CORE COMPONENTS OF A DOCTORAL PROGRAM IN AGRICULTURAL COMMUNICATIONS: A NATIONAL DELPHI STUDY

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CHAPTER I

INTRODUCTION

As agricultural communications evolves and rapidly grows as an academic field and as an industry, agricultural communicators are needed more than ever to support the industry (Tucker, Whaley, & Cano, 2003). According to Birkenholz and Craven (1996), the public has an overwhelming lack of knowledge about the agricultural industry. An agricultural communicator's job is to help educate the public (Boone, Meisenbach, & Tucker, 2000). "The process through which messages, both intentional and unintentional, create meaning" is the definition of the 13-letter word communication (Baldwin, Perry, & Moffit, 2004, p. 5). The name, agricultural communications, formerly agricultural journalism, was chosen around 1970 to represent the particular discipline although courses and degrees have been available since the early 20th century (Burnett & Tucker, 1990; Simon, Robertson, & Doerfert, 2003)

According to Sprecker and Rudd (1998), the competencies needed to become an agricultural communicator change with technology. The researcher explained the pressing need to examine the agricultural communications graduate curriculum. A lack of knowledge about agriculture exists among the general public and more agricultural communicators are needed to educate the public (Birkenholz & Craven, 1996; Simon, Haygood, Akers, Doerfert, Davis, & Bullock, 2004).

Burnett and Tucker (2001) and Reisner (1990) noted the agricultural industry depends on agricultural communicators from more than 25 different programs throughout

the United States. Burnett and Tucker (2001) explained these communicators are to inform the public about agricultural issues such as environmental conservation, food safety, and the scientific practices involved in agricultural production. Proper communication in the field of agriculture is crucial to producing the safest, most abundant food supply in the world (Boone et. al, 2000). Agricultural communications programs often differ due to changes in geography and needs of an area (Reisner, 1990). Most research previously conducted is focused on how to improve curriculum and programs for undergraduate students (Bailey-Evans, 1994; Sprecker & Rudd, 1998; Terry, Vaughn, Vernon, Lockaby, Bailey-Evans, & Rehrman, 1994). Sprecker and Rudd (1998) concluded there should be a periodic examination of curriculum within agricultural communications.

Doerfert and Miller (2006) stated agricultural industry leaders look to communicators to lead them through challenges and changes of knowledge management. Over the years, agriculture and academia have changed dramatically (Siegfried, 2010). Tucker et al., (2003) explained that early leaders in agricultural communications were successful in building and defining a profession long before an academic program existed to compliment such an industry. As agricultural communications became a more popular profession and academic choice, the need for more graduate courses and programs became apparent (Tucker et al., 2003). These researchers explained that agricultural communications has relied heavily on agricultural education as an influence. A tendency to emphasize teaching at the expense of research occurs because of the agricultural education influence in agricultural communications (Tucker et al., 2003). According to Birkenholz and Craven (1996), the public has an overwhelming lack of knowledge about

the agricultural industry, and agricultural communicator's job is to help educate the public (Boone et al., 2000).

Statement of Problem

To pursue doctoral training in agricultural communications, one must enter into an agricultural education program and emphasize his or her dissertation and coursework on agricultural communications (Birkenholz & Simonsen, 2011). These authors continue to explain eight of the distinguished programs of agricultural education included communication as a specialization (Birkenholz & Simonsen, 2011). However, core components for a doctoral program in agricultural communications have not been found after a review of literature.

Purpose of the Study

The purpose of this study was to determine the core content and competencies needed in a doctoral program in agricultural communications.

Objectives

The objectives for this study were:

1. To describe selected personal and professional characteristics of the panel of experts used in the Delphi study: university represented, highest degree held, years of experience in industry, years of experience in higher education, and title;
2. To determine the core content needed within a doctoral curriculum in agricultural communications; and
3. To determine core competencies students would gain by completing an agricultural communications doctoral program.

Scope of Study

The researcher found 22 universities that offered an agricultural communications bachelor's degree and had tenured or tenure-track faculty. This study included one panel: faculty members who taught agricultural communications on the university level at one of these 22 universities. Thirteen faculty members agreed to participate on the panel.

Assumptions

The following assumptions were made in conducting this study:

1. All respondents were familiar with doctoral curriculum.
2. All respondents were familiar with what competencies are needed in academia and in the industry.
3. All respondents were familiar with what content should be included in an agricultural communications or related doctoral program.
4. The respondents provided information that is accurate, appropriate, and relevant to the questions and objectives for the study.

Limitations of the Study

The following were limitations of the study:

1. Differences in undergraduate program objectives varied from university to university.
2. Differences in undergraduate program standards varied from university to university.
3. The study was limited to the 13 universities whose programs were called agricultural communications or had an agricultural communications option

within a degree plan and had faculty members who agreed to participate on the panel.

Terms

Below are terms and definitions the researcher determined should be defined:

Agricultural Communications: Academic programs that involve agriculture and communication specializations such as public relations, journalism, advertising, etc. (Bailey-Evans, 1994).

Core Content: The instructional material students to which students will be exposed (Akers, 2001).

Core Competencies: Identifiable skills or abilities necessary for successful performance in an occupation a student might seek after the completion of his or her coursework or academic experience (Akers, 2001).

CHAPTER II

LITERATURE REVIEW

In this review of literature, the researcher will outline the history of agricultural communications, the development of agricultural communications as a discipline, the development of agricultural communications curriculum, the establishment of doctoral programs, a conceptual framework, and the Delphi technique.

History of Agricultural Communications

Agricultural communications began as a word-of-mouth form of communication as information was passed from farmer to farmer (Boone, Mesienbach, & Tucker, 2000). "Like many other industries, the development of agricultural communications in the United States goes back to the colonial days when the society was predominantly agrarian" (Graves, 2005, p. 7).

In its beginnings in the late 1700s, agricultural communications was born out of the need to distribute important farm and home information (Tucker et al, 2003). According to Boone, Mesienbach, and Tucker (2000), agricultural publications were first printed in 1790 with the main intent to spread information to farmers. Some 200 years later, the profession of agricultural communications has become a diverse industry responsible for developing and sending news and marketing information (Tucker et. al., 2003). Dynamic and influential leadership helped defined the profession in its early days (Tucker et al., 2003). According to Buck and Paulson (1995), the need for a profession in

agricultural communications came when sharing information via word-of-mouth was no longer effective.

The first agriculture magazine was established in the District of Columbia in 1810 and was named *Agricultural Museum* (Graves, 2005). Additionally, this author explained the first agriculturally formed magazine released to wide circulation was *American Farmer* in 1819.

Graves (2005) stated Morse code was used to broadcast the first weather and crop reports over a radio at the University of Wisconsin and the first vocal broadcast was given at the University of Wisconsin in 1921. According to the National Association of Farm Broadcasters, the NAFB was organized in 1944. In 1990, more than 1,025 AM radio stations, 803 FM radio stations, 14 state and three regional radio networks as well as five television stations existed that specialized in agriculture (Burnett & Tucker, 2001).

The profession made great strides in the industry due to the leaders being outspoken and using their reputation as editors and writers to argue many social and political issues for improving farming and ranching (Tucker et al., 2003). Reisner (1990) said agricultural communicators use communication skills and theories to make decisions and communicate with rural and urban populations concerning companies involved in food, agricultural or natural resources. According to Duley, Jensen, and O'Brien (1984), a push for university-level agricultural communications by the Cooperative Extension Service grew as a part of the outward growth of extension services.

Development of Agricultural Communications as a Discipline

The dean of agriculture at Iowa State University, C.F. Curtis, was present at a meeting in Chicago in May 1905 at the International Livestock Exposition when

members discussed the need for practical training in marketing and communications (Marvin, 1946). Curtis decided if funds were available he would develop a course in agricultural journalism to teach students how to promote the agricultural industry properly (Marvin, 1946).

The first agricultural communications course was taught by Will H. Ogilvie at Iowa State University and was offered in fall 1905 (Marvin, 1946). The university continued to add courses, having eight in agricultural journalism by 1911. Finally, in 1930, the university offered a bachelor's degree in agricultural journalism (Marvin, 1946). However, the University of Wisconsin in 1908 offered the first agricultural journalism program, which was led by instructor J. Clyde Marquis (Burnett & Tucker, 1990). Dallas S. Burch was the first person to receive a bachelor's degree in agricultural journalism in 1905, and he later became an employee with the U.S. Department of Agriculture (Burnett & Tucker, 1990).

Many colleges began offering agricultural journalism courses between 1908 and 1928 (Graves, 2005). Oklahoma State University offered its first class in 1928 (Heath, 1992). However, according to Akers (2000), the growth in the number of agricultural communication programs slowed until the 1960s.

Over the years, agricultural communications has been listed under various academic departments such as agricultural education and agricultural journalism (Tucker et al., 2003). Developing background about and sources in the agricultural industry as well as teaching the basics of communications skills with emphasis on journalistic writing are two areas of teaching sought after in agricultural communication programs (Terry et. al, 1995). Professional development groups supporting agricultural

communications have been developed, as well (Graves, 2005). Graves (2005) stated college students in the discipline were given the opportunity to come together as agricultural communicators through Agricultural Communicators of Tomorrow in 1970.

Development of Agricultural Communications Curriculum

The need for agricultural communications curricula parallels the agricultural industry's need to communicate and disperse information to the public (Boone et al., 2000).

Reisner (1990) reported agricultural communications' need for curriculum revision came from student interest in the program. According to Sprecker and Rudd (1998), agricultural communications curriculum needs to be evaluated frequently to ensure it is effective in preparing students. This should occur every two to five years (Morgan, 2008).

Members of academia who plan and evaluate curriculum should seek an open mind and formulate content that is beneficial to students (Finch & Crunkilton, 1989). Curriculum development is affected at the faculty level by the quality and quantity of faculty members (Finch & Crunkilton, 1989). An insufficient number of faculty are available and the number of appointed faculty in agricultural communication varies nationwide (Doerfert, Cepica, Jones, & Fiel, 1991). According to the American Association for Agricultural Education (AAAE) on April 17, 2012, three agricultural communications assistant professor positions have been posted and not filled since February 2011. Weckman, Witham, and Telg (2000) reported two full professors, four associate professors, and four assistant professors in the southern region. According to Weckman et. al. (2000), full-time equivalent faculty members per program ranged from

.5 to 2.6. This made student to teacher ratios as small as 1:10 and as large as 1:77. According to these authors who conducted the most recent research on the issue, most agricultural communications faculty held a doctoral degree and were associate or assistant professors**.**

"Competencies needed by an agricultural communicator have changed with technology and job requirements, indicating a need to examine the curriculum to make it applicable to students and their future employers" (Sprecker & Rudd, 1998, p. 6). Bailey-Evans (1994) conducted a study of agricultural communications advancements. Sprecker and Rudd agreed with Bailey-Evans, explaining changes and revisions need to be made in the curricula to keep programs current with technological changes and industry needs.

Flexibility is a key characteristic in agricultural communications curricula, even at the graduate level (Evans and Bolick, 1982). Graduate students emerge from programs as enlightened thinkers equipped with good people skills and enhanced communication skills (The Changing Landscape, 2001).

The profession of agricultural communications is constantly developing and refining its contributions to society and academic programs (Buck & Paulson, 1995). These authors explained the constant change in technology means students must gain objectives written in curriculum to be realistically ready for the profession. Buck and Paulson (1995) said research has motivated curriculum development because of new technological developments, new societal pressures, and recognition of existing problems. The development and use of new communications technologies and instructional systems can bring about change in education (Buck & Paulson, 1995).

Establishment of Doctoral Programs

A Ph.D. is defined as "a traditional academic degree that is focused on preparing researchers, university faculty, and scholars in education" (McCool, 2008, p. 26). Graduate school is for students to gain new knowledge and acquire skills and abilities needed to be more professionally successful (Lindner, Dooley, & Wingenbach, 2003). Lindner and Dooley (2002) explained a successful agricultural doctoral student will draw on many fields, knowledge bases, and applications to attain his or her personal and professional goals. Additionally, the authors added, "For doctoral students, graduate school is an opportunity to gain not only new knowledge, but also acquire and strengthen skills and abilities needed to be professionally successful" (Lindner & Dooley, 2002, p. 57).

"Researchers have yet to examine fully the specific factors perceived to relate to doctoral program quality" (Neuendorf, Skalski, Atkin, Kogler-Hill, & Perloff, 2007, p. 27). According to Lindner, Dooley, and Murphy (2001), doctoral students are to become experts in theory and design of research problems. These authors stated, "Low levels of knowledge related to theory of research may result in frustration, demotivation, impeded learning, and ultimately failure for students," (Lindner et al., 2001, p. 36). Research and teaching are necessary to bring into the arena of a graduate program (Lindner & Dooley, 2002).

Doctoral programs are evaluated using many measures (Neuendorf et. al., 2007). The authors stated journal productivity is the most common way to measure faculty in social sciences and productive faculties are an important base on which to build a doctoral program. Doctoral curriculum is an additional way to evaluate and rate a

program (Valero, 2001). Valero (2001) continues to explain the importance of administration and pedagogy in reference to a doctoral program and evaluation.

When students seek to find the right doctoral program for them, they consider multiple factors such as university library, faculty encouragement, up-to-date computer facilities, and commitment of the professors to teaching (Neuendorf et. al., 2007). Furthermore, "time to doctoral degree and completion rates among graduate students are also affected by factors related to departmental practices, advising practices, and climate" (Valero, 2001, p. 344). Perry (2004) suggested the presence of a strong doctoral program influences perceptions about the master's program. Students also must be knowledgeable with the technology used in a doctoral program (Lindner et al., 2001). Students on the doctoral level become extremely self-directed and more successful in the branch of knowledge they chose to specialize in (Lindner et al., 2001). No university offers a doctoral program in agricultural communications (Birkenholz & Simonsen, 2011).

Students pursuing a doctoral degree do it for multiple reasons (Linder et al., 2001). A report on lifelong learning from National Association of State Universities and Land Grand Colleges (2000) noted 80% of adults believe furthering their education is important for success at work. Furthermore, the knowledge, skills, and abilities learned from a doctoral degree will prove to be beneficial in the workplace (Lindner et al., 2001).

Conceptual Framework: Human Capital Theory and Curriculum Studies Related to Agricultural Communications

This study employed a conceptual framework using the human capital theory (Becker, 1964; Little, 2003; Robinson & Baker, 2011; Shultz, 1971; Smith, 2010; Smylie, 1996) as well as previous agricultural communications curriculum studies (Bailey-Evans,

1994; Kroupa & Evans, 1973; Sprecker & Rudd, 1998; Terry, Lockaby, & Bailey-Evans, 1995; Terry, Vaughn, Vernon, Lockaby, Evans, & Rehrman, 1994).

Becker (1964), Little (2003), Shultz (1971), Smith (2010) and Smylie (1996) (as cited in Robinson & Baker, 2011) indicated a person's knowledge, experiences, education, and skills are the basis for human capital.

