question

data and procedures found in service manuals	Gathering	
Utilize appropriate agricultural terminology	Agricultural Industry	No CIMC test question
Identify current issues and concerns in agricultural industry	Agricultural Industry	No CIMC test question
Write a professional letter	Writing	No CIMC test question
Utilize correct spelling	Writing	No CIMC test question
Utilize correct punctuation	Writing	No CIMC test question
Identify the various career opportunities in agricultural communications	Professional Development	No CIMC test question
Research both sides on an issue	Research/Information Gathering	No CIMC test question
Check facts	Research/Information Gathering	No CIMC test question
Identify sources for information	Research/Information Gathering	No CIMC test question
Demonstrate proper phone skills	Professional Development	No CIMC test question
Identify the basic workings of the government system and how it affects the agricultural industry	Legislative Issues	No CIMC test question
Utilize the basic principles involved in technical writing	Writing	No CIMC test question
Converse knowledgeably on the different areas in agriculture	Agricultural Industry	No CIMC test question
Write a quality thank-you note	Writing	No CIMC test question

APPENDIX D

Script Read to Respondents

Script for administering survey:

Good morning! As an agricultural educator, your input and participation in this survey about agricultural communications curriculum is highly valued, whether you are currently teaching an agricultural communications course or not. Your participation in this survey is voluntary, though greatly appreciated.

The survey includes three sections to be answered on the questionnaire booklet: demographic information, perceptions of agricultural communications competencies, and a knowledge test. Please return the consent form and completed booklet to me when you are finished. Although the questionnaires are coded, your identity will not be disclosed during any portion of this study.

The survey will take around 30 minutes to complete. You can stop at any time without penalty, and you do not have to answer any questions you do not want to answer. There are no known risks for participating in this study, and there is no compensation or benefits. However, those who complete the survey will be eligible to receive an OSU gift in a random drawing.

If you have any questions, please call Stephanie Mitchell Hanson at (405) 641-8435 or send an e-mail to hansons@ajiusa.com. You also can call her adviser, Shelly Peper Sitton at (405) 744-3690 or send an e-mail to shelly.sitton@okstate.edu.

Thank you for helping us to learn about Oklahoma agricultural educators.

APPENDIX E

Informed Consent Statement

INFORMED CONSENT STATEMENT

Please read this consent document carefully before deciding to participate in this study. Once you have read the following, sign and return with your completed survey.

My name is Stephanie Mitchell Hanson, and I am a graduate student in the Department of Agricultural Education, Communication, & 4-H Youth Development. I am studying the perceptions of agricultural communications from agricultural educators throughout the state. Additional investigators for this study include Dr. Shelly Sitton and Dr. Craig Edwards, associate professors.

A lack of identified and validated knowledge of and attitudes toward agricultural communications throughout Oklahoma exists, knowledge that could help guide the curriculum development for high school and collegiate studies in Oklahoma. The purpose of this study is to determine Oklahoma agricultural educators' basic knowledge level of agricultural communications and to determine their perceived attitudes toward the agricultural communications curriculum. As the agricultural educators teaching in Oklahoma your opinions of the importance and ability to teach different curriculum areas in agricultural communications are highly valued.

In this study you will be asked to complete three sections on the questionnaire booklet: demographic information, perceptions of agricultural communications competencies, and a knowledge test. The survey will take around 30 minutes to complete. You can stop at any time without penalty, and you do not have to answer any questions you do not want to answer. There are no known risks for participating in this study and there is no compensation or benefits.

Your participation in this study is completely voluntary and truly appreciated. If you choose to participate, your identity will not be disclosed and will be protected to the extent of the law and your answers will be confidential. However, if this data was to be subpoenaed by a court your identity will be revealed. For purposes of this study you will be identified with your survey. This will allow the researcher to verify information provided in the survey. No record of your name or identifiable information will be used as findings or results of the study. All information provided which identify your questionnaire with your name will be kept in a locked cabinet only accessed by the research committee and destroyed after the conclusion of this research. The OSU IRB has the authority to inspect consent records and data files to assure compliance with approved procedures.

If you have any questions or concern, please call me or my research adviser, Dr. Shelly Sitton, at (405) 744-3690. Mailing address is 448 Agricultural Hall, Stillwater, OK 74078. For information on subjects' rights, contact Dr. Sue Jacobs, IRB Chair, 415 Whitehurst Hall, (405) 744-1676.

By returning this signed form I agree that I have read and received a copy of the procedure described above. In signing I voluntarily agree to participate.

_____

Participant Signature Date

I certify that I have personally explained this document before requesting that the participants sign it.

_____

Signature of Researcher Date

VITA

Stephanie Jo Mitchell Hanson

Candidate for the Degree of

Master of Science

Thesis: KNOWLEDGE OF AND ATTITUDES TOWARD AGRICULTURAL COMMUNCATIONS COMPETENCIES AS PERCEIVED BY OKLAHOMA AGRICULTRUAL EDUCATION TEACHERS

Major Field: Agricultural Communications

Biographical:

Personal Data: Stephanie Jo Mitchell Hanson was born September 22, 1980, in Bloomfield, Iowa. She is the daughter of Bob and Peggy Mitchell.

Education: Bachelor of Science in Animal Science, Oklahoma State University, 2003. Completed the requirements for the Master of Science Degree with a major in Agricultural Communications at Oklahoma State University in December, 2007.

Name: Stephanie Mitchell Hanson Date of Degree: December, 2007

Institution: Oklahoma State University Location: Stillwater, Oklahoma

Title of Study: KNOWELDGE OF AND PERCEPTIONS ABOUT AGRICULTURAL COMMUNICATIONS COMPETENCIES AS PERCEIVED BY OKLAHOMA AGRICULTURAL EDUCATION TEACHERS

Pages in Study: 127 Candidate for the Degree of Master of Science

Major Field: Agricultural Communications

Scope and Method of the Study: The purpose of this study was to determine Oklahoma agricultural educators' basic knowledge level and perceptions about agricultural communications, especially as they related to the secondary curriculum for agricultural education. Participants were agricultural educators who attended the five district meetings during the 2006 Career Tech Summer Conference. Each respondent was asked to complete a three-part instrument.

Findings and Conclusions: Oklahoma agricultural education teachers perceived 46 agricultural communications competencies in five constructs held much importance for high school agricultural education curriculum. Respondents perceived themselves to have high ability to teach ethics, leadership development, and professional development competencies and communications history competencies, and perceived their ability to teach communications history competencies, public relations, advertising, and marketing competencies, and research, information gathering, and writing competencies as average. Respondents did not have adequate knowledge to teach agricultural communications courses, which was not congruent with teachers' perceptions of ability.

ADVISER'S APPROVAL: _____