HIGH SCHOOL AGRICULTURAL COMMUNICATIONS COMPETENCIES:

A NATIONAL DELPHI STUDY

by

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CHAPTER I

INTRODUCTION

Background and Setting

Agricultural education has been part of the educational system in America since its inception. The first formal instruction of agriculture in the United States started in Georgia in 1773. The instruction was for colonists who were trying to learn native farming methods, cultivation techniques and crop identification that would adapt to their new homeland (Hamlin, 1956; Moore, 1987).

In the first half of the nineteenth century, some schools offered instruction in agricultural practices, but parents conducted most instruction in this area. Following the custom of the times, most practical skills and knowledge were passed from parent to child. (National Research Council, 1988). It was not until the passage of the Morrill Act in 1862 that more formal instruction in agriculture began. This act provided for the support and maintenance of state colleges where students received instruction in agriculture and mechanical arts (Tenney, 1977).

Although a number of states, including Tennessee, Connecticut, Rhode Island, Alabama, and Wisconsin provided funding for state and regional schools of agriculture, it was not until 1908 that the state of Virginia first funded agricultural departments in public schools (Warmbrod, 1962). The typical high school curriculum at the time included agronomy, laboratory and field work, rural engineering and farm mechanics (National Research Council, 1988).

Federal funding of high school agricultural education began with the Smith-Hughes Act of 1917. This act included specific provisions for agricultural education. It marked the start of “vocational agriculture” programs which were designed to prepare young people to be or to work as farmers. Although the instruction was to prepare young people for farming, it was much more encompassing. Vocational agriculture programs helped to spread knowledge about agricultural innovations and proper use of soil and animal husbandry (National Research Council, 1988).

A major development in vocational agriculture was the founding of the Future Farmers of America (FFA) in 1928. The FFA was established to assist young farm boys in developing a sense of pride and self-confidence. It was perceived that these youth felt inferior to their “city” counterparts, and the FFA would allow them opportunities to excel. (Vaughn et al., 1995). The FFA quickly became an integral part of the instructional program and provided parents and other community members opportunities for involvement in a variety of educational and recreational activities (National Research Council, 1988).

The year 2000 finds agricultural education firmly entrenched in public school education. The National Association of Agricultural Educators (1999) reported agricultural education programs in approximately 8,000 schools in the United States near the turn of the century. However, high school agricultural education programs are much different than they were in the early 1900’s. The programs are no longer just for boys, as Federal funding for agricultural education—provided through the Carl D. Perkins Act—places

emphasis on the special needs of women, members of minority groups and handicapped and disadvantaged students (National Research Council, 1988). Over one-fourth of the students enrolled in high school agricultural education courses were female in 1998 (National FFA Organization, 1999).

The agricultural education curriculum has also changed to meet the needs of a changing agricultural industry. Instead of studying farming techniques, high school students in the year 2000 study topics such as genetic engineering, agricultural systems management, and aquaculture. The emphasis on instruction has changed from production agriculture to agribusiness (Case & Whitaker, 1998). Federal legislation has also expanded the measure of success of agricultural education programs by stressing development of “basic employment competencies” instead of employment alone (National Research Council, 1988).

The development of a business oriented industry in agriculture, coupled with a lack of knowledge on the part the general public about agriculture, has generated a tremendous interest in including agricultural communications as part of the curriculum in agricultural education (Birkenholz and Craven, 1996; Sprecker and Rudd, 1998). Birkenholz and Craven (1996) claim that helping agriculturists become effective communicators is one of the most important roles of an agriculturist. Their implication is that agricultural communications should be a major component of the high school agricultural education program. Recent national studies from the National Academy of Sciences (National Research Council, 1998) and the National Council for Agricultural Education (Reinventing

Agricultural Education in the Year 2020, 1998) have identified a need to better communicate the story of agriculture.

Just as agriculture has changed, so have the competencies needed to become an agricultural communicator (Sprecker & Rudd, 1998). Buck and Barrick's (1995) study revealed a need for identifying the type of education best suited for an agricultural communicator. Although there have been several studies conducted to determine curriculum/competency needs for university students enrolled in agricultural communications programs (Terry et al., 1994; Sprecker & Rudd, 1998), a review of the research indicates there has never been a national study to determine curriculum needs of students enrolled in high school agricultural communications courses.