Human capital is based upon how positive and unique an individual's skills are and how much an employer values these skills (Lepak & Snell, 1999). In 1964, Becker (as cited in Robinson & Baker, 2012) stated potential employers assess a student's skill set and abilities to determine the student's employability. A student's human capital increases as competencies are learned (Heckman, 2000). These activities increase human capital and make the student more valuable to the employer (Robinson & Baker, 2012).

Lepak and Snell (1999) conducted a study using human capital theory to study alternative employment arrangements used by firms in allocating work. Lepak and Snell (1999) concluded "adopting an architectural perspective may help both academics and practitioners understand which forms of human capital have the potential to be a source of competitive advantage today and in the future" (p. 1998).

Smith (2010) explained employability is based upon human capital, meaning as individuals learn more skills and a broader range of skills, their human capital increases (as cited in Robinson & Baker, 2012). This author studied human capital and how it changes as employees become more specifically skilled in a certain area. As employees become more skilled, their human capital increases; however, a greater downside lose occurs when specific opportunities are not available (Smith, 2010).

In recent decades, studies reviewed agricultural communication curriculum by inquiring of industry, faculty, graduates, and students to help determine coursework, competencies, and objectives that would be included in programs (Bailey-Evans, 1994; Kroupa & Evans, 1973; Sprecker & Rudd, 1998; Terry et al., 1995; Terry et al., 1994).

In the early 1990s, a group of researchers became pioneers and developed a disciplined and competency-based curriculum for undergraduate agricultural communications programs (Terry et al., 1994). From this Delphi study, the authors found disciplines and competencies receiving a 70% consensus of agreement rating. Using these competencies, the researchers recommended the universities develop their curriculum and said new competency lists should be derived through research for specialized areas of agricultural communications (Terry, et al., 1994).

Additionally, Terry et al. (1994) recommended future research be completed to identify core curriculum as the basis for all agricultural communications degree plans. Terry et al. (1994) concluded it would be difficult to master each objective contain in the research in a four-year bachelor's degree. The researcher argued curricula be flexible so students could choose to specialize in a particular area of agriculture and communications in their upper division coursework. Terry et al. (1994) also explained one of the greatest strengths of the agricultural communications undergraduate degree program is this flexibility and its intent to prepare graduates for a diverse set of job opportunities. Bailey-Evans (1994) reported advertising, journalism, photography, public relations, public speaking, business, marketing, computer applications, internship experiences, international relations, and telecommunications should be included in agricultural communications undergraduate curriculum.

Simon, Haygood, Akers, Doerfert, Davis, and Bullock (2005) conducted a national Delphi study to measure the competencies needed for master's level agricultural communications curriculum. "The purpose of this study was to identify the areas of study that should be included in an agricultural communications master's degree program" (Simon et al., 2005, p. 3). The open-ended question first sent to panelists yielded 121 curricular areas panelists agreed should be included at the master's level (Simon et al., 2005). Simon et. al. (2005) ended their study with the panel reaching consensus of agreement on 76 of the 121 curricular areas. The authors recommended additional studies be conducted (a) to review competencies further, (b) to determine each universities' needs and if the university is capable of effectively delivering a program, and (c) curriculum should be reviewed each year to keep up with changing technologies, stakeholders in agricultural communications should be surveyed frequently, and a list of courses could be taught in an agricultural communication master's program.

Akers (2001) conducted a national Delphi study that determined the competencies needed for high school agricultural communications programs. From this study, the panelists produced initially 11 topic areas that included writing, computer technology, agricultural industry, communications history, professional development, research and information gathering, ethics, public relations/advertising/marketing, leadership development, legislative issues, and communication skills (Akers, 2001). Ninety-three competencies were identified, and two of the 93 did not reach consensus of agreement (Akers, 2001). "The ninety-three competencies were categorized by the 11 topics that were identified. Within each topic area, the panelists identified the scholastic level at which each competency should be introduced" (Akers, 2001, p. 129). Akers (2001)

recommended the competencies be used to develop curriculum in high schools, the competencies be disseminated to agricultural educators across the nation, the competencies be the benchmark for curricula development on the high school level, the National FFA Organization utilize the competencies in developing their agricultural communications career development event, and additional studies should be conducted on the state or regional level.

Sprecker and Rudd (1998) conducted a study determining the curriculum at the undergraduate level at the University of Florida prepared students to be writers, not communicators. “Instructors, practitioners, and alumni agreed that students need in-depth training in all aspects of communication beyond introductory classes” (Sprecker & Rudd, 1998, p. 10). Sprecker and Rudd (1998) explained students at the undergraduate level should take classes that will make them well versed in agriculture and natural resources of the geographic area they plan to work. This study also found curriculum should encourage students to interact with people from the industry to network with other agricultural communicators (Sprecker and Rudd, 1998). “Students should participate in clubs on campus designed for students with career aspirations in this area” (Sprecker and Rudd, 1998, p. 11).

The Delphi Technique

Martin and Frick (1998) reported the Delphi technique has been used in agricultural education extensively since 1984. Akers (2001), Simon et al. (2005), and Terry (1995) used the Delphi technique in similar agricultural communications core content and competency studies, as well.

This technique can be used to identify problems and needs, to establish priorities, and to evaluate solutions (Borg & Gall, 1983). Finch and Crunkilton (1989) explained this technique will be effective in helping reach consensus regarding the content of a particular curriculum.

According to Linstone and Turoff (1975), the Delphi has four phases. The first phase is usually a set of open-ended questions and the participants contribute information they feel is appropriate. The second phase determines the understanding of how the group views the issue. In a case where significant disagreement occurs, the third phase moves to determine reasons for differences. The final and fourth phase is a final evaluation of all information gathered.

Hostrop (1975) described the Delphi technique and process in seven steps:

1. Participants who normally remain anonymous to one another list their opinion on specific topics in the form of written statements. These statements are in response to prepared questionnaires, such as recommended activities or predictions.
2. Participants then evaluate their total listing against some criterion. Often times this is importance or chance of success.
3. The statements made by the participants are received and clarified by the investigator.
4. Participants receive the refined list and a summary of the responses to the items. If they are in the minority, they are asked to revise their opinion or indicate a reason for remaining in the minority.

5. The investigator receives the statements made by the participants. The investigator further clarifies, refines, and summarizes the responses.
6. Participants receive the further refined topic list that includes updated summary of responses and a summary of minority opinions. The participants are given a final chance to revise their opinions.
7. Finally, the investigator receives the last round of questionnaires, which he then summarizes in a final report (p. 68-69).

Martino (1972) suggested a Delphi study include three rounds. According to Linstone and Turoff (1975), two or three rounds were normally sufficient in a Delphi study. Akers (2000) and Simon et. al. (2005) used the modified three-round Delphi technique. Linstone and Turoff (1975) reported excessive repetition encourages no response; however, minimum of two rounds are necessary to reach consensus in Delphi studies (Brooks, 1972). Most authors state the first questionnaire in a Delphi should be open-ended and have little to no structure (Martino, 1972). The questionnaire for round two should be developed using the responses from round one (Brooks, 1972). According to Sutphin (1981), for round three, the researcher compiles the data and provides feedback. This author also noted the researcher is responsible for bringing closure to the rounds by analyzing the data.

Delbecq, Vand De Ven, and Gustafson (1986) reported four characteristics of an effective panel of experts:

1. Feel personally involved in the problem of concern to the decision makers.
2. Have pertinent information to share.
3. Are motivated to include the Delphi task in their schedule of completing tasks.

4. Feel that the aggregation of judgment of a respondent panel will include information which they too value or to which they would not otherwise have access. (p. 88)

Panel size is important (Swanson, 1981). The size of a panel should be a minimum of 10 to a maximum of 15 (Delbecq et al., 1986). Simon et. al. (2005) reported a good panel should consist of individuals who have an interest in the problem being solved.

Summary

The review of literature helps support the lack of curriculum for a doctoral program in agricultural communications. Agricultural communications has changed dramatically since its implementation many years ago (Tucker et al., 2003). The function is still very much the same; however, the technology and need in the industry have changed the most (Sprecker& Rudd, 1997).

Early implementation of agricultural communications programs on the undergraduate and master's levels set the precedent for a doctoral program in agricultural communications (Akers, 2001). According to Tucker (2003), developing new ways to disseminate information to farmers, ranchers, and the general public is important and more research should be done.

Agricultural communications as a discipline was first introduced in 1905 at Iowa State University in the first agricultural communications class (Marvin, 1946). Programs in agricultural communications increased in growth in the 1960s (Akers, 2000). Curriculum within agricultural communications must be reviewed frequently to ensure reliability (Sprecker & Rudd, 1998).

Current doctoral programs in other disciplines were reviewed for comparison. Multiple factors can be used to identify a good, high-quality doctoral program (Linder & Dooley, 2002). Current programs placed an emphasis on both research and teaching while combining a large portion of industry knowledge (Linder & Dooley, 2002).

As students increase their human capital, they increase their ability to become employable (Robinson & Baker, 2012). To increase human capital, content must be taught and competencies must be learned (Smith, 2010). Industry and academic leaders both agreed it is important to educate individuals to the maximum level to continue to develop the program (Akers, 2001). Specific competencies and content items must be taught to ensure individuals are prepared for the research and teaching load for which a member of academia in agricultural communications will be responsible (Akers, 2000).

The Delphi technique has been used far and wide in curriculum studies (Martin & Frick, 1998). Various forms of the Delphi technique are used (Linstone & Turoff, 1975).

CHAPTER III

METHODOLOGY

In this chapter, the researcher will explain the Institutional Review Board regulations and how this study complied with them. In addition, a description of the design of the study, panel of experts, instrumentation, validity and reliability, and the data collection and analysis used will be presented.

Institutional Review Board

The Office of University Research and the Institutional Review Board of Oklahoma State University require review and approval of all research studies that involve human subjects before investigators can begin their research. The application addressed the researcher's intention to protect the rights and welfare of human subjects involved in the behavioral study (see Appendix A). The study was formally approved for use on March 7, 2011, with approval of the Participant Information Sheet (see Appendix B). The email soliciting the panelists to confirm participation was approved April 14, 2011. The Round One instrument was approved on May 9, 2011 (see Appendix C). The Round Two instrument was approved on May 24, 2011 (see Appendix D). The Round Three instrument was approved on June 8, 2011 (see Appendix E). The institutional review board code for this study was AG1118, and copies of the approval forms are presented in the Appendices.

Research Design

This study included descriptive statistics and used survey research while employing a modified Delphi technique (Sackman, 1975). The Delphi technique was developed by the Rand Corporation in the late 1950s. According to McCampbell and Helmer (1993), the Delphi was developed as a tool to forecast future events using a series of intensive questionnaires with controlled-opinion feedback. “Delphi has obviously been widely used in agricultural education research – specifically in the area of curriculum planning” (Martin & Frick, 1998, p. 76). The Delphi also is commonly used in agricultural communications and education research (Terry et. al, 1995; Akers, 2001; Ramsey, 2009). The charm of this technique is per its ability to achieve convergence of opinion from experts within topic areas (Hsu & Sandford, 2007). Delphi is a useful communication and research method that relies on an expert panel to facilitate the formation of group judgment or consensus of agreement (Helmer, 1966).

The Delphi technique is a communication process used to produce detailed feedback of a topic or problem and discussion from a particular group, but this technique should not force a quick compromise (Linstone and Turoff, 1975). In addition, the Delphi is a research design that includes four phases. The first phase, or round, explores the subject and the panel of experts can offer information they deem appropriate. In the second phase, or round, the researcher seeks to determine an understanding of how the entire group views an issue. If there is significant disagreement to be found, the third phase is used to explore this disagreement. The fourth phase is an evaluation of information gathered.

Two types of Delphi technique can be used: conventional paper and pencil form and Delphi conference form (Linstone & Turoff, 1975). Additionally, in recent years a modified Delphi technique has been used. This modification consists of using three rounds instead of four (Custer, Scarcella, & Stewart, 1999). These authors said three rounds is often enough to collect the needed information and to reach "consensus of agreement" in most cases. This study employed the three round modified Delphi technique.

Panel of Experts

The panel of experts for this study was comprised of university faculty in undergraduate agricultural communications from throughout the United States (N=22). To ensure representation from all regions of the United States, the researcher invited a faculty member from institutions that had an active Agricultural Communicators of Tomorrow (ACT) chapter. The researcher divided the panelists into three regions (North Central, Southern, and Western) based on the guidelines of American Association for Agricultural Education (AAAE) guidelines guide the discipline and were used to ensure accuracy (Weckman et. al., 2000).

To select the expert panel, the researcher invited each panelist via email (see Appendix F) on May 3, 2011. To qualify for the panel, panelists had to hold a doctoral degree and be employed at a university as a faculty member in agricultural communications or a related discipline. Thirteen faculty members (n=13) agreed to participate.

According to Stitt-Gohdes and Crews (2004), participants must "understand the goal of the study and feel they are part of the group" (p. 61). The researcher provided an

explanation of the study and invited participates to participate via email. An email explanation was used to ensure consistency and adherence to IRB guidelines.

Instrumentation

Custer et al. (1999) reported that three rounds are often sufficient to collect needed data and reach "consensus of agreement." Accordingly, this study used a modified Delphi technique of three rounds.

The Delphi conference approach collects the experts' responses via Internet and allows the experts to change their responses at any time (Linstone & Turoff, 1975). In Round One of a conventional paper and pencil Delphi technique, the researcher sends an instrument with appropriate questions to the expert panel. Open-ended questions tend to receive more complete answers with the use of electronic questionnaires than by using paper forms (Dillman, 2007). Panel members received an electronic notice from the researcher with a hyperlink to access the survey for each round (see Appendices XXXX). The researcher used Qualtrics.com to develop the instruments.

Based on the panelists' responses to Round One, the researcher developed a second instrument to be sent to the panel of experts. This included items with a summated rating scale for respondents to agree or disagree. This procedure was continued until group consensus of agreement was reached.

Validity

Creswell (2008) explained that validity refers to the strength of a researchers' conclusion and is described as how accurately the research instrument measure the content that is intended to be measured by the study. Further, Creswell (2008) showed that reliability referred to the consistency of the measurement tool.

According to Gay, Mills, and Airasian (2006), validity is the most important characteristic a test can exhibit. The degree to which a test measures what it plans to measure and ensures appropriate interpretation of means is defined as validity (Gay et al., 2006). The researcher in this study was concerned with the face and content validity of the instrument. Gay et al. (2006) stated face validity is the degree an instrument appears to measure what it claims to measure. Content validity can be determined by expert judgment (Gay et al., 2006).

Face and content validity was evaluated by 4 Oklahoma State University agricultural education and communications faculty who had expertise and experience with Delphi methodology. Feedback was collected and minor adjustments were made. From this review, the researcher determined the instrument was ready to administer.

Reliability

"Reliability is the degree to which a test consistently measures whatever it is measuring" (Gay et al., 2006, p. 139). Dalkey, Rourke, Lewis, and Snyder (1972) reported a reliability of .7 or greater could be achieved if a panel consisted of 11 members or more. Additionally, Dalkey et al. (1972) stated a group size of 13 would afford a reliability coefficient of .9. The authors recommended a group size of 12 to 15 panelists. Sutphin and Camp (1990) explained the sample should be large enough to secure enough information to conduct a good study. Additionally, the authors concluded too large of a sample size, however, could be detrimental to the study. According to Ramsey (personal communication, April 15, 2011), sample size should be kept to a minimum to keep costs down and reduce the overabundance of data. Ramsey (personal communication, April 15, 2011) also said too much data can be burdensome and not

produce additional information for the study. Thirteen members formed the final panel suggesting the reliability of this multiple-round Delphi procedure used in this study would meet the expected reliability of .9 set by Dalkey et al. (1972).

Data Collection

"The Delphi Technique uses rounds of written questionnaires and guaranteed anonymity with summarized information and controlled feedback to produce a group consensus of agreement on an issue" (Beech, 1999, p. 23). This Delphi study sought to identify the core content and competencies of a doctoral program in agricultural communications.

For Round Two, the decision guidelines were as follows: Items should continue to Round Two when 60% or more of the respondents give the same response on an item (Weatherman & Swenson, 1974). Items that did not score a "4," "5," or "6' by 60% or more of the panel were removed from further investigation.

For Round Three, the decision guidelines were as follows: Items that scored a "4," "5," or "6" by 75% or more of the panelists were said to have reached consensus of agreement in Round Three (Weatherman & Swenson, 1974). Items that did not report a consensus of agreement of 75% or more in round three were removed from the final list.

Round One Instrument

In Round One, personal and professional characteristics were collected. Personal characteristics included place of employment, years of industry and academic experience, tenure status, and job title. Professional characteristics included information specific to the university at which the individual served. Panelists also received two open-ended questions in this round. The Round One instrument (See Appendix G) was sent via email

on May 11, 2011 and linked to Qualtrics.com online survey software. A reminder message (See Appendix H) for the Round One instrument was sent to panelists on May 16, 2011. Round One instrument results were compiled and analyzed by May 20, 2011. Panelists were given two full weeks to submit answers, but panelists were quick in their responses. The response rate from the first round was 100% (n = 13).

The two open-ended questions were:

1. For this study, core content is defined as the instructional material students will be exposed to: What core content will be needed for a Ph.D. in Agricultural Communications?
2. For this study, core competencies are defined as the skills and attitudes students will obtain: What competencies will the participants achieve by participating in this program?

Round Two Instrument

The panelists provided 112 core content items and 120 core competency items (see Appendix I). The researcher combined like items and split compound items to arrive at a list of 60 core content items and 59 core competency items using Microsoft Excel 2010 (Shinn, Wingenbach, Briers, Lindner, & Baker, 2009). The same group of faculty members from Oklahoma State University who ensured the instrument design was valid also provided guidance for combining the like items.

Providing the list of 60 core content items and 59 core competency items from items provided by the panelists in Round One, the Round Two instrument asked panelists to indicate their level of agreement on core content and competencies to be included in a doctoral program in agricultural communications. Panelists use a six-point response scale

to rate the content and competencies: 1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Slightly Agree, 5 = Agree, and 6 = Strongly Agree (Jenkins, 2009; Ramsey, 2009). According to Jenkins (2009), this scale encourages panelists to make a decision in terms of agreement with the content item or competency item. Items should continue to Round Two when 60% or more of the respondents give the same response on an item (Weatherman & Swenson, 1974). Items that did not score a "4," "5," or "6' by 60% or more of the panel were removed from further investigation. The Round Two instrument (See Appendix J) was sent via email on May 25, 2011 and was linked to Qualtrics.com online survey software. A reminder message (See Appendix K) for the Round Two instrument was sent to panelists on May 31, 2011. Round Two survey results were compiled and analyzed by June 6, 2011. Panelists were given two full weeks to submit answers, but panelists were quick in their responses. The response rate on round two was 100% (n = 13).

Round Three Instrument

The third round sought to establish consensus of agreement concerning the remaining items (Buriak & Shinn, 1989). Panelists reviewed all items that moved forward from Round Two to Round Three. The third round instrument sought to develop consensus of agreement on the 58 core content items and 58 core competency items that survived Round Two. The panelists were asked to rate their level of agreement for those remaining items by either retaining the mean initial score or by revising it up or down (Stitt-Gohdes & Crews, 2004). The Round Three instrument included the mean score the items had been given in the previous round. Items that scored a "4," "5," or "6" by 75% or more of the panelists were said to have reached consensus of agreement in Round

Three (Weatherman & Swenson, 1974). Items that did not report a consensus of agreement of 75% or more in round three were removed from the final list (Shinn et. al, 2009). Compared to the previous round, a slight increase in the degree of consensus of agreement was expected (Anglin, 1991). The Round Three (See Appendix L) instrument sent via email on June 8, 2011 and was linked to Qualtrics.com online survey software. A reminder message (see Appendix M) for the Round Three instrument was sent to panelists on June 13, 2011. Round Three survey results were compiled and analyzed by June 17, 2011. No fourth round was necessary due to consensus of agreement being met on Round Three. The study had a 100% (n = 13) response rate throughout all rounds.

Data Analysis

Data were analyzed using Qualtrics.com. Personal and professional characteristics were analyzed using percentages and frequencies. Buriak and Shinn (1989) suggested researchers use the frequency distribution valid percentage approach to analyze data from rounds two and three. This study employed said data analysis procedures and looked at specific frequency distribution of variables among the panelists. Percentages were derived from these frequencies.

CHAPTER IV

FINDINGS

This chapter presents findings from data collected from the Delphi panelists. The presentation of the findings is organized by objective.

Findings for Objective 1

The first objective of this study sought to identify professional and personal characteristics of panel members. Each of the 13 panelists held a Doctor of Philosophy degree. Eight of the panelists (61.5%) held the rank of professor, four (30.8%) were associate professors, and one was an assistant professors (7.7%). Twelve of the 13 panelists (92.3%) indicated they were tenured. Three of the 13 (23.1%) indicated they held an administrative role in addition to their role as a faculty member (see Table 1).

Panelists' years of industry experience ranged from 1 year to 36 years with a mean of 7.26 years (*SD* = 13.09). Their years in higher education ranged from 4 years to 36 years with a mean of 17.85 years (*SD* = 9.24).

The researcher sorted the panelists into regions using the AAAE regions discussed in Chapter 3. More than half of the panelists (*f* = 10; 76.9%) were from the southern region. Two panelists (15.4%) were from the western region. One panelist (7.7%) was from the north central region. These data are presented in Table 1.

Table 1.

Selected Professional Characteristics of Delphi Panelists

Title	Highest Degree Held	Tenure Status	Years of Industry Experience	Years in Higher Education	AAAE Region
Extension Professor	Ph.D.	Tenure Track	36	36	Southern
Associate Dean; Director; Professor	Ph.D.	Tenured	1	36	Western
Professor	Ph.D.	Tenured	8	25	North Central
Professor	Ph.D.	Tenured	30	22	Western
Professor	Ph.D.	Tenured	2	19	Southern
Professor	Ph.D.	Tenured	12	15	Southern
Dean; Professor	Ph.D.	Tenured	20	14	Southern
Associate Chair and Professor	Ph.D.	Tenured	31	13	Southern
Associate Professor	Ph.D.	Tenured	10	13	Southern
Associate Professor	Ph.D.	Tenured	5	13	Southern
Associate Professor	Ph.D.	Tenured	2	12	Southern
Associate Professor	Ph.D.	Tenured	8	10	Southern
Assistant Professor	Ph.D.	Tenure-Track	2	4	Southern

Only one panelist (7.7%) represented a stand-alone agricultural communications department (see Table 2). Three panelists (23.1%) were from agricultural or related science departments. Nine of the panelists (69.2%) were from departments paired with education, extension, and/or leadership.

Table 2.

Names of Panelists' Home Departments

Agricultural and Consumer Sciences
Agricultural and Extension Education
Agricultural Communications
Agricultural Education and Communications (3)
Agricultural Education and Studies
Agricultural Education, Communications, and Leadership
Agricultural Leadership, Education and Communications (2)
Agricultural Sciences
Agriculture Science
Human Sciences, Agricultural Information Sciences and Education

Findings for Objective 2

Objective 2 sought to identify core content items that should be learned by a student who completes a doctoral degree in agricultural communications.

In Round One, Delphi panelists provided 112 core content items. A complete list of the original 112 core content items can be found in Appendix J. From those original items, the researcher combined like items to create 60 core content items for presentation in Round Two of the study (see Table 3).

Ethics was the highest rated core content item in Round Two as 11 panelists (84.6%) strongly agreed it was needed in an agricultural communications doctoral

program. The panelists strongly agreed 16 additional core content items should be included in an agricultural communications doctoral program. Ten panelists (76.9%) strongly agreed *Qualitative and quantitative research methods; Survey design, survey errors, data analysis, data management, and process;* and *Writing and editing for research, technical, scientific, journalistic, and media* should be included as core content items for an agricultural communications doctoral program. Nine panelists (69.2%) strongly agreed *Media influence and global issues in food, agriculture, and communication*; *Statistics for social sciences*; and *Practical understanding of mass communications* should be included as core content items for an agricultural communications doctoral program. Eight panelists (61.5%) strongly agreed *Understanding connections between agricultural communications and its related disciplines*; *Evaluation methods of focus groups and needs assessments*; *organizing and planning*; and *Communication theories* should be included as core content items in agricultural communications doctoral curriculum. Seven panelists (53.8%) strongly agreed *Setting goals and objectives*; *Knowledge of agricultural policy and current events*; *History and philosophies of agricultural communications and general media*; *Listening*; *Risk and crisis communication*; and *Oral communication skills* should all be included as core content items in agricultural communications doctoral curriculum.

Nine panelists (69.2%) agreed *Reasoning on an individual and community level* should be an agricultural communications core content item, while eight panelists (61.5%) agreed *Instructional design* should be a core content item. Seven panelists (53.8%) indicated they agreed an additional nine core content items should be included in an agricultural communications doctoral program: *Accurate, accepted rules of style and*

usage such as AP and APA; Relationship building and people skills; Emerging tools; Moving audience segments from information intake to knowledge development to sense-making; Use of technologies and innovations; Layout and principles of design; Understanding of business, environmental policy, and science; Leadership and supervision; and *Web design*.

Nine panelists (69.2%) slightly agreed *Negotiating* was a needed core curriculum component. Seven panelists (53.8%) slightly agreed the following core components should be in the agricultural communications core curriculum (53.8%): *Finance*; *Visualization; Facilitation;* and *Core disciplines of anthropology, psychology, and sociology.*

Educational administration and *Debating* were removed from Round Three because they did not reach the 60% consensus of agreement needed to remaining the core content list for the panelists to review.

Table 3.

Core Content Items from Round Two

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Ethics	0	0.00%	0	0.00%	0	0.00%	0	0.00%	2	15.38%	11	84.62%
Research methods: qualitative and quantitative	0	0.00%	0	0.00%	0	0.00%	0	0.00%	3	23.08%	10	76.92%
Research: survey design, survey errors, data analysis, data management, and process	0	0.00%	0	0.00%	0	0.00%	0	0.00%	3	23.08%	10	76.92%
Writing and editing: research, technical, scientific, journalistic, and media	0	0.00%	0	0.00%	0	0.00%	2	15.38%	1	7.70%	10	76.9%
Media influence and global issues in food, agriculture, and communication	0	0.00%	0	0.00%	0	0.00%	1	7.70%	3	23.08%	9	69.23%
Statistics: social science	0	0.00%	0	0.00%	0	0.00%	1	7.70%	3	23.08%	9	69.23%
Practical understanding of mass communications	0	0.00%	0	0.00%	0	0.00%	2	15.38%	2	15.38%	9	69.23%
Understanding connections between agricultural communications and its related disciplines	0	0.00%	0	0.00%	0	0.00%	1	7.70%	4	30.77%	8	61.54%
Evaluation methods: focus groups and needs assessments	0	0.00%	0	0.00%	0	0.00%	2	15.38%	3	23.08%	8	61.54%

Table 3. Continued

Core Content Items from Round Two

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Organizing and planning	0	0.00%	0	0.00%	0	0.00%	2	15.38%	3	23.08%	8	61.54%
Communication theories	0	0.00%	0	0.00%	1	7.70%	0	0.00%	3	23.08%	8	61.54%
Setting goals and objectives	0	0.00%	0	0.00%	0	0.00%	0	0.00%	6	46.15%	7	53.85%
Agricultural knowledge of policy and current events	0	0.00%	0	0.00%	0	0.00%	0	0.00%	6	46.15%	7	53.85%
History and philosophies of agricultural communications and general media	0	0.00%	0	0.00%	0	0.00%	1	7.70%	5	38.46%	7	53.85%
Listening	0	0.00%	0	0.00%	0	0.00%	1	7.70%	5	38.46%	7	53.85%
Risk and crisis communication	0	0.00%	0	0.00%	0	0.00%	1	7.70%	5	38.46%	7	53.85%
Oral communication skills	0	0.00%	0	0.00%	0	0.00%	3	23.08%	3	23.08%	7	53.85%
Accurate, accepted rules of style and usage such as AP and APA	0	0.00%	0	0.00%	0	0.00%	0	0.00%	7	53.85%	6	46.15%
Relationship building: people skills	0	0.00%	0	0.00%	0	0.00%	0	0.00%	7	53.85%	6	46.15%
Public relations	0	0.00%	0	0.00%	0	0.00%	2	15.38%	5	38.46%	6	46.15%
Management of people, processes, media, and resources	0	0.00%	0	0.00%	1	7.70%	1	7.70%	5	38.46%	6	46.15%
Public opinion processes	0	0.00%	0	0.00%	0	0.00%	3	23.08%	4	30.77%	6	46.15%

Table 3. Continued

Core Content Items from Round Two

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Social media (new media)	0	0.00%	0	0.00%	0	0.00%	4	30.77%	3	23.08%	6	46.15%
Emerging tools	0	0.00%	0	0.00%	0	0.00%	1	7.70%	7	53.85%	5	38.46%
Moving audience segments from information intake to knowledge development to sense-making	0	0.00%	0	0.00%	0	0.00%	1	7.70%	7	53.85%	5	38.46%
Use of technologies and innovations	0	0.00%	0	0.00%	0	0.00%	1	7.70%	7	53.85%	5	38.46%
Statistical analysis: bi-variate, descriptive, inferential, multi-variate, non-parametic, and parametic	0	0.00%	0	0.00%	0	0.00%	3	23.08%	5	38.46%	5	38.46%
Strategic planning and visioning	0	0.00%	0	0.00%	0	0.00%	5	38.46%	3	23.08%	5	38.46%
Layout and principles of design	0	0.00%	0	0.00%	0	0.00%	2	15.38%	7	53.85%	4	30.77%
Educational philosophy and theory	0	0.00%	0	0.00%	0	0.00%	4	30.77%	5	38.46%	4	30.77%
University level teaching: methods, application of, learning and development, andragogy and pedagogy	0	0.00%	0	0.00%	0	0.00%	4	30.77%	5	38.46%	4	30.77%
Video and audio production	0	0.00%	0	0.00%	0	0.00%	4	30.77%	5	38.46%	4	30.77%
Characteristics of news	0	0.00%	0	0.00%	1	7.70%	3	23.08%	5	38.46%	4	30.77%
Scale development: constructs and scale	0	0.00%	0	0.00%	1	7.70%	3	23.08%	5	38.46%	4	30.77%