Statement of the Problem

The problem of this study was the lack of an identified-validated list of competencies that could guide the development of curriculum for agricultural communications at the high school level nationwide.

Purpose of the Study

The major purpose of this study was to identify competencies that should be attained by high school students who complete courses in agricultural communications. Identification of the competencies came from industry leaders, high school agricultural education teachers, and agricultural communications university faculty. Teachers and faculty used in the study were individuals who are teaching in the United States during the

1999-2000 school year. Industry leaders were 1999-2000 national officers from seven professional organizations in the United States whose primary goal is enhancement of agricultural communications.

Research Questions

As a means of accomplishing the purpose of the study, answers to two major questions were sought:

1. What specific topics should be included in a high school curriculum for agricultural communications?
2. For each topic identified, what competencies should agricultural communications students possess upon completion of the program?
3. For each competency identified, at what scholastic level should they be introduced to the student?

Definition of Terms

For the purpose of the study, the following terms were defined as follows:

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

Agricultural Education. Also referred to “agriscience education” and “vocational agriculture education.” Systematic instruction that prepares students for successful careers and a lifetime of informed choices in the global

agriculture, food, fiber and natural resources systems (Reinventing Agricultural Education in the Year 2020, 1999).

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

Industry Leader. Officers of agricultural communications professional organizations. The organizations selected for this study were: (a) Agricultural Communicators of Tomorrow (ACT); (b) Agricultural Communicators in Education (ACE); (c) Agricultural Relations Council (ARC); (d) American Agricultural Editors' Association (AAEA); (e) Cooperative Communicators Association (CCA); (f) Livestock Publications Council (LPC); and (g) National Association of Farm Broadcasters.

Topic. A subject that is taught. A field of study in agricultural communications.

Limitations of the Study

The following are limitations to the study that should be taken into consideration when generalizing the results to other populations.

1. The study was limited to opinions expressed by industry leaders, agriscience teachers, and agricultural communications university faculty who occupied such positions during the 1999-2000 school year. Although input from other groups would prove useful, such input goes beyond the scope of this study.

2. Although agricultural education was offered at the elementary and post-secondary level, this study focused only on those competencies needed by students who complete high school courses in agricultural communications.

Importance of the Study

The need for this study was based upon consideration of the following factors.

1. There is a need to teach agricultural communications to high school students.

The National Research Council (1988), in its final report on agricultural education, spoke of the tremendous need for agricultural literacy and “education about agriculture.” The Council recommended that agricultural education be expanded to include education in this area. Lockaby and Vernon (1998) contend that agricultural communications has always been an important component of the agricultural education program and that an even closer relationship should exist. Birkenholz and Craven (1996) have noted agricultural communications is one of the most important aspects of agricultural education. Osborne and Phipps (1988) list skills in agricultural communications as one of the goals of agricultural education.

A national steering committee, charged with the concept of “reinventing agricultural education” (National Council for Agricultural Education, 1999), concluded that one of the major goals of agricultural education should be to enhance agricultural literacy skills. In 1999, the

National FFA Organization, which conducts competitive events to test curricula knowledge of high school agricultural education students, started a national competition in agricultural communications. Approval of this competition by the National FFA Board of Directors is a clear indication of the recognized importance of agricultural communications as part of the high school agricultural education program.

2. Information gained from industry leaders, agriscience teachers, and agricultural communications university faculty is needed to help agricultural educators offer high school agricultural communications programs.

In order for realistic priorities for instructional developments to occur, the curriculum planning process should involve all who are affected by the program. Those involved include teachers, employers, and employees (Diamond, 1989; Sledge et al., 1987; Sprecker, 1998). Finch and Crunkilton (1989) indicate that it is vitally important to ensure that curriculum content reflects the needs of the work force. Evans (1975) contends that the explosion of knowledge in agriculture and a parallel revolution in communications has created a demand for curriculum evaluation in the area of agricultural communications. According to Reisner (1990), the need for periodic examination of agricultural communications programs and curricula is acute. Bailey-Evans (1994) noted the agricultural communications curriculum should be continually expanded and updated to reflect the technological advancements of today and the future.