Table 3. Continued

Core Content Items from Round Two

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
anchors												
Campaign development	0	0.00%	0	0.00%	1	7.70%	4	30.77%	4	30.77%	4	30.77%
Rhetorical theory and criticism	0	0.00%	0	0.00%	1	7.70%	5	38.46%	3	23.08%	4	30.77%
Grantsmanship	0	0.00%	0	0.00%	2	15.38%	2	15.38%	6	46.15%	3	23.08%
Change theory beyond diffusion	0	0.00%	1	7.70%	1	7.70%	3	23.08%	5	38.46%	3	23.08%
Conflict and content management	0	0.00%	1	7.70%	0	0.00%	5	38.46%	4	30.77%	3	23.08%
Human communication theory	0	0.00%	0	0.00%	1	7.70%	4	30.77%	4	30.77%	3	23.08%
Team building	0	0.00%	0	0.00%	0	0.00%	7	53.85%	3	23.08%	3	23.08%
Basic concepts of photography	0	0.00%	0	0.00%	0	0.00%	8	61.54%	2	15.38%	3	23.08%
Reasoning on an individual and community level	0	0.00%	0	0.00%	0	0.00%	2	15.38%	9	69.23%	2	15.38%
Instructional design	0	0.00%	0	0.00%	1	7.70%	2	15.38%	8	61.54%	2	15.38%
Understanding of business, environmental policy, and science	0	0.00%	0	0.00%	0	0.00%	4	30.77%	7	53.85%	2	15.38%
Leadership and supervision	0	0.00%	0	0.00%	1	7.70%	3	23.08%	7	53.85%	2	15.38%
Web design	0	0.00%	0	0.00%	1	7.70%	3	23.08%	7	53.85%	2	15.38%
Industry processes	0	0.00%	1	7.70%	0	0.00%	3	23.08%	6	46.15%	2	15.38%

Table 3. Continued

Core Content Items from Round Two

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Facilitation	0	0.00%	0	0.00%	0	0.00%	7	53.85%	4	30.77%	2	15.38%
Adult education	0	0.00%	0	0.00%	2	15.38%	5	38.46%	4	30.77%	2	15.38%
Career counseling	0	0.00%	3	23.08%	0	0.00%	4	30.77%	4	30.77%	2	15.38%
Core disciplines of anthropology, psychology, and sociology	0	0.00%	1	7.70%	2	15.38%	7	53.85%	1	7.70%	2	15.38%
Assertiveness	0	0.00%	0	0.00%	3	23.08%	3	23.08%	6	46.15%	1	7.70%
Visualization	0	0.00%	0	0.00%	1	7.70%	7	53.85%	4	30.77%	1	7.70%
Negotiating	0	0.00%	0	0.00%	1	7.70%	9	69.23%	2	15.38%	1	7.70%
Debating	0	0.00%	2	15.38%	4	30.77%	5	38.46%	1	7.70%	1	7.70%
Structural equation modeling	0	0.00%	0	0.00%	4	30.77%	6	46.15%	3	23.08%	0	0.00%
Entrepreneurism	0	0.00%	3	23.08%	1	7.70%	6	46.15%	3	23.08%	0	0.00%
Educational administration	1	7.70%	3	23.08%	5	38.46%	1	7.70%	3	23.08%	0	0.00%
Finance	1	7.70%	1	7.70%	3	23.08%	7	53.85%	1	7.70%	0	0.00%

In Round Three the remaining 58 core content items were sent back to the panel of experts for further consideration. Survey design, survey errors, data analysis, data management, and process was the highest rated core content item in Round Three as 12 panelists (92.3%) strongly agreed it was needed in an agricultural communications doctoral program. Eleven panelists (84.6%) strongly agreed Qualitative and quantitative research methods should be included as a core content item for a doctoral program in agricultural communications. Ten (76.9%) panelists strongly agreed *Ethics* should be included as a core content item for a doctoral program in agricultural communications. Nine panelists (69.2%) strongly agreed Media influence and global issues in, food, agriculture, and communication; Writing and editing for research, technical, scientific, journalistic, and media; and Statistics for social sciences should be included as core content items for a doctoral program in agricultural communications. Eight panelists (61.5%) strongly agreed Practical understanding of mass communications should be included as core content item for a doctoral program in agricultural communications. Seven panelists (53.8%) strongly agreed Communication theories should be included as a core content item for a doctoral program in agricultural communications.

Ten panelists (76.9%) agreed Emerging tools should be an agricultural communications core content item. Eight panelists (61.5%) agreed Accurate, accepted rules of style and usage such as AP and APA should be an agricultural communications core content item in addition to *Grantsmanship*. Seven panelists (53.8%) agreed *Understanding connections between agricultural communications and its related discipline; Public opinion processes*; and Leadership and supervision should be included as agricultural communications core content items.

Seven panelists (53.8%) slightly agreed *Statistical analysis: bi-variate, descriptive, inferential, multi-variate, nonparametric and parametric* and *rhetorical theory and criticism* should be included as agricultural communications core content items.

Web design; *Negotiation; Career counseling; Industry processes;* Core disciplines of anthropology, psychology, and sociology; *Structural equation modeling;* Finance*;* and *Entrepreneurism* were all omitted from the final list because they did not yield the 75% consensus of agreement needed to be retained.

Table 4.

Core Content Items from Round Three

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Research: survey design, survey errors, data analysis, data management, and process	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	7.70%	12	92.30%
Research methods: qualitative and quantitative	0	0.00%	0	0.00%	0	0.00%	0	0.00%	2	15.38%	11	84.62%
Ethics	0	0.00%	0	0.00%	0	0.00%	0	0.00%	3	23.08%	10	76.92%
Media influence and global issues in food, agriculture, and communication	0	0.00%	0	0.00%	0	0.00%	0	0.00%	4	30.77%	9	69.23%
Writing and editing: research, technical, scientific, journalistic, and media	0	0.00%	0	0.00%	0	0.00%	0	0.00%	4	30.77%	9	69.23%
Statistics: social science	0	0.00%	0	0.00%	0	0.00%	1	7.70%	3	23.08%	9	69.23%
Practical understanding of mass communications	0	0.00%	0	0.00%	0	0.00%	1	7.70%	4	30.77%	8	61.54%
Communication theories	0	0.00%	0	0.00%	0	0.00%	2	15.38%	4	30.77%	7	53.85%
Agricultural knowledge of policy and current events	0	0.00%	0	0.00%	0	0.00%	1	7.70%	6	46.15%	6	46.15%

Table 4. Continued

Core Content Items from Round Three

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
History and philosophies of agricultural communications and general media	0	0.00%	0	0.00%	0	0.00%	2	15.38%	5	38.46%	6	46.15%
Setting goals and objectives	0	0.00%	0	0.00%	0	0.00%	3	23.08%	4	30.77%	6	46.15%
Organizing and planning	0	0.00%	0	0.00%	1	7.70%	3	23.08%	3	23.08%	6	46.15%
Listening	0	0.00%	0	0.00%	0	0.00%	5	38.46%	2	15.38%	6	46.15%
Accurate, accepted rules of style and usage such as AP and APA	0	0.00%	0	0.00%	0	0.00%	0	0.00%	8	61.54%	5	38.46%
Understanding connections between agricultural communications and its related disciplines	0	0.00%	0	0.00%	0	0.00%	1	7.70%	7	53.85%	5	38.46%
Use of technologies and innovations	0	0.00%	0	0.00%	0	0.00%	3	23.08%	5	38.46%	5	38.46%
Use of technologies and innovations	0	0.00%	0	0.00%	0	0.00%	3	23.08%	5	38.46%	5	38.46%
Evaluation methods: focus groups and needs assessments	0	0.00%	0	0.00%	0	0.00%	4	30.77%	4	30.77%	5	38.46%
Human communication theory	0	0.00%	0	0.00%	1	7.70%	4	30.77%	3	23.08%	5	38.46%
Oral communication skills	0	0.00%	0	0.00%	0	0.00%	3	23.08%	6	46.15%	4	30.77%
Public relations	0	0.00%	0	0.00%	0	0.00%	3	23.08%	6	46.15%	4	30.77%
Relationship building: people skills	0	0.00%	1	7.70%	0	0.00%	2	15.38%	6	46.15%	4	30.77%

Table 4. Continued

Core Content Items from Round Three

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Management of people, processes, media, and resources	0	0.00%	1	7.70%	0	0.00%	3	23.08%	5	38.46%	4	30.77%
Risk and crisis communication	0	0.00%	0	0.00%	0	0.00%	4	30.77%	5	38.46%	4	30.77%
Social media (new media)	0	0.00%	0	0.00%	0	0.00%	4	30.77%	5	38.46%	4	30.77%
University level teaching: methods, application of, learning and development, andragogy and pedagogy	0	0.00%	0	0.00%	0	0.00%	4	30.77%	5	38.46%	4	30.77%
Change theory beyond diffusion	0	0.00%	1	7.70%	1	7.70%	3	23.08%	4	30.77%	4	30.77%
Public opinion processes	0	0.00%	0	0.00%	0	0.00%	3	23.08%	7	53.85%	3	23.08%
Characteristics of news	0	0.00%	0	0.00%	1	7.70%	3	23.08%	6	46.15%	3	23.08%
Educational philosophy and theory	0	0.00%	0	0.00%	2	15.38%	3	23.08%	5	38.46%	3	23.08%
Campaign development	0	0.00%	1	7.70%	0	0.00%	4	30.77%	5	38.46%	3	23.08%
Layout and principles of design	0	0.00%	0	0.00%	0	0.00%	5	38.46%	4	30.77%	3	23.08%
Statistical analysis: bi-variate, descriptive, inferential, multi-variate, non-parametic, and parametic	0	0.00%	0	0.00%	0	0.00%	7	53.85%	3	23.08%	3	23.08%
Moving audience segments from information intake to knowledge development to sense-	0	0.00%	0	0.00%	1	7.70%	6	46.15%	3	23.08%	3	23.08%

Table 4. Continued

Core Content Items from Round Three

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
making												
Rhetorical theory and criticism	0	0.00%	1	7.70%	1	7.70%	7	53.85%	1	7.70%	3	23.08%
Emerging tools	0	0.00%	0	0.00%	0	0.00%	1	7.70%	10	76.92%	2	15.38%
Strategic planning and visioning	0	0.00%	0	0.00%	2	15.38%	3	23.08%	6	46.15%	2	15.38%
Scale development: constructs and scale anchors	0	0.00%	0	0.00%	3	23.08%	3	23.08%	5	38.46%	2	15.38%
Instructional design	0	0.00%	1	7.70%	0	0.00%	5	38.46%	5	38.46%	2	15.38%
Basic concepts of photography	0	0.00%	0	0.00%	2	15.38%	5	38.46%	4	30.77%	2	15.38%
Web design	1	7.70%	0	0.00%	4	30.77%	3	23.08%	3	23.08%	2	15.38%
Career counseling	1	7.70%	1	7.70%	3	23.08%	4	30.77%	2	15.38%	2	15.38%
Grantsmanship	0	0.00%	0	0.00%	2	15.38%	1	7.70%	8	61.54%	1	7.70%
Video and audio production	0	0.00%	0	0.00%	2	15.38%	4	30.77%	6	46.15%	1	7.70%
Understanding of business, environmental policy, and science	0	0.00%	0	0.00%	1	7.70%	5	38.46%	6	46.15%	1	7.70%
Conflict and content management	0	0.00%	1	7.70%	1	7.70%	5	38.46%	5	38.46%	1	7.70%
Reasoning on an individual and community level	0	0.00%	0	0.00%	2	15.38%	6	46.15%	4	30.77%	1	7.70%
Adult education	0	0.00%	1	7.70%	2	15.38%	5	38.46%	4	30.77%	1	7.70%

Table 4. Continued

Core Content Items from Round Three

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Assertiveness	1	7.70%	1	7.70%	1	7.70%	6	46.15%	3	23.08%	1	7.70%
Facilitation	0	0.00%	2	15.38%	2	15.38%	5	38.46%	3	23.08%	1	7.70%
Industry processes	0	0.00%	2	15.38%	4	30.77%	3	23.08%	3	23.08%	1	7.70%
Visualization	0	0.00%	3	23.08%	1	7.70%	6	46.15%	2	15.38%	1	7.70%
Core disciplines of anthropology, psychology, and sociology	1	7.70%	1	7.70%	3	23.08%	6	46.15%	1	7.70%	1	7.70%
Structural equation modeling	1	7.70%	3	23.08%	2	15.38%	5	38.46%	1	7.70%	1	7.70%
Finance	3	23.08%	1	7.70%	2	15.38%	5	38.46%	1	7.70%	1	7.70%
Entrepreneurism	2	15.38%	1	7.70%	3	23.08%	4	30.77%	1	7.70%	1	7.70%
Leadership and supervision	0	0.00%	1	7.70%	2	15.38%	3	23.08%	7	53.85%	0	0.00%
Team building	0	0.00%	1	7.70%	2	15.38%	4	30.77%	6	46.15%	0	0.00%
Negotiating	0	0.00%	1	7.70%	4	30.77%	4	30.77%	4	30.77%	0	0.00%

Findings for Objective 3

Objective 3 sought to identify core competency items that should be learned when a student completes a doctoral degree in agricultural communications.

In Round One, Delphi panelists provided 120 core competency items. A complete list of the original 120 core competency items can be found in Appendix I. From those original items, the researcher combined like items to create 59 core competency items for presentation in Round Two of the study (see Table 5).

Critical thinking was the highest-rated core competency item in Round Two as 12 panelists (92.3%) strongly agreed it was needed in an agricultural communications doctoral program. Ten panelists (76.9%) strongly agreed Apply their knowledge should be included as a core competency item for a doctoral program in agricultural communications. Nine panelists (69.2%) strongly agreed Conduct original research studies using experimental design, case studies, content analysis, focus groups, and survey research; Write effectively for public forums, news, journals, journalistic, professional, and technical; and Research methodology should be included as core competency items for a doctoral program in agricultural communications. Eight panelists (61.5%) strongly agreed Manage time, manage multiple tasks at a time, focus, and live a balanced life; Understand how communication affects agriculture; Interpret and data analysis; Ask questions; Know how to use theory for inquiry; Research design; and Publish original research should be included as core competency items for a doctoral program in agricultural communications. Seven panelists (53.8%) strongly agreed Develop strategic and tactical communication plans; Analysis of agricultural issues; AP style; Research identification, planning and development; Agriculture, agricultural

policy, and science literacy and knowledge; Efficiently and effectively design and deliver graduate and undergraduate courses that maximize student learning; Independently design, compile, analyze, and report social science information; Interviewing skills; and Teach a variety of learning styles should be included as core competency items for a doctoral program in agricultural communications.

Eight (61.5%) panelists agreed Collaborate and Computer technology should be included in core competency items for a doctoral program in agricultural communications. Additionally, seven (53.8%) panelists agreed Editing processes and Fundraising and grant seeking skills should be included in core competency items for a doctoral program in agricultural communications.

Seven (53.8%) panelists slightly agreed Video and audio production, planning and management should be included in an agricultural communication's doctoral program's core competency list.

Human Resource Management was removed from the list because it did not reach the 60% agreement needed to move on to the next round.

Table 5.

Core Competency Items from Round Two

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Critical Thinking	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	7.70%	12	92.30%
Apply their knowledge	0	0.00%	0	0.00%	0	0.00%	1	7.70%	2	15.38%	10	76.92%
Conduct original research studies using experimental design, case studies, content analysis, focus groups, and survey research	0	0.00%	0	0.00%	0	0.00%	1	7.70%	3	23.08%	9	69.23%
Write effectively: for public forums, news, for journals, journalistic, professional, and technical	0	0.00%	0	0.00%	0	0.00%	1	7.70%	3	23.08%	9	69.23%
Research methodology; qualitative and quantitative; data analysis	0	0.00%	0	0.00%	0	0.00%	2	15.38%	2	15.38%	9	69.23%
Manage time, manage multiple tasks at a time, focus, and live a balanced life	0	0.00%	0	0.00%	0	0.00%	0	0.00%	5	38.46%	8	61.54
Understand how communication affects agriculture	0	0.00%	0	0.00%	0	0.00%	0	0.00%	5	38.46%	8	61.54%

Table 5. Continued

Core Competency Items from Round Two

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Statistics: interpret and data analysis	0	0.00%	0	0.00%	0	0.00%	1	7.70%	4	30.77%	8	61.54
Ask questions	0	0.00%	0	0.00%	0	0.00%	1	7.70%	4	30.77%	8	61.54%
Know how to use theory for inquiry	0	0.00%	0	0.00%	0	0.00%	2	15.38%	3	23.08%	8	61.54%
Research design	0	0.00%	0	0.00%	0	0.00%	2	15.38%	3	23.08%	8	61.54%
Publish original research	0	0.00%	0	0.00%	1	7.70%	2	15.38%	2	15.38%	8	61.54%
Develop strategic and tactical communication plans	0	0.00%	0	0.00%	0	0.00%	1	7.70%	5	38.46%	7	53.85%
Analysis of agricultural issues	0	0.00%	0	0.00%	0	0.00%	2	15.38%	4	30.77%	7	53.85%
AP style	0	0.00%	0	0.00%	0	0.00%	2	15.38%	4	30.77%	7	53.85%
Research identification, planning and development	0	0.00%	0	0.00%	0	0.00%	2	15.38%	4	30.77%	7	53.85%
Agricultural, agricultural policy, and science literacy and knowledge	0	0.00%	0	0.00%	1	7.70%	1	7.70%	4	30.77%	7	53.85%

Table 5. Continued

Core Competency Items from Round Two

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Efficiently and effectively design and deliver graduate and undergraduate courses that maximize student learning	0	0.00%	0	0.00%	0	0.00%	3	23.08%	3	23.08%	7	53.85%
Independently design, compile, analyze, and report social science information	0	0.00%	0	0.00%	0	0.00%	3	23.08%	3	23.08%	7	53.85%
Interviewing skills	0	0.00%	0	0.00%	0	0.00%	3	23.08%	3	23.08%	7	53.85%
Teach a variety of learning styles	0	0.00%	0	0.00%	1	7.70%	2	15.38%	3	23.08%	7	53.85%
Create knowledge useful to those employed in the realm of agriculture	0	0.00%	0	0.00%	0	0.00%	1	7.70%	6	46.15%	6	46.15%
Survey research	0	0.00%	0	0.00%	0	0.00%	1	7.70%	6	46.15%	6	46.15%
Interpersonal communication	0	0.00%	0	0.00%	0	0.00%	2	15.38%	5	38.46%	6	46.15%
Oral communication skills	0	0.00%	0	0.00%	0	0.00%	3	23.08%	4	30.77%	6	46.15%
Teaching effectiveness	0	0.00%	0	0.00%	1	7.70%	2	15.38%	4	30.77%	6	46.15%
Syllabi design and project rubrics	0	0.00%	0	0.00%	2	30.77%	1	7.70%	4	30.77%	6	46.15%

Table 5. Continued

Core Competency Items from Round Two

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Presentation development	0	0.00%	0	0.00%	0	0.00%	4	30.77%	3	23.08%	6	46.15%
Public speaking	0	0.00%	0	0.00%	0	0.00%	4	30.77%	3	23.08%	6	46.15%
Social media	0	0.00%	0	0.00%	1	7.70%	4	30.77%	2	15.38%	6	46.15%
Message analysis: effectiveness, presentation, and readability	0	0.00%	0	0.00%	1	7.70%	1	7.70%	5	38.46%	6	46.15%
Collaborate	0	0.00%	0	0.00%	0	0.00%	0	0.00%	8	61.54%	5	38.46%
Audience analysis and measurement	0	0.00%	0	0.00%	0	0.00%	2	15.38%	6	46.15%	5	38.46%
Theory development	0	0.00%	0	0.00%	0	0.00%	5	38.46%	5	38.46%	5	38.46%
Networking	0	0.00%	0	0.00%	0	0.00%	3	23.08%	5	38.46%	5	38.46%
Public relations writing, processes, and planning	0	0.00%	0	0.00%	0	0.00%	4	30.77%	4	30.77%	5	38.46%
Media relations	0	0.00%	0	0.00%	1	7.70%	3	23.08%	4	30.77%	5	38.46%
Professional development	0	0.00%	0	0.00%	2	15.38%	2	15.38%	4	30.77%	5	38.46%

Table 5. Continued

Core Competency Items from Round Two

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Technical agriculture and agriculture science	0	0.00%	0	0.00%	2	15.38%	4	30.77%	2	15.38%	5	38.46%
Produce an effective résumé	0	0.00%	1	7.70%	0	0.00%	5	38.46%	2	15.38%	5	38.46%
Computer technology	0	0.00%	0	0.00%	0	0.00%	1	7.70%	8	61.54%	4	30.77%
Design a media campaign	0	0.00%	0	0.00%	0	0.00%	3	23.08%	6	46.15%	4	30.77%
Editing processes	0	0.00%	0	0.00%	1	7.70%	2	15.38%	7	53.85%	3	23.08%
Fundraising and grant seeking skills	0	0.00%	0	0.00%	1	7.70%	2	15.38%	7	53.85%	3	23.08%
Evaluate media products	0	0.00%	1	7.70%	0	0.00%	3	23.08%	6	46.15%	3	23.08%
Web design: theory and processes	0	0.00%	0	0.00%	2	15.38%	2	15.38%	6	46.15%	3	23.08%
Develop industry partnerships	0	0.00%	0	0.00%	2	15.38%	3	23.08%	5	38.46%	3	23.08%
Visual design theory	0	0.00%	0	0.00%	2	15.38%	3	23.08%	5	38.46%	3	23.08%
Digital video and audio techniques	0	0.00%	0	0.00%	1	7.70%	5	38.46%	4	30.77%	3	23.08%
Video/audio production planning and	0	0.00%	1	7.70%	1	7.70%	4	30.77%	4	30.77%	3	23.08%

Table 5. Continued

Core Competency Items from Round Two

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
management												
Photography	0	0.00%	0	0.00%	1	7.70%	7	53.85%	2	30.77%	3	23.08%
Magazine layout and production	0	0.00%	0	0.00%	1	7.70%	4	30.77%	6	46.15%	2	15.38%
TV broadcasting	0	0.00%	2	15.38%	1	7.70%	3	23.08%	5	38.46%	2	15.38%
Marketing	0	0.00%	1	7.70%	2	15.38%	5	38.46%	4	30.77%	2	15.38%
Higher education policy and procedures	0	0.00%	0	0.00%	2	15.38%	6	46.15%	3	23.08%	2	15.38%
How to gauge psychological and sociological aspects of social systems large and small	0	0.00%	0	0.00%	3	23.08%	5	38.46%	3	23.08%	2	15.38%
Modeling	0	0.00%	0	0.00%	3	23.08%	6	46.15%	3	23.08%	1	7.70%
Human Resource Management	1	7.70%	0	0.00%	5	38.46%	4	30.77%	2	15.38%	1	7.70%

Based upon results of Round Two, 58 core competency items were sent back to the panel of experts in Round Three (see Table 6). Critical thinking and Conduct original research studies using experimental design, case studies, content analysis, focus groups, and survey research were the highest rated core competency items in Round Three as 11 panelists (84.6%) strongly agreed they were needed in an agricultural communications doctoral program. Ten panelists (76.9%) strongly agreed Understand how communication affects agriculture; Research design; Apply their knowledge; and Write effectively for public forums, news, for journals, journalistic, professional, and technical should be included as core competency items for a doctoral program in agricultural communications. Nine panelists (69.2%) strongly agreed Qualitative and quantitative research methodology and data analysis should be included as a core competency item for a doctoral program in agricultural communications. Eight panelists (61.5%) strongly agreed Manage time, manage multiple tasks at a time, focus, and live a balanced life; Interpret and data analysis; Teaching effectiveness; and Audience analysis and measurement should be included as core competency items for a doctoral program in agricultural communications. Seven panelists (53.8%) strongly agreed Know how to use theory for inquiry and Independently design, compile, analyze, and report social science information should be included as core competency items for a doctoral program in agricultural communications.

Eight (61.5%) panelists agreed Analysis of agricultural issues should be included in agricultural communications core competency items for a doctoral program. Seven (53.8%) panelists agreed Ask questions; Oral communication skills; Public speaking; Research; identification planning and development; and Fundraising and grant seeking

skills should be included core competency items for agricultural communications doctoral curriculum.

The following eight items were removed from the final list because they did not reach the 75% consensus of agreement needed to remain: *Produce an effective résumé; Marketing; Magazine layout and production;* Video and audio production planning and management; *How to gauge psychological and social aspects of social systems large and small; Modeling;* and *TV broadcasting.*

Table 6.

Core Competency Items from Round Three

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Critical Thinking	0	0.00%	0	0.00%	0	0.00%	0	0.00%	2	15.38%	11	84.62%
Conduct original research studies using experimental design, case studies, content analysis, focus groups, and survey research	0	0.00%	0	0.00%	0	0.00%	0	0.00%	2	15.38%	11	84.62%
Understand how communication affects agriculture	0	0.00%	0	0.00%	0	0.00%	0	0.00%	3	23.08%	10	76.9%
Research design	0	0.00%	0	0.00%	0	0.00%	1	7.70%	2	15.38%	10	76.9%
Apply their knowledge	0	0.00%	0	0.00%	0	0.00%	0	0.00%	4	30.77%	9	69.23%
Write effectively: for public forums, news, for journals, journalistic, professional, and technical	0	0.00%	0	0.00%	0	0.00%	2	15.38%	2	15.38%	9	69.23%
Research methodology; qualitative and quantitative; data analysis	0	0.00%	0	0.00%	0	0.00%	2	15.38%	2	15.38%	9	69.23%
Manage time, manage multiple tasks at a time, focus, and live a balanced life	0	0.00%	0	0.00%	0	0.00%	1	7.70%	4	30.77%	8	61.54%

Table 6. Continued

Core Competency Items from Round Three

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Statistics: interpret and data analysis	0	0.00%	0	0.00%	0	0.00%	1	7.70%	4	30.77%	8	61.54
Teaching effectiveness	1	7.70%	0	0.00%	0	0.00%	1	7.70%	3	23.08%	8	61.54%
Audience analysis and measurement	1	7.70%	0	0.00%	0	0.00%	3	23.08%	1	7.70%	8	61.54
Know how to use theory for inquiry	0	0.00%	0	0.00%	0	0.00%	2	15.38%	4	30.77%	7	53.85%
Independently design, compile, analyze, and report social science information	0	0.00%	0	0.00%	0	0.00%	2	15.38%	4	30.77%	7	53.85%
Ask questions	0	0.00%	0	0.00%	0	0.00%	0	0.00%	7	53.85%	6	46.15%
Develop strategic and tactical communication plans	0	0.00%	0	0.00%	0	0.00%	1	7.70%	6	46.15%	6	46.15%
Interpersonal communication	0	0.00%	1	7.70%	0	0.00%	2	15.38%	6	46.15%	6	46.15%
Efficiently and effectively design and deliver graduate and undergraduate courses that maximize student learning	1	7.70%	0	0.00%	0	0.00%	1	7.70%	5	38.46%	6	46.15%
Survey research	0	0.00%	0	0.00%	0	0.00%	3	23.08%	4	30.77%	6	46.15%

Table 6. Continued

Core Competency Items from Round Three

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Computer technology	1	7.70%	0	0.00%	0	0.00%	2	15.38%	4	30.77%	6	46.15%
Networking	0	0.00%	0	0.00%	0	0.00%	3	23.08%	3	23.08%	6	46.15%
Publish original research	0	0.00%	0	0.00%	1	7.70%	3	23.08%	4	30.77%	6	46.15%
Oral communication skills	0	0.00%	0	0.00%	1	7.70%	0	0.00%	7	53.85%	5	38.46%
Public speaking	1	7.70%	0	0.00%	0	0.00%	0	0.00%	7	53.85%	5	38.46%
Teach a variety of learning styles	1	7.70%	0	0.00%	0	0.00%	1	7.70%	6	46.15%	5	38.46%
Critique articles for both scholarly	0	0.00%	0	0.00%	0	0.00%	3	23.08%	5	38.46%	5	38.46%
AP style	1	7.70%	0	0.00%	0	0.00%	3	23.08%	4	30.77%	5	38.46%
Collaborate	1	7.70%	0	0.00%	0	0.00%	3	23.08%	4	30.77%	5	38.46%
Editing processes	0	0.00%	0	0.00%	0	0.00%	5	38.46%	3	23.08%	5	38.46%
Media relations	0	0.00%	0	0.00%	2	15.38%	3	23.08%	3	23.08%	5	38.46%
Develop industry partnerships	1	7.70%	0	0.00%	1	7.70%	5	38.46%	1	7.70%	5	38.46%

Table 6. Continued

Core Competency Items from Round Three

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Message analysis: effectiveness, presentation, and readability	0	0.00%	0	0.00%	0	0.00%	3	23.08%	6	46.15%	4	30.77%
Presentation development	1	7.70%	0	0.00%	0	0.00%	2	15.38%	6	46.15%	4	30.77%
Public relations writing, processes, and planning	0	0.00%	0	0.00%	0	0.00%	2	15.38%	6	46.15%	4	30.77%
Agricultural, agricultural policy, and science literacy and knowledge	1	7.70%	0	0.00%	0	0.00%	2	15.38%	6	46.15%	4	30.77%
Create knowledge useful to those employed in the realm of agriculture	0	0.00%	0	0.00%	0	0.00%	4	30.77%	5	38.46%	4	30.77%
Syllabi design and project rubrics	1	7.70%	0	0.00%	1	7.70%	2	15.38%	5	38.46%	4	30.77%
Social media	0	0.00%	0	0.00%	1	7.70%	4	30.77%	4	30.77%	4	30.77%
Produce an effective résumé	1	7.70%	1	7.70%	2	15.38%	1	7.70%	4	30.77%	4	30.77%
Analysis of agricultural issues	0	0.00%	0	0.00%	0	0.00%	2	15.38%	8	61.54%	3	23.08%
Interviewing skills	1	7.70%	0	0.00%	1	7.70%	2	15.38%	6	46.15%	3	23.08%