Sprecker (1998) noted the competencies needed to become an agricultural communicator have changed with technology and job requirements, and there is a pressing need to examine the agricultural communications curriculum. Terry et al. (1995) claim that specialization and scientific discovery in the field of food, agriculture, and natural resources has created a new need to communicate information about this area. If academic curriculum is to meet the needs of industry, “agricultural communications must continually survey professionals to determine the needs and skills required for a career in agricultural communications and then adjust curriculum accordingly” (Sprecker, 1998 p. 2).

3. No existing study has been found that identifies competencies to include in a high school agricultural communications program.

A thorough review of Educational Resources Information Centers (ERIC), the Journal of Agricultural Education and proceedings of regional and national research conferences in agricultural education, indicates there has not been a research study reported that identifies competencies or course content for high school students studying agricultural communications.

CHAPTER II

REVIEW OF LITERATURE

This review is divided into several sections based on literature detailing curriculum in agricultural education and agricultural communications. The sections are: (a) background and history of agricultural education; (b) background and history of educational programs in agricultural communications; (c) need for curriculum review; (d) curriculum/competency studies related to agricultural communications; and (e) the Delphi technique.

Background and History of Agricultural Education

The Early Years

Teaching of agriculture has been evident in America since the first colonist came to this country. Agriculture trades were taught through apprenticeships and fathers were held responsible for teaching their sons to farm. One of the first agriculture schools was established in Georgia in 1734 for orphans. A similar school, called the Bethesda School in Savannah, Georgia, was founded in 1740, and a private school in Gardiner, Maine, offered agricultural education in 1821, the year the first public high school was established (Hamlin, 1956).

According to Phipps and Osborne (1988), some type of secondary agricultural education has been present in the public school system since the beginning of public education. They note that most of the first courses taught were academic and non-vocational in nature. Hamlin (1956) notes that

agriculture in public schools of less-than-college grade began in certain elementary schools in Massachusetts in 1858. He believes that teaching agriculture in secondary schools began in Elyria, Ohio, in 1902, and that the first high school agricultural education teacher was an individual who was employed by a public school in Carroll County, Georgia, in 1903.

In some states, emphasis was placed on agriculture training as part of general education that was provided for all rural boys and girls. Many schools provided agricultural education primarily for farmers and prospective farmers and supervised practice was stressed. Instruction was available to young and adult farmers as well as to school-age children and youth. By 1916, the number of public high schools teaching agriculture had risen to 3,181 (Hamlin, 1956).

Agricultural education was first offered to less-than-college age pupils at the public's expense and was under the control of the local school districts. Later, the states aided the development of agricultural education and the first bill proposing national aid was introduced to Congress in 1907. The first act providing aid for agricultural education did not pass until 10 years later on February 23, 1917. This, of course, was known as the Smith-Hughes Act (Hamlin, 1956).

Phipps and Osborne (1988) note that although 30 states had established some type of agriculture courses in public schools prior to 1917, it was not until the passage of the Smith-Hughes Act that agricultural education programs became a fixture in American public education. This Act provided federal funds to promote vocational education in agriculture that

had to be matched with local and state funds. The Smith-Hughes Act and subsequent acts were very effective in promoting the establishment of courses of vocational education in agriculture (Phipps & Osborne, 1988).

Modern Agricultural Education

When agricultural education was introduced in public schools in 1917, there were approximately 200,000 school districts in the United States. Nearly all farmers were in districts supporting one-teacher elementary schools. Farm children were just beginning to attend high schools, which at the time, were very new to most rural areas. High schools available to them were in neighboring towns and cities. There was a heavy dropout rate the first two years in high schools of the period. Consequently, agricultural education courses were provided the first two years to reach as many farm boys as possible. The typical course work dealt with crops and livestock. It was not until 1930, that agriculture courses were offered in the eleventh and twelfth grades. The courses taught were usually more advanced in nature. Examples of these courses included farm mechanics and management (Hamlin, 1956).

Although agricultural education made adjustments to match changes in production agriculture, until 1960 it remained a program aimed at teaching young males how to improve farming techniques. The Vocational Education Act of 1963—and its subsequent amendment in 1968—expanded the definition of agriculture to include many non-farm areas, including horticulture, agricultural mechanics, agribusiness, and agriscience. For the

first time, females were allowed into the high school program (National Research Council, 1988). The Carl D. Perkins Act of 1984 and its subsequent reauthorization enhanced the broadening of agricultural education by emphasizing the use of modern technology in vocational programs, including agricultural education.