Table 6. Continued

Core Competency Items from Round Three

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Technical agriculture and agriculture science	0	0.00%	0	0.00%	1	7.70%	6	46.15%	3	23.08%	3	23.08%
Design a media campaign	0	0.00%	0	0.00%	2	15.38%	5	38.46%	3	23.08%	3	23.08%
Marketing	1	7.70%	0	0.00%	3	23.08%	3	23.08%	3	23.08%	3	23.08%
Evaluate media products	1	7.70%	0	0.00%	1	7.70%	6	46.15%	2	15.38%	3	23.08%
Web design: theory and processes	1	7.70%	0	0.00%	2	30.77%	5	38.46%	2	30.77%	3	23.08%
Research identification, planning and development	0	0.00%	0	0.00%	0	0.00%	4	30.77%	7	53.85%	2	15.38%
Theory development	0	0.00%	0	0.00%	1	7.70%	4	30.77%	6	46.15%	2	15.38%
Visual design theory	1	7.70%	0	0.00%	2	30.77%	2	30.77%	6	46.15%	2	30.77%
Photography	1	7.70%	0	0.00%	2	15.38%	3	23.08%	5	38.46%	2	15.38%
Professional development	1	7.70%	0	0.00%	1	7.70%	5	38.46%	4	30.77%	2	15.38%
How to gauge psychological and sociological aspects of social systems large and small	1	7.70%	1	7.70%	2	15.38%	5	38.46%	2	15.38%	2	15.38%

Table 6. Continued

Core Competency Items from Round Three

Item	Strongly Disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Higher education policy and procedures	1	7.70%	0	0.00%	2	15.38%	5	38.46%	2	15.38%	2	15.38%
Modeling	1	7.70%	2	15.38%	3	23.08%	3	23.08%	2	15.38%	2	15.38%
Fundraising and grant seeking skills	0	0.00%	0	0.00%	2	15.38%	3	23.08%	7	53.85%	1	7.70%
Magazine layout and production	1	7.70%	0	0.00%	3	23.08%	2	15.38%	6	46.15%	1	7.70%
Digital video and audio techniques	1	7.70%	0	0.00%	2	15.38%	4	30.77%	5	38.46%	1	7.70%
Video/audio production planning and management	1	7.70%	0	0.00%	3	23.08%	4	30.77%	4	30.77%	1	7.70%
TV broadcasting	1	7.70%	2	15.38%	3	23.08%	4	30.77%	2	15.38%	1	7.70%

CHAPTER V

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

In this chapter, the researcher will discuss conclusions and implications from the study, recommendations for research, and recommendations for practice.

Conclusions & Implications for Objective 1

Objective 1 was to describe selected personal and professional characteristics of the panel of experts used in the Delphi study.

The typical panelist holds a Doctor of Philosophy degree, teaches agricultural communications classes at his or her respective university, is from the southern region of the United States, and is from an institution that teaches agricultural education and communications within the same department. In terms of years of experience, the panelists vary greatly.

Should geographic regions and related disciplines in the department be considered when choosing a doctoral program? Should programs in other regions of the United States consider offering agricultural communications curriculum at the doctoral level?

Conclusions & Implications for Objective 2

Objective 2 was to determine the core content needed within a doctoral curriculum in agricultural communications.

Fifty core content items reached consensus of agreement by the panel. The list of core content items provided by the panelists was extremely broad and needed to be divided into categories because of their diversity. In a similar study conducted by Simon et. al.

(2005), content items were categorized by likeness. This study's researcher categorized the content items in a similar manner: Agricultural Knowledge and News (see Table 7); Communications Knowledge (see Table 8); Employability Skills (see Table 9); Media (see Table 10); Research (see Table 11); Teaching and Education (see Table 12); and Writing (see Table 13).

Table 7.

Agricultural Knowledge and News Core Content Items that Reached Consensus of Agreement

Agricultural knowledge of policy and current events
Characteristics of news
History and philosophies of agricultural communications and general media
Media influence and global issues in food, agriculture, and communications
Understanding connections between agricultural communications and its related disciplines
Understanding of business, environmental policy, and science

Table 8.

Communications Knowledge Core Content Items that Reached Consensus of Agreement

Change theory beyond diffusion
Communication theories
Human communication theory
Practical understanding of mass communications
Public opinion processes
Public relations
Reasoning on an individual and community level
Rhetorical theory and criticism

Table 9.

Employability Core Content Items that Reached Consensus of Agreement

Assertiveness
Conflict and content management
Ethics
Facilitation
Leadership and supervision
Listening
Management of people, processes, media, and resources
Moving audience segments from information intake to knowledge development to sense making
Oral communication skills
Organizing and planning
Relationship building: people skills
Risk and crisis management
Setting goals and objectives
Strategic planning and visioning
Team building
Visualization

Table 10.

Media Core Content Items that Reached Consensus of Agreement

Basic concepts of photography
Campaign development
Emerging tools
Layout and principles of design
Social media (new media)
Use of technologies and innovations
Video and audio production

Table 11.

Research Core Content Items that Reached Consensus of Agreement

Evaluation methods for focus groups and needs assessments.
Qualitative and quantitative research methods
Research: survey design, survey errors, data analysis, data management, and process
Scale development: constructs and anchors
Statistical analysis: bi-variate, descriptive, inferential, multi-variate, non-parametric, parametric
Statistics: social science

Table 12.

Teaching and Education Core Content Items that Reached Consensus of Agreement

Adult education
Educational philosophy and theory
Grantsmanship
Instructional design
University level teaching: methods, application of, learning and development, andragogy and pedagogy

Table 13.

Writing Core Content Items that Reached Consensus of Agreement

Accurate, accepted rules of style and usage such as AP and APA
Writing and editing: research, technical, scientific, journalistic, and media

Research and writing are the most important core content items to the panel. Educational administration, debating, web design, negotiation, career counseling, industry processes, core disciplines of anthropology, psychology, and sociology, structural equation modeling, finance and entrepreneurism are not important enough to panelists to keep as a core content item.

Do these categories serve as a guide for what is needed within the industry in terms of an agricultural communicator? Since the group reached consensus of agreement on the majority of the core content items, could this be an indication of consistency among programs or of a lack of diversity? Since research seemed to be a common theme among all panelists as an extremely important part of a doctoral program, should

agricultural communications undergraduate curriculum implement an understanding research class for students?

Conclusions & Implications for Objective 3

Objective 3 was to determine core competencies students would gain by completing an agricultural communications doctoral program.

Fifty-one core competency items reached consensus of agreement by the panel. The list of core content items provided by the panelists was extremely broad and needed to be divided into categories because of their diversity. In a similar study conducted by Simon et. al. (2005), competency items were categorized by likeness. The same categories used to organize the core content items were used to organize the core competency items: Agricultural Knowledge and News (see Table 14); Communications Knowledge (see Table 15); Employability Skills (see Table 16); Media (see Table 17); Research (see Table 18); Teaching and Education (see Table 19); and Writing (see Table 20).

Table 14.

Agricultural Knowledge and News Core Competency Items that Reached Consensus of Agreement

Agricultural, agricultural policy, and science literacy and knowledge
Analysis of agricultural issues
Create knowledge useful to those employed in the realm of agriculture
Technical agriculture and agriculture science

Table 15.

Communications Knowledge Core Competency Items that Reached Consensus of Agreement

Develop strategic and tactical communication plans
Understand how communication affects agriculture

Table 16.

Employability Core Competency Items that Reached Consensus of Agreement

Apply their knowledge
Ask questions
Collaborate
Critical thinking
Develop industry partnerships
Interpersonal communication
Interviewing skills
Manage time, manage multiple tasks at one time, focus, and live a balanced life
Networking
Oral communication skills
Presentation development
Professional development
Public speaking

Table 17.

Media Core Competency Items that Reached Consensus of Agreement

Computer technology
Design a media campaign
Digital video and audio techniques
Evaluate media products
Media relations
Photography
Social media
Visual design theory
Web design theory and processes

Table 18.

Research Core Competency Items that Reached Consensus of Agreement

Audience analysis and measurement
Conduct original research studies using experimental design, case studies, content analysis, focus groups, and survey research
Independently design, compile, analyze, and report social science information
Know how to use theory for inquiry
Publish original research
Qualitative and quantitative research methodology
Research design
Research identification, planning and development
Statistics: interpret and data analysis
Survey research
Theory development

Table 19.

Teaching and Education Core Competency Items that Reached Consensus of Agreement

Efficiently and effectively design and deliver graduate and undergraduate courses that maximize student learning
Fundraising and grant seeking skills
Higher education policy and procedures
Message analysis: effectiveness, presentation, readability
Syllabi design and project rubrics
Teach a variety of learning styles
Teaching effectiveness

Table 20.

Writing Core Competency Items that Reached Consensus of Agreement

AP Style
Critique articles for both scholarly and journalistic print publications
Editing processes
Public relations writing, processes, and planning
Write effectively for public forums, news, journals, journalistic, professional, and technical

Critical thinking, apply their knowledge, conduct original research, and writing are the most important core competency items according to the panelists. Human resource management, produce an effective résumé, marketing, magazine layout and production,

video and audio production planning and management, how to gauge psychological and social aspects of social systems large and small, modeling, human resource management, and TV broadcasting are not important enough to the panelists to keep as a core competency items**.** Although a slight increase in the degree of consensus of agreement was expected (Anglin, 1991), this did not occur.

Does this mean if a doctoral program is developed, courses should be guided by the competencies they should teach? Also, do these competencies serve as a guide for what competencies are needed within the industry? Since the group reached consensus of agreement on most of the items, could this be an indication of program consistency or a lack of diversity in teaching the same competencies across the nation? Since employability is necessary for a candidate for a doctoral degree in agricultural communications, should programs look for students who are good with people and have a wide array of industry experience? To be successful, should a program develop its entire curriculum based on these competencies? Could the content and competencies be matched together in terms of content item A yields competency item B?

Recommendations for Future Research

As these content and competency items indicate what faculty members recommend doctoral students should experience, strong curricula should be developed from these items using further research. Investigations should be held to determine specifically what curricula could be formed from these findings (Simon et al., 2005) to enhance the ability to learn these competencies.

The content and competencies reaching consensus of agreement by the panelists should be examined further. Researchers should conduct a factor analysis to determine

which items remain in the list and in what categories. Additionally, the items should be separated by category to determine which items can be taught together (Simon et al., 2005).

Researchers should investigate the core content items that were removed from the study and find another way to measure their importance, if any, to a doctoral program in agricultural communications.

Future researchers should have an alternative panel, such as alumni or administrators, rank the core content and core competency items that reached consensus of agreement. Having another panel rank these items would provide a comparison measure for the first study (Sprecker & Rudd, 1998). Additionally, data from both these studies could result in curriculum development of a doctoral program in agricultural communications.

Research should be conducted to determine if a doctoral program in agricultural communications is needed. Additionally, research should be conducted to determine how many faculty members are required to run a successful doctoral program in agricultural communications, as time to completion of degree is important for programs to be aware of (Linder et al., 2001).

Finally, a similar study evaluating the core components of agricultural education and agricultural leadership doctoral programs should be done. Stakeholders should be surveyed to determine what core content items and what core competency items would increase the human capital of these students and make them more employable (Becker, 1964, as cited in Robinson and Baker, 2011).

Recommendations for Future Practice

Faculty members at institutions where agricultural communications curriculum is offered should consider developing doctoral curriculum based on the findings of this study. Faculty should develop courses to include the content items directly related to agricultural communications. Specific courses taught should include the core content and competencies identified in this study. If those courses are unavailable, doctoral students should be encouraged to take courses outside of their home departments to seek the core content and competencies to make them more employable (Smith, 2010).

Additionally, institutions planning to implement curriculum for a doctoral program should collaborate to take advantage of expertise across the nation. Although the programs should be similar, students should consider taking an online course if the core content needed is not offered at their institutions. Although the various programs will have some minor differences, students should learn the same core competencies upon completion of program.

According to Simon et al. (2005), curriculum should be reviewed and revised each year to keep up with technology. If a doctoral program in agricultural communications is developed and implemented, curriculum must be evaluated each year to ensure its stability. Simon et al. (2005) explained the need for stakeholders in agricultural communications to be surveyed. These stakeholders include students, alumni, faculty, administration, and industry leaders.

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APPENDICES

APPENDIX A:

Oklahoma State University Institutional Review Board Application

Date:	Tuesday, March 08, 2011
IRB Application No	AG1118
Proposal Title:	Core Components for PhD in Agricultural Communications: A Delphi Study
Reviewed and Processed as:	Exempt

Status Recommended by Reviewer(s): Approved Protocol Expires: 3/7/2012

Principal Investigator(s):

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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.

[X] 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 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,

Shelia Kennison, Chair
Institutional Review Board

APPENDIX B:

Participant Information Sheet

Project Title: Core Components for a PhD in Agricultural Communications: A Delphi Study

Investigator(s): Jennifer Ann Smith, graduate student, Oklahoma State University Agricultural Communications and Shelly Sitton, Professor, Oklahoma State University Agricultural Communications

Purpose: This is a web-based Delphi study in which the researchers are looking at what core components should be included in a PhD program in Agricultural Communications. We invite you to participate in the research and serve on our panel of experts for this Delphi Study. If you choose to participate, you will be asked to answer questions about what components you feel should be included in a PhD program in Agricultural Communications.

Procedures: Proceeding with the web-based instrument will imply your consent to participate in this study. If you decide to participate, you will answer the first round of questions. You will answer questions online. You also will be asked for selected personal and professional information. The amount of time to complete the instrument will be between 30 and 60 minutes. There will be two follow-up instruments. The first follow-up instrument will be emailed to you within three weeks of the submission deadline of the initial instrument. The second follow-up instrument will be emailed to you within three weeks of the submission deadline of the initial instrument. When you complete the instrument, you will be asked to submit your answers.
Risks of Participation: The risks associated with this study are minimal.

Benefits: This research will assist in potentially creating a PhD program in Agricultural Communications. An understanding of what is needed for a PhD program in this discipline will help in the planning and implementing of the courses and curriculum. There are no direct benefits to you other than what you learn from answering the questions and knowing that you are helping with the research.

Confidentiality: The results from the Delphi questionnaires will be locked in a file cabinet. Any written results will discuss group findings and will not release any information that could possibly identify you as an individual. The data will be kept for up to five years.
Only researchers and individuals responsible for research oversight will have access to the records.

Contacts: If you have any questions or concerns about this project, please contact Jennifer Ann Smith, M.S. Graduate Student, 903-926-5514, jennifer.a.smith@okstate.edu or Shelly Sitton, Professor, 405-744-3690, shelly.sitton@okstate.edu. If you have questions about your rights as a research volunteer, you may contact Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu.

Participant Rights: Your participation in this research in voluntary. You can discontinue the study at any time without reprisal or penalty. You may also skip questions that you do not wish to answer.

Consent: I have read and fully understand the consent form. I understand that my participation is voluntary. By clicking below, I am indicating that I freely and voluntarily and agree to participate in this study and I also acknowledge that I am at least 18 years of age.

It is recommended that you print a copy of this consent page for your records before you begin the study by clicking below.

APPENDIX C:

ROUND ONE INSTITUTIONAL REVIEW BOARD APPROVAL

Oklahoma State University Institutional Review Board

Date:	Thursday, April 14, 2011	Protocol Expires:	3/7/2012
IRB Application No:	AG1118		
Proposal Title:	Core Components for PhD in Agricultural Communications: A Delphi Study		
Reviewed and Processed as:	Exempt **Modification**		

Status Recommended by Reviewer(s) **Approved**

Principal Investigator(s):

Jennifer A. Smith
448 Ag Hall
Stillwater, OK 74078

Shelly Sitton
448 Ag Hall
Stillwater, OK 74078

The requested modification to this IRB protocol has been approved. Please note that the original expiration date of the protocol has not changed. The IRB office MUST be notified in writing when a project is complete. All approved projects are subject to monitoring by the IRB.

[X] 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.

The reviewer(s) had these comments:

The modification request to include the preliminary email or phone call is approved.

Signature :

Shelia Kennison, Chair, Institutional Review Board

Thursday, April 14, 2011
Date

Oklahoma State University Institutional Review Board

Date	Monday, May 09, 2011	**Protocol Expires:**	**3/7/2012**
IRB Application	AG1118		
Proposal Title:	Core Components for PhD in Agricultural Communications: A Delphi Study		
Reviewed and Processed as:	Exempt **Modification**		

Status Recommended by Reviewer(s) **Approved**

Principal Investigator(s) :

Jennifer A. Smith
448 Ag Hall
Stillwater, OK 74078

Shelly Sitton
448 Ag Hall
Stillwater, OK 74078

The requested modification to this IRB protocol has been approved. Please note that the original expiration date of the protocol has not changed. The IRB office MUST be notified in writing when a project is complete. All approved projects are subject to monitoring by the IRB

☒ 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.

Signature :

Shelia Kennison, Chair, OSU Institutional Review Board

Monday, May 09, 2011
Date

APPENDIX D:

ROUND TWO INSTITUTIONAL REVIEW BOARD APPROVAL

Oklahoma State University Institutional Review Board

Date:	Tuesday, May 24, 2011	**Protocol Expires:**	**3/7/2012**
IRB Application No:	AG1118		
Proposal Title:	Core Components for PhD in Agricultural Communications: A Delphi Study		
Reviewed and Processed as:	Exempt **Modification**		

Status Recommended by Reviewer(s) **Approved**

Principal Investigator(s):

Jennifer A. Smith
448 Ag Hall
Stillwater, OK 74078

Shelly Sitton
448 Ag Hall
Stillwater, OK 74078

The requested modification to this IRB protocol has been approved. Please note that the original expiration date of the protocol has not changed. The IRB office MUST be notified in writing when a project is complete. All approved projects are subject to monitoring by the IRB.

☒ 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.

The reviewer(s) had these comments:

The modification request to revise the research instrument for round 2 of the Delphi process is approved.

Signature :

Shelia H. Kennison

Shelia Kennison, Chair, Institutional Review Board

Tuesday, May 24, 2011
Date

APPENDIX E:

ROUND THREE INSTITUTIONAL REVIEW BOARD APPROVAL

Oklahoma State University Institutional Review Board

Date:	Wednesday, June 08, 2011	**Protocol Expires:**	**3/7/2012**
IRB Application No:	AG1118		
Proposal Title:	Core Components for PhD in Agricultural Communications: A Delphi Study		
Reviewed and Processed as:	Exempt **Modification**		

Status Recommended by Reviewer(s) **Approved**

Principal Investigator(s):

Jennifer A. Smith
448 Ag Hall
Stillwater, OK 74078

Shelly Sitton
448 Ag Hall
Stillwater, OK 74078

The requested modification to this IRB protocol has been approved. Please note that the original expiration date of the protocol has not changed. The IRB office MUST be notified in writing when a project is complete. All approved projects are subject to monitoring by the IRB.

X 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.

The reviewer(s) had these comments:

The modification request to revise the research instrument for round 3 of the Delphi process is approved.

Signature :

Shelia Kennison, Chair, Institutional Review Board

Wednesday, June 08, 2011
Date

APPENDIX F:

INITIAL EMAIL

My name is Jennifer Ann Smith and I am a graduate student at Oklahoma State University in Agricultural Communications. I am working under the direction of Dr. Shelly Sitton. We are beginning to embark on a study called *Core Components for a PhD in Agricultural Communications: A Delphi Study* and are looking to you, a professor in Agricultural Communications, for help.

If you agree to help, I will send you the link, introductory email, and participation consent sheet. Please email me and let me know if you are planning to serve on the panel of experts. I know your time is valuable and hope you will consider this opportunity.

Thank you,

Jennifer Ann Smith
Graduate Student
Oklahoma State University
903-926-5514

APPENDIX G:

ROUND ONE INSTRUMENT

Core Components for a PhD in Agricultural Communications: A Delphi Study Part 1

Default Question Block

Q1 **The first two questions should be answered with exhaustive lists.**

For this study, core content is defined as the concepts students will be required to learn.

What core content will be needed for a Ph.D. program in agricultural communications? (What should they know?)

Q2 **For this study, core competencies are defined as the skills and attitudes students will obtain.**

What competencies will the students gain by participating in a Ph.D. program in agricultural communications? (What should they be able to do?)

Q3 **At what institution are you are currently employed?**

Q4 **What is the name of the academic department in which you are currently employed?**

Q5 **Which choice indicates your highest degree?**

- Bachelor of Science (B.S.)
- Bachelor of Arts (B.A.)
- Master of Science (M.S.)
- Master of Arts (M.A.)
- Doctor of Philosophy (Ph.D.)
- Doctor of Education (Ed.D.)
- Other

Q6 **How many years of professional (non-academic) experience do you have?**

Q7 **How many years have you been employed in higher education?**

Q8 **What is your job title?**

APPENDIX H:

ROUND ONE REMINDER

I am emailing you to remind you to fill out the first round survey for my study “Core Components of a PhD in Agricultural Communications.” I emailed the instrument link to you last week. If you could fill out the instrument sometime today or tomorrow, I would greatly appreciate it. Please let me know if I need to resend it.

I appreciate your time!

Jennifer Ann Smith

APPENDIX J:

LIST OF 112 AND 120 CORE CONTENT AND CORE COMPETENCY ITEMS

112 Core Content Items

A philosophical opinion of core agricultural issues - past, present and future
A practical understanding of mass communication to include layout and design concepts, writing techniques, use of technology, etc.
Accurate, accepted rules of style and usage such as AP and APA
Adult education
Advanced Communication Theory
Agricultural economics and rural sociology instead of production agriculture techniques Agricultural policy
Agricultural knowledge
Agricultural policy and current events
Assertiveness
Assessment
Basics concepts of photography
Basics of descriptive and inferential statistics
Career Counseling
Characteristics of news
Closure
Communication Program Evaluation
Communication Theories
Competent in research and data analysis methodologies including but not limited to quantitative methods, qualitative methods, needs assessments and evaluation methods, multivariate data analysis, and structural equation modeling.
Computer Technology
Conflict management
Contemporary issues in communication and journalism
Controlling
Data analysis
Dealing with difficult people
Debating
Diffusion of innovation
Digital video and audio techniques
Editing
Educational Administration
Educational Methods
Educational Philosophy
Educational Theory
Ethics & Philosophy
Evaluation
Facilitation

Finance
Focus group methodology
Global issues in food, agriculture and related sciences
Grantsmanship
Graphic Design
Grounded in change theory that is beyond diffusion (e.g. business management)
Grounded in management of people, processes, and resources to facilitate the development of related outcomes such as innovation, entrepreneurism, etc.
Grounded in the core disciplines of psychology, sociology, and anthropology towards the end of understanding human thinking and reasoning on an individual and community level
History and philosophies of agricultural communications and general media
History of Agricultural Communications
How to apply what they teach
How to write in a scientific style (i.e. for journals)
Human Communication Theory
Influence of media on a national and global scale
Influencing
Intercultural communications
Issues management
Journalistic Writing
Journals for their discipline
Leadership
Learning Objectives
Listening
Manage
Media history with particular emphasis on rural as opposed to urban settings
Media management
Negotiating
New media (social media) integration
Oral Communication Skills
Organization
Pedagogy/Instructional design
Philosophy
Photography
Planning
Post-Secondary teaching methods (Pedagogy and Andragogy)
Principles & Practices of Teaching
Principles of design
Problem Solving
Psychology of learning and/or development;
Public Opinion Processes
Public Relations and Campaign Development
Qualitative Research Methods
Quantitative Research Methods
Questionnaire evaluation (e.g., reliability, principle component analysis, etc.).

Relationship building
Research methods- quantitative & qualitative
Research Process
Research Writing
Rhetorical theory and criticism
Risk and crisis communication management
Scale development (e.g., constructs, scale anchors, etc)
Scientific and Technical Writing
Setting goals
Skilled in moving audience segments from information intake to knowledge development to sense-making (wisdom)
Social justice issues
Social Media
Social science statistics (at least the basics)
Speaking
Statistical analysis- parametric, non-parametric, bi-variate, multi-variate, descriptive, inferential, etc.
Statistics
Supervision
Survey & Questionnaire design
Survey errors
Teaching at the University level tenure and promotion processes
Teaching methods
Team building
Technology
They should be able to write effectively, everything to Journal articles to simple memos.
They should know how to correctly use all electronic necessary to communicate effectively.
They should know how to speak across a diverse range of people (highly educated to non-educated) and be able to get their main points across to this diverse population.
Understand connections between agricultural communications and its related disciplines
Understanding of Science, Business, Environmental Policy
Versed in emerging tools, technologies and industry processes such as social media, content management, and database management.
Versed in the problems, issues, and trends currently facing the agriculture industry as well as possessing a foundational knowledge of agriculture
Video and audio production and editing
Visualization
Web Site Design
Writing

120 Core Competencies Items Organized by Category
A better understanding of how communications affects agriculture
Ability to teach in formal and non-formal settings

Able to develop strategic and tactical communications plans.
Able to securing extramural funding in support of a research and scholarly activity program
Advertising/marketing writing
Analysis of agricultural issues
AP style
Apply their knowledge.
Ask questions- finding answers to questions is the goal of a researcher, but we must know what the question is first
Audience analysis and measurement
Be able to utilize all electronic form of communications
Be knowledgeable about the entire Agricultural industry- ranging from fat cattle to cotton growing to FFA and 4-H SAE's to markets. This will allow graduates the ability to communicate a wide range of issues within the Agricultural industry
Be proficient/experienced in one of the traditional communication areas (journalism, strategic communications such as marketing, advertising, or public relations) to the point of transferring the proper skills and best practices to undergraduate students.
Be proficient/experienced in several of the technologies commonly used by the profession (digital photography, Adobe suite products) to the point of transferring the proper skills to undergraduate students.
Broadcasting
Business writing
Campaign Planning
Carry out qualitative and quantitative research studies
Collaborate
Communicate
Communications Campaign Development
Computer/information technology literacy
Conduct original research
Conduct research studies using content analysis, survey research, focus groups, case studies, etc.
Correctly design and complete research including data analysis, modeling, and theory development
Create advertisements for various media
Create knowledge useful to those employed in the realm of agriculture (broadly defined).
Critical thinking,
Data analysis
Demonstrated skills in verbal and written communication, collaboration/teamwork, networking, and interpersonal communication.
Design a media campaign;
Develop industry partnerships
Digital video and audio techniques
Editing processes
Efficiently and effectively design and deliver graduate and undergraduate courses that maximize student learning.

Establish validity and reliability when conducting quantitative research as well as the comparable assessments in qualitative research;
Evaluate media products
Experimental design
Feature writing
Focus
Fundraising
Grammar and punctuation
Grant Development
Grant Writing Skills
Higher Education Policy & Procedures
How to gauge psychological and sociological aspects of social systems large and small human resource management
Identify patterns and trends revealed through research.
Identify their research focus.
Impromptu speaking
Independently design, compile, analyze and report social science information
InDesign
Industry Knowledge
Information literacy in agriculture and related sciences
Interpret statistics;
Journalism
Journalistic interviewing
Know how to use a theory for inquiry (research).
Knowledge of agricultural policy
Laboratory acquisition and purchasing processes
Layout and design
Lead a balance life--allocate time for work, family, recreation, etc.
Manage multiple tasks at one time.
Manage time well.
Media effects measurement
Media relations
Message Analysis (readability, presentation, effectiveness)
News writing
Opinion writing
Oral communication skills
Persuasive writing
Photo manipulation
Photoshop Design
PR and marketing
Presentation development (such as PowerPoint or Keynote)
Produce an effective résumé
Professional Development
Project rubrics
Proposal writing
Public relations processes

Public relations writing
Public speaking
Publication production management
Publish original research
Reading and writing Agricultural and scientific literacy
Research design
Research methodology (quantitative or qualitative)
Social media
Social media marketing & PR
Statistical Analysis
Statistical Data Analysis
Survey Research
Syllabi Design
Take and evaluate photos
Teach AP style writing
Teach to a variety of learning styles
Teach well
Teaching effectiveness
Technical agriculture and agriculture science
Technical writing and editing
Think critically about issues, research, etc.
This position requires that we focus on a project for a bit and then change tasks (e.g., write on a manuscript for an hour in the morning, then go teach class, then grade papers, then answer emails, then write for another hour in the afternoon).
TV
Use discipline and industry-level software programs
Video production (shooting and editing)
Video/audio editing software
Video/audio production planning and management
Videography
Visual design theory
Web design
Web design software
Website design theory and processes
Work with groups inside and outside academia
Write a grant
Write a news release
Write effective letters
Write in multiple forms
Writing (extensive)- journalistic, technical, professional, for public forums, etc.

APPENDIX J:

ROUND TWO INSTRUMENT

Round 2

Statements from Core Content

Please indicate your level of agreement with these statements using the 1-6 scale.