In 1988, the best known type of agricultural education in public schools was vocational in nature. Phipps and Osborne (1988) defined agricultural education at that time as being the:

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

In the late 20th century, agricultural educators began to expand Phipps and Osborne's definition of agricultural education. A study commissioned by the National Academy of Sciences (National Research Council, 1988) released a report titled "Understanding Agriculture: New Directions for Education." In the report, a national committee charged that major revisions were needed in vocational agriculture. Specifically, they noted that the focus of agricultural education must change and "agricultural education is more than vocational agriculture." The committee recommended broadening the subject matter in and about agriculture to include "the utilization of agricultural commodities, agribusiness marketing and

management in a global economy, public policy, environmental and resource management, nutrition and health” (p. 6).

In the late 1990's, W. K. Kellogg funded a project titled “Reinventing Agricultural Education in the Year 2020.” A national steering committee established by the project released a report in 1998 titled “A New Era in Agriculture” (National Council for Agricultural Education, 1998) which outlined changes needed in order to develop the types of agricultural education programs needed to meet future demands. The report noted that agricultural education programs were serving more than 800,000 middle school, secondary, post-secondary and adult students throughout the 50 states and three U.S. territories (Puerto Rico, Guam, U.S. Virgin Islands), but agricultural education was not reaching all those who could benefit from the program. Despite having approximately 8,000 agricultural education programs in the country (S. Vaughn, personal communication, February 8, 2000), the report concluded that a large majority (94%) of students in the United States do not have the knowledge required for a lifetime of informed choices in agriculture, food, fiber and natural resources systems. The report recommended collaboration as the key to develop and disseminate contemporary agriculture curricula for all students. It also indicated that agricultural educators must work with educators in all schools and all university teacher preparation programs to infuse agriculture across the educational spectrum.

In a move to emphasize that modern agricultural education is more than vocational education, the National Association of Vocational Agriculture

Teachers (NVATA) changed their name in 1999 to the National Association of Agricultural Educators (S. Vaughn, personal communication, February 8, 2000). The year 2000 finds many high school agricultural education programs have dropped “vocational” from their titles and emphasizing science and technology in agriculture (S. Vaughn, personal communication, February 8, 2000). For example, in Texas, which has the largest agricultural education enrollment in the nation in 2000, former vocational agriculture teachers are now referred to as “Agriscience and Technology” teachers (IMS, 1999). State officials overseeing agricultural education programs in the state are housed in a division, titled “Career and Technology Education (Texas Education Agency, 1999).

Philosophy of Agricultural Education

According to Phipps and Osborne (1988) over the years, agricultural education has shaped and refined a clear philosophy with several distinguishing characteristics. Agricultural educators put an emphasis on pragmatism. The instruction, methodology, program, and courses are based on the problems involved in the various tasks in the agricultural world of work making the content of the courses flexible and changing. Principles and theories are studied as potential solutions to real problems while practical application and the successful transfer of knowledge into real-world settings is the goal of instruction. The emphasis is on learning by doing and this is accomplished by using laboratory work, field trips, problem solving and supervised agricultural experience programs (Phipps & Osborne, 1988).

Phipps and Osborne (1988) state that much emphasis is placed on the individual student in agricultural education. Activities and experiences in agricultural education programs contribute toward the development of positive self-concepts and self-confidence in students. It is believed that any student can achieve success given timely and appropriate support and encouragement from teachers of agricultural education. The importance placed on home and job visits by the teachers and by basing the content of instruction on the individual shows the students that they have worth and importance (Phipps & Osborne, 1988).

According to the National Research Council (1988) because of its distinctive mission, agricultural education has utilized an equally distinctive approach to instruction. Teachers have sought to engage students in tasks that taught process and work experience as well as entrepreneurship. Teachers have also historically encouraged students to make independent decisions and to take initiative (National Research Council, 1988).

Objectives of Agricultural Education

Phipps and Osborne (1988) note that agricultural education is an important part of the public school system in that it contributes to the general objectives of education. It contributes to the development of the student's ability to think and study and also solve problems efficiently using the skills of collecting and interpreting data. Agricultural education also aids in the development of desirable interests and attitudes, and in the development of social sensitivity and resourcefulness of students. According

to Phipps and Osborne (1988) a comprehensive program of agricultural education—in the late 1980's—in addition to contributing to the objectives of all types of education, should do the following:

- Develop understanding of the influence of research on agriculture and on other aspects of our society, such as medicine and consumer products.
 - Develop understanding of interrelationships of agriculture and other segments of society.
 - Develop understanding of the influence of public policy on agriculture.
 - Develop understanding and appreciation of agriculture for a vocational and leisure interests.
 - Promote creative activities of students.
 - Promote meaningful and practical applications of the content of other subject matter areas, such as science and mathematics.
 - Provide guidance regarding the opportunities in occupations requiring knowledge and skills in agriculture.
 - Assist in improving the economic efficiency of agriculture and individuals in agriculture.
 - Promote balance and meaning in the total educational program of the school and of the individuals.
 - Develop understanding of the contributions of agriculture to society.
 - Assist present and prospective workers in agricultural education occupations in improving their efficiency.
- (pp. 9-10)

Recent Changes in Philosophy and Objectives

The National Research Council Report of 1988

The National Research Council's (1988) report promoted a change in philosophy for agricultural education. Whereas agricultural education was previously considered vocational in nature, the report emphasized the relevance and scope of the agricultural education curriculum, supervised agricultural experience, and the aims of the FFA must be broadened. The report clearly stated the agricultural education program must go beyond preparing students for immediate employment upon graduation from high school:

Vocational agriculture programs must be upgraded to prepare students more effectively for the study of agriculture in post-secondary schools and colleges and for current and future career opportunities in agricultural sciences, agribusinesses, marketing, management, and food production and processing. (p. 4)

The report also addressed the difference between education "in agriculture" and "about agriculture" and emphasized that both types of education were important components for modern day agricultural education.

Reinventing Agricultural Education Report

The National Steering Committee for Reinventing Agricultural Education in the Year 2020 (National Council for Agricultural Education, 1998) further expanded the mission and objectives of agricultural education. Their report was the result of a series of visioning exercises which took place across the country in regional consortia and involved numerous individuals

both within and outside the field of agricultural education. Their “new” vision for agricultural education employs the phrase “agriculture, food fiber and natural resources systems” to describe the broad field of agricultural education:

Agricultural education envisions a world where all people value and understand the vital role of agriculture, food, fiber and natural resources systems in advancing personal and global well-being. (p. 2)

The committee utilized this vision to develop a new mission for agricultural education “agricultural education prepares students for successful careers and a lifetime of informed choices in the global agriculture, food, fiber and natural resources systems” (p. 2). The committee emphasized that in order to achieve the vision and mission, agricultural educators must “. . . engage in a global social contract to serve the needs of society, improve the quality of the environment, build leadership and collaboration, and develop new approaches to new challenges” (p. 2).

The visioning process conducted by the Reinventing Agricultural Education project produced four specific goals for agricultural education to be attained by the year 2020. Those goals, along with specific objectives were:

Goal 1. An abundance of highly motivated, well-educated teachers in all disciplines, pre-kindergarten through adult, provide agriculture, food, fiber and natural resources systems education.

Objective 1. Agricultural education leaders ensure a sufficient quantity of qualified agriculture teachers who represent the demographics of the nation.

Objective 2. Preparation programs for all elementary, secondary and adult teachers to integrate instruction in agriculture, food, fiber and natural resources systems.

Objective 3. Agricultural education leaders provide relevant instructional leadership and professional development opportunities for themselves and for all teachers.

Objective 4. Teacher preparation programs rely on the most current and broadly representative research for developing curriculum and courses of study.

Objective 5. Partnerships of leaders in agriculture, food, fiber and natural resources systems education, industry and government provide diverse learning experiences to ensure that school administrators and counselors are aware of the broad career opportunities available in agriculture.

Objective 6. Agricultural education leaders provide instruction in the review, selection, adaptation and use of appropriate educational technologies and teaching strategies to address the changing education environment.

Goal 2. All students have access to seamless, lifelong instruction in agriculture, food, fiber and natural resources systems through a wide variety of delivery systems and educational settings.

Objective 1. Collaboration among educators and educational entities to ensure students benefit from educational effectiveness and efficiency.

Objective 2. All students, in urban, suburban and rural schools have access to high quality agricultural education programs.

Objective 3. Prepare students for successful careers in global agriculture, food, fiber and natural resources systems.

Objective 4. Every agriculture student has opportunities for experiential learning and leadership development.

Objective 5. Agricultural education instructional systems and materials provide for diverse learning styles.