1= strongly disagree, 2= disagree, 3= slightly disagree, 4= slightly agree, 5= agree, and 6= strongly agree

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
accurate, accepted rules of style and usage such as AP and APA	○	○	○	○	○	○
adult education	○	○	○	○	○	○
agricultural knowledge of policy and current events	○	○	○	○	○	○
assertiveness	○	○	○	○	○	○
basic concepts of photography	○	○	○	○	○	○
campaign development	○	○	○	○	○	○
career counseling	○	○	○	○	○	○
change theory based on diffusion	○	○	○	○	○	○
characteristics of news	○	○	○	○	○	○
communication theories	○	○	○	○	○	○
conflict and content management	○	○	○	○	○	○
core disciplines of anthropology, psychology, and sociology	○	○	○	○	○	○
debating	○	○	○	○	○	○
educational administration	○	○	○	○	○	○
educational philosophy and theory	○	○	○	○	○	○
emerging tools	○	○	○	○	○	○
entreperneurism	○	○	○	○	○	○
ethics	○	○	○	○	○	○
evaluation methods- focus groups and needs assessments	○	○	○	○	○	○
facilitation	○	○	○	○	○	○
finance	○	○	○	○	○	○
grantmanship	○	○	○	○	○	○
history and philosophies of agricultural communications and general media	○	○	○	○	○	○
history communication theory	○	○	○	○	○	○
industry processes	○	○	○	○	○	○
instructional design	○	○	○	○	○	○
layout and principle of design	○	○	○	○	○	○
leadership and supervision	○	○	○	○	○	○
listening	○	○	○	○	○	○
management of people, processes, media, and resources	○	○	○	○	○	○
media influence and global issues in food, agriculture, and communication	○	○	○	○	○	○
moving audience segments from information intake to knowledge development to sense-making	○	○	○	○	○	○
negotiating	○	○	○	○	○	○
oral communication skills	○	○	○	○	○	○
organization and planning	○	○	○	○	○	○
practical understanding of mass communication	○	○	○	○	○	○
public opinion processes	○	○	○	○	○	○
public relations	○	○	○	○	○	○

Q1

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
reasoning on an individual and community level						
relationship building- people skills						
research methods- qualitative and quantitative						
research- survey design, survey errors, data analysis, data management, process						
rhetorical theory and criticism						
risk and crisis communication						
scale development- constructs & scale anchors						
setting goals and objectives						
social media- new media						
statistical analysis- bi-variate, descriptive, inferential, multi-variate, non-parametric, parametric						
statistics- social science						
strategic planning and visioning						
structural equation modeling						
team building						
technologies and innovations- use of						
understanding connections between agricultural communications and its related disciplines						
understanding of business, environmental policy, and science						
university level teaching- methods, application of, learning and development, andragogy and pedagogy						
video and audio production						
visualization						
web site design						
writing and editing- research, technical, scientific, journalistic, media						

Round 2

Statements from Core Competencies

Please indicate your level of agreement with these statements using the 1-6 scale.

1= strongly disagree, 2= disagree, 3= slightly disagree, 4= slightly agree, 5= agree, and 6= strongly agree

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
agricultural, agricultural policy, and science literacy and knowledge	○	○	○	○	○	○
analysis of agricultural issues	○	○	○	○	○	○
AP style	○	○	○	○	○	○
apply their knowledge	○	○	○	○	○	○
ask questions	○	○	○	○	○	○
audience analysis and measurement	○	○	○	○	○	○
collaborate	○	○	○	○	○	○
computer technology	○	○	○	○	○	○
conduct original research studies using experimental design, case studies, content analysis, focus groups, survey research	○	○	○	○	○	○
create knowledge useful to those employed in the realm of agriculture	○	○	○	○	○	○
critical thinking	○	○	○	○	○	○
critique articles for both scholarly and journalistic print publications	○	○	○	○	○	○
design a media campaign	○	○	○	○	○	○
develop industry partnerships	○	○	○	○	○	○
develop strategic and tactical communication plans	○	○	○	○	○	○
digital video and audio techniques	○	○	○	○	○	○
editing processes	○	○	○	○	○	○
efficiently and effectively design and deliver graduate and undergraduate courses that maximize student learning	○	○	○	○	○	○
evaluate media products	○	○	○	○	○	○
fundraising and grant seeking skills	○	○	○	○	○	○
higher education policy and procedures	○	○	○	○	○	○
how to gauge psychological and sociological aspects of social systems- large and small	○	○	○	○	○	○
human resource management	○	○	○	○	○	○
independently design, compile, analyze, and report social science information	○	○	○	○	○	○
interpersonal communication	○	○	○	○	○	○
interviewing skills	○	○	○	○	○	○
know how to use theory for inquiry	○	○	○	○	○	○
magazine layout and production	○	○	○	○	○	○
manage time, manage multiple tasks at one time, focus, and live a balanced life	○	○	○	○	○	○
marketing	○	○	○	○	○	○
media relations	○	○	○	○	○	○
message analysis- effective, presentation, readability	○	○	○	○	○	○
modeling	○	○	○	○	○	○
networking	○	○	○	○	○	○
oral communication skills	○	○	○	○	○	○

Round 2

Q2	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
photography						
presentation development						
produce an effective resume						
professional development						
public relations writing, processes, and planning						
public speaking						
publish original research						
research design						
research identification, planning and development						
research methodology- qualitative and quantitative; data analysis						
social media						
statistics- interpret and data analysis						
survey research						
syllabi design & project rubrics						
teach a variety of learning styles						
teaching effectiveness						
technical agriculture and agriculture science						
theory development						
think critically						
TV broadcasting						
understanding how communication affects agriculture						
video and audio production planning and management						
visual design theory						
web design- theory and processes						
write effectively- for public forums, news, for journals, journalistic, professional, technical						

APPENDIX K:

ROUND TWO REMINDER

Hello participants,

This is your reminder message to please submit your responses to Round Two of Core Components of a PhD Program in Agricultural Communications: A Delphi Study. The link is posted below. I would like all responses recorded by this Friday, June 3, 2011.

https://okstatecasnr.qualtrics.com/SE/?SID=SV_0wGboYyw3LPbF64

I know your time is valuable. I appreciate your help!

Thank you,

Jennifer Ann Smith
903.926.5514

APPENDIX L:

ROUND THREE INSTRUMENT

round 3

Statements from Core Content

Please indicate your level of agreement with these statements using the 1-6 scale.

1= strongly disagree, 2= disagree, 3= slightly disagree, 4= slightly agree, 5= agree, and 6= strongly agree

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
ethics 5.85						
research methods- qualitative and quantitative 5.77						
research- survey design, survey errors, data analysis, data management, process 5.77						
media influence and global issues in food, agriculture, and communication 5.62						
statistics- social science 5.62						
writing and editing- research, technical, scientific, journalistic, media 5.62						
pratical understanding of mass communications 5.54						
setting goals and objectives 5.54						
understanding connections between agricultural communications and its related disciplines 5.54						
agricultural knowledge of policy and current events 5.54						
accurate, accepted rules of style and usage such a AP and APA 5.46						
history and philosophies of agricultural communications and general media 5.46						
listening 5.46						
organization and planning 5.46						
relationship building- people skills 5.46						
risk and crisis communication 5.46						
evaluation methods- focus groups and needs assessments 5.38						
emerging tools 5.31						
moving audience segments from information intake to knowledge development to sense-making 5.31						
oral communication skills 5.31						
public relations 5.31						
technologies and innovations- use of 5.31						
management of people, processes, media and resources 5.23						
public opinion processes 5.23						
layout and principles of design 5.15						
social media (new media) 5.15						
statistical analysis- bi-variate, descriptive, inferential, multi-variate, non-parametric, parametric 5.15						
communication theories- 5.08						
educational philosophy & theory 5.00						
reasoning on an individual and community level 5.00						
strategic planning/visioning 5.00						
university level teaching- methods, application of,						

round 2

1

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
learning and development, andragogy and pedagogy 5.00						
video and audio production 5.00						
characteristics of news 4.92						
scale development- constructs and scale anchors 4.92						
campaign development 4.85						
instructional design 4.85						
understanding of business, environmental policy, and science 4.85						
grantmanship 4.77						
leadership and supervision 4.77						
rhetorical theory and criticism 4.77						
web site design 4.77						
team building 4.69						
conflict and content management 4.62						
basic concepts of photography 4.62						
change theory beyond diffusion 4.62						
facilitation 4.62						
adult education 4.46						
assertiveness 4.38						
human communication theory 4.38						
visualization 4.38						
industry processes 4.31						
negotiating 4.23						
career counseling 4.15						
core disciplines of antropology, psychology, sociology 4.08						
structural equation modeling 3.92						
entreperneurism 3.69						
debating 3.62						
finance 3.46						
educational administration 3.15						

Comments **Please record any and all comments here. If you see any content that could be combined, record them here.**

Core Competencies

round 2

Statements from Core Competencies

Please indicate your level of agreement with these statements using the 1-6 scale.
1= strongly disagree, 2= disagree, 3= slightly disagree, 4= slightly agree, 5= agree, and 6= strongly agree

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
critical thinking 5.92	○	○	○	○	○	○
apply their knowledge 5.69	○	○	○	○	○	○
conduct original research studies using experimental design, case studies, content analysis, focus groups, survey research 5.62	○	○	○	○	○	○
manage time, manage multiple tasks at one time, focus, and live a balanced life 5.62	○	○	○	○	○	○
understand how communication affects agriculture 5.62	○	○	○	○	○	○
write effectively- for public forums, news, for journals, journalistic, professional, technical 5.62	○	○	○	○	○	○
ask questions 5.54	○	○	○	○	○	○
research methodology- qualitative and quantitative; data analysis 5.54	○	○	○	○	○	○
statistics- interpret and data analysis 5.54	○	○	○	○	○	○
develop strategic and tactical communication plans 5.46	○	○	○	○	○	○
know how to use theory for inquiry 5.46	○	○	○	○	○	○
research design 5.46	○	○	○	○	○	○
analysis for agricultural issues 5.38	○	○	○	○	○	○
AP style 5.38	○	○	○	○	○	○
collaborate 5.38	○	○	○	○	○	○
create knowledge useful to those employed in the realm of agriculture 5.38	○	○	○	○	○	○
research identification, planning and development 5.38	○	○	○	○	○	○
survey research 5.38	○	○	○	○	○	○
agricultural, agricultural policy, and science literacy and knowledge 5.31	○	○	○	○	○	○
efficiently and effectively design and deliver graduate and undergraduate courses that maximize student learning 5.31	○	○	○	○	○	○
independently design, compile, analyze, and report social science information 5.31	○	○	○	○	○	○
interpersonal communication 5.31	○	○	○	○	○	○
interviewing skills 5.31	○	○	○	○	○	○
publish original research 5.31	○	○	○	○	○	○
audience analysis and measurement 5.23	○	○	○	○	○	○
computer technology 5.23	○	○	○	○	○	○
message analysis- effectiveness, presentation, readability 5.23	○	○	○	○	○	○
oral communication skills 5.23	○	○	○	○	○	○
teach a variety of learning styles 5.23	○	○	○	○	○	○
critique articles for both scholary and journalistic print publications 5.15	○	○	○	○	○	○
networking 5.15	○	○	○	○	○	○
presentation development 5.15	○	○	○	○	○	○

round 3

2

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
public speaking 5.15						
teaching effectiveness 5.15						
design a media campaign 5.08						
public relations writing, processes, and planning 5.08						
syllabi design and project rubrics 5.08						
media relations 5.00						
social media 5.00						
editing processes 4.92						
fundraising and grantseeking skills 4.92						
professional development 4.92						
theory development 4.85						
evaluate media products 4.77						
produce an effective resume 4.77						
technical agriculture and agriculture science 4.77						
web design- theory and processes 4.77						
develop industry partnerships 4.69						
digital video and audio techniques 4.69						
magazine layout and production 4.69						
visual design theory 4.69						
photography 4.54						
video/audio production planning and management 4.54						
marketing 4.46						
higher education policy/procedures 4.38						
how to gauge psychological and sociological aspects of social systems large and small 4.31						
TV broadcasting 4.31						
modeling 4.15						
human resource management 3.69						

Comments **Please record any and all comments here. If you see any competencies that could be combined, record them here.**

University **Please respond below with what university you are affiliated with.**

APPENDIX M:

ROUND THREE REMINDER

Hello participants,

This is your reminder message to please submit your responses to Round Three of Core Components of a PhD Program in Agricultural Communications: A Delphi Study. The link is posted below. I would like all responses recorded by this Friday, June 17, 2011.

https://okstatecasnr.qualtrics.com/SE/?SID=SV_7QEAVci6TggRZnS

I know your time is valuable. I appreciate your help!

Thank you,

Jennifer Ann Smith
903.926.5514

VITA

JENNIFER ANN SMITH

Candidate for the Degree of

Master of Science

Thesis: CORECOMPONENTS OF A DOCTORAL PROGRAM IN AGRICULTURAL COMMUNICATIONS: A NATIONAL DELPHI STUDY

Major Field: Agricultural Communications

Biographical:

Education: Completed the requirements for the Master of Science in agricultural communications at Oklahoma State University, Stillwater, Oklahoma in May, 2012. Completed the requirements for the Bachelor of Science in agricultural leadership at Texas A&M University College Station, Texas, in August 2010

Experience: Career Coordinator, College of Agriculture and Life Sciences, Texas A&M University, October 2011 through present, graduate assistant, Oklahoma State University, fall 2010 through spring 2011.

Professional Memberships: Association of Former Students Texas A&M University, American Angus Association, North American Colleges & Teachers of Agriculture, American Association for Agricultural Education

Name: Jennifer Ann Smith Date of Degree: May, 2012

Institution: Oklahoma State University Location: Stillwater, Oklahoma

Title of Study: CORE COMPONENTS OF A DOCTORAL PROGRAM IN AGRICULTURAL COMMUNICATIONS: A NATIONAL DELPHI STUDY

Pages in Study: 113 Candidate for the Degree of Master of Science

Major Field: Agricultural Communications

Scope and Method of Study: The purpose of this study was to determine the core content and competencies needed in a doctoral program in agricultural communications. The Delphi technique was used to reach the objectives. Thirteen university faculty from around the United States served on the panel of experts.

Findings and Conclusions: One hundred percent (n = 13) of the respondents completed all three rounds of the study. In Round One, Delphi panelists provided 112 core content items and 120 core competency items. From those original items, the researcher combined like items to create 60 core content items and 59 core competency items for presentation in Round Two of the study. Through the three-round modified Delphi method technique, the panel reached consensus of agreement on 50 core content items and 51 core competency items. The typical panelist held a Doctor of Philosophy degree, taught agricultural communications classes at his or her respective university, was located in the Southern Region of the American Association for Agricultural Education, and had been in academia for many years. The final core content and competency items provided by the panelists were broad and divided into categories by the researcher: Agricultural Knowledge and News; Communications Knowledge; Employability Skills; Media; Research; Teaching and Education; and Agricultural Writing. The ability to communicate with others and promote the discipline of agricultural communications was important to many of the panelists based on their answers to the instruments as was the ability to conduct effective research. This study should be repeated with another set of experts. Curriculum, if developed, should be revised annually. A needs assessment should be conducted to determine if a unique doctoral program in agricultural communications is needs. A doctoral program, if subsequently implemented, should be evaluated annually by evaluating competencies learned by students.

ADVISER'S APPROVAL: Dr. Shelly Peper Sitton