Objective 6. Student enrollments in agricultural education represent the diversity of the school-age population.

Goal 3. All students are conversationally literate in agriculture, food, fiber and natural resources systems.

Objective 1. Agriculture teachers encourage cross-curricular course development and instructional collaboration with teachers in all disciplines.

Objective 2. All teachers include elements of agriculture in a relevant, integrated instructional approach.

Objective 3. Agriculture teachers collaborate with other groups to bring factual information about agriculture, food, fiber and natural resources systems to all students.

Goal 4. Partnerships and strategic alliances ensure a continuous presence of education in and about agriculture, food, fiber and natural resources systems.

Objective 1. Positive working relationships with multiple stakeholders to build lines of communication and provide a diverse workforce for the agriculture, food, fiber and natural resources industries.

Objective 2. Broad-based coalitions of groups and organizations collaborate to develop and disseminate contemporary agriculture curricula for all students.

Objective 3. Partnerships and strategic alliances provide strong support for agricultural education.

Objective 4. Numerous and varied stakeholders, inside and outside the school system, engage in a continuing effort to strengthen and refine the shared vision, mission and goals.

Instructional Components of Agricultural Education

In agricultural education programs at the secondary level, historically four components have been included as integral parts of instruction: (1) classroom instruction, (2) supervised agricultural experience, (SAE) programs (3) laboratory instruction, and (4) FFA, the student organization.

Classroom Instruction

Classroom instruction gives students opportunities to study and discuss problems that pertain to specific areas of agriculture. Consequently, students gain knowledge and study principles that allow them to discover potential solutions to agricultural problems. Classroom instruction in agricultural education sets the stage for real understanding, application and

problem solving in the agriscience laboratory and the real world (Phipps and Osborne, 1988).

Supervised Agricultural Experience

Supervised Agricultural Experience (SAE) programs have been part of agricultural education since its early beginnings. Agricultural educator Rufus W. Stimson is given credit for pioneering “supervised farming” when he used this technique in 1908 for his students in the Smith Agricultural School in Northhampton, Massachusetts (Moore, 1985). The concept was to provide for curriculum and programs which were comprehensive in coverage, scientific in method, and practical in impact and focus (National Research Council, 1988). The Smith-Hughes Act of 1917 had a provision pertaining to agricultural education that stated “in order to receive the benefits of such appropriation, . . .such schools shall provide for directed or supervised practice in agriculture” (P.L. #64-347).

SAE programs, which at one time were referred to as SOEP's (Supervised Occupational Experience Programs) provide opportunities for agriculture students to apply the skills and knowledge learned at school to real-world situations. These programs include: production agriculture or agribusiness placement, directed laboratory experiences, productive enterprises, exploratory experiences, improvement projects and supplementary skills. SAE programs are directed under the supervision of an agriscience instructor and provide an integral component of instruction in agricultural education programs. The expectation of the students involved in

this program is the ability to apply knowledge and skills gained as a result of classroom instruction to problems encountered in their SAE. Supervised Agricultural Experience programs also provide students a way to individualize their study of agriculture while providing teachers the opportunity for one-on-one interaction with their students (Phipps & Osborne, 1988).

Laboratory Instruction

The laboratory instruction component of an agricultural education program involves laboratory teaching and learning activities in agriculture. Examples of laboratory instruction include, but are not limited to: machinery repair, artificial insemination, plant propagation, food processing, and insecticide application. This type of instruction usually occurs in a setting other than the classroom, but is not restricted to indoor activity. Effective instruction in the laboratory requires teacher demonstration and supervision of student practice. This component of the agricultural education curriculum serves as the major setting where students develop psychomotor skills and apply principles learned through classroom instruction. Laboratory instruction is seen as the essential link between classroom instruction and skill development (Phipps & Osborne, 1988).

The FFA Organization

The agricultural education organization known as the FFA (formerly the Future Farmers of America), is the national organization of, by, and for

students studying agricultural education in public secondary schools which operates under the provisions of the National Vocational Education acts. This organization is an educational, nonprofit, nonpolitical youth group of voluntary membership designed to develop leadership, character, thrift, scholarship, cooperation, citizenship, and patriotism. Members of this organization learn through participating in different experiences to conduct and take part in public meetings, public speaking skills, to buy and sell cooperatively, and to assume civic responsibility. The FFA is recognized as an integral part of the agricultural education program and constitutes one of the most effective devices for teaching through participatory experiences. It is an intra-curricular part of agricultural education programs and provides a variety of opportunities and experiences for students in all types of programs at the secondary level (Phipps & Osborne, 1988).

The original idea for the Future Farmers of America was fostered after courses in agricultural education were established by the National Vocational Education Act in 1917. Virginia formed a Future Farmers Club for boys in agriculture classes in the early 1920's, and the national organization was formed in 1928 in Kansas City, Missouri. The New Farmers of America (NFA), the organization for black agriculture students, merged with the FFA in 1965, and girls were allowed to become members in 1969. In 1988, the official name of the organization changed from the Future Farmers of America to the National FFA Organization (Official FFA Manual, 1999).

The main goal of the FFA is to “develop leadership, cooperation and citizenship for tomorrow’s agriculturists” (Official FFA Manual, 1999, p. 4).

The national FFA organization is a major force in developing leadership in today's youth. It is structured on three levels – local, state and national. On the local level, FFA chapters may be chartered in any public school with an agricultural education program. Leadership is provided by elected student officers and advisors (usually the agriscience teacher) who guide the chapter activities. A Program of Activities organizes what each chapter does in a year, serving as a guide for planning and accomplishing goals. A wide range of activities are planned to meet the needs of members and the community (Official FFA Manual, 1999).

The FFA is structured into degree programs that reward FFA members for achievement in all phases of leadership, skill and occupational development. There are four categories of membership in FFA – active, students currently enrolled in agricultural education; honorary, individuals who have rendered outstanding service to the FFA and the agricultural education program; alumni, former members; and collegiate, members of college FFA organizations (Official FFA Manual, 1999).

FFA Career Development Events

Career Development Events (CDE), formerly known as judging contests, were developed by the FFA to serve as a compliment to regular classroom instruction education. This is accomplished by allowing students to apply classroom skills in activities outside the classroom in competitive activities. Each of the CDE's help develop technical knowledge, reasoning skills and sportsmanship. CDE's are used to test skills and knowledge of

individuals or teams in the major areas of agricultural instruction and leadership (Official FFA Manual, 1999). According to the National FFA Organization (1999), the primary goal of CDE's is to develop individual responsibilities, foster teamwork, and promote communications while recognizing the value of ethical competition and the value of individual achievement. A CDE often requires two or more members from one chapter to work cooperatively. CDE's should be an outgrowth of instruction but recognize the value and contributions of the experience and aspirations of the individual members. A national agricultural communications career development event has been established. This event was demonstrated at the 1999 National FFA Convention (National FFA Organization, 1999).

Background and History of Agricultural Communications Educational Programs

University Agricultural Communications Programs

Similar to agricultural education programs, educational programs in agricultural communications began at the university, rather than the high school level. The recognition of agricultural communications at the university level began when colleges of agriculture developed an extension function in the early decades of the twentieth century (Duley, Jensen, & O'Brien, 1984). These researchers note that universities created agricultural journalism out of a need to disseminate research results to agriculturally related entities. Agricultural journalists required specific knowledge and skills unique to the profession (Terry et al., 1994). This led to the

development of educational programs by various universities to prepare agricultural journalists.

According to Duncan (1957), the first agricultural journalism curriculum to address this need came about in 1905 at Iowa State College in Ames, Iowa. This was the result of a group of agricultural leaders that gathered around the fireplace at the Stockyards Inn during the 1904 International Livestock Exposition Show. The consensus of this meeting was an expressed need for agriculturally trained writers. Marvin (1946) reported that C.F. Curtis, Dean of Agriculture at Iowa State College, who attended this meeting, was receptive to the idea, if funds were available. Burnett and Tucker (1990) report that in response to Curtis' statement during the meeting, John Clay, a Chicago livestock commissioner, offered the college an annual endowment of \$1,000 to fund a course titled "The Agricultural Press" in 1905.

Marvin (1946), reported on May 30, 1905, a group of friends and editors met on the Iowa State campus to follow through with the plans discussed during the meeting. As a result of this meeting, the first course ever offered in agricultural journalism was developed in the fall of 1905 and was taught by Will H. Ogilvie, editor for the Iowa Agricultural Experiment Station.

Iowa State offered eight classes in agricultural communications by 1911. One of these eight courses was a class in home economics as a result of the high demand from female students. By 1920, a four-year curriculum was

offered to receive the degree of Bachelor of Science in Agricultural Journalism (Marvin, 1946).

According to Marvin (1946), John Clay continued his contributions toward instruction in agricultural journalism at Iowa State College until the 1920's when he endowed a research fellowship in the form of a \$7,000 grant.

According to Burnett and Tucker (1990), in 1908, The University of Wisconsin-Madison became the first university to establish a department of agricultural journalism. J. Clyde Marquis was appointed agricultural instructor, and the first course offered was Farm News Writing. Marquis joined the staff of the Country Gentlemen in 1911 and later became the U. S. Representative at the International Institute of Agriculture in Rome. Dallas S. Burch received the first bachelor's degree in agricultural journalism in 1908. Burch pursued a career with the USDA.

There was quick growth between 1908-1928 in the number of colleges that offered courses in agricultural journalism. By 1928, seven colleges offered eleven courses under the category of "Trade and Technical Journalism." Examples of the course names included: "Agricultural Journalism," "Agricultural Editing," "Agricultural Writing," "The Agricultural Press," and "Agricultural Research and Seminar" (Nash, 1928, p. 54).

After the initial growth spurt, there was slowed growth in the number of agricultural communications programs until the 1960's. Duley, Jensen, and O'Brien (1984) found that half of the programs functioning in 1984 had started after 1961. These researchers found 38.5 percent of the new

programs used agricultural communications as the program title and were established between 1960 and 1979. The majority of programs developed prior to 1960 were identified as agricultural journalism programs. According to Lockaby and Vernon (1998), agricultural communications programs before 1960 were more narrowly defined in journalistic terms. An example of this is the agricultural communications program at Kansas State University. This program was developed out of the Industrial Journalism program, which spawned the current School of Journalism and Mass Communications. In the early years, students majored in agricultural journalism to seek a career in the print news field.

Terry et al. (1994), indicate that today's agricultural communications programs are well established. Most of the programs in the 1990's are identified with the term communication(s) rather than journalism (Doerfert & Cepica, 1991). Doerfert and Cepica reported there were approximately 30 university agricultural communications programs were in existence in 1990, and over 75 percent were housed in colleges of agriculture and related fields.

Relationship Between Agricultural Education and Agricultural Communications

Duley, Jensen, and O'Brien (1984), found many of the agricultural communications programs originated with initial courses offered through departments of agricultural education. According to Lockaby and Vernon (1998), this happened because students planning to teach must have a breadth of understanding about the complex agricultural industry. These students need to have the ability to "communicate" or "educate" this

information to others. Lockaby and Vernon (1998) continue by saying that agricultural communications and agricultural education have become effective partners and are rapidly becoming integral parts of each other. They add that this partnership is not only making agricultural education and agricultural communications stronger, it will continue to do so in the future.

Lockaby and Vernon's contention is supported by recent changes at universities that have seen agricultural communications programs joining in with departments of agricultural education. Many of the larger undergraduate agricultural communications programs at universities—including those at Texas Tech University, Oklahoma State University, California Polytechnic University at San Luis Obispo, and the University of Florida—are housed in departments which contain the name "Agricultural Education & Communication(s)" (AAAE Directory, 1999-2000).

Agricultural Communications as Part of Secondary Agricultural Education Programs

Communication has always been an important part of the agricultural education curriculum. According to Birkenholz and Craven (1996) agricultural education programs have historically helped students develop and polish communication skills through public speaking, writing and leadership activities. A study evaluating high agricultural education curriculum needs completed by Scanlon, Bruening and Cordero (1996) found that strong communication skills was the need most frequently mentioned. These researchers found the need to communicate both orally and in written form were equally important.

Despite its inclusion as part of the agricultural education curriculum, it is only in recent years that courses in agricultural communications have been offered at the high school level. A number of states, including Texas, Oklahoma, Missouri, and Florida, have started to offer courses/programs in agricultural communications. Birkenholz and Craven (1996) cite the need for high school agricultural education programs to expand their role one step further by offering courses in agricultural communications. The National Resource Council report (1988) and the Reinventing Agricultural Education in the Year 2020 report (1998) clearly emphasize the need for education about agriculture and conversational literacy in agriculture. It logically follows that high school students must complete course work in agricultural communications if they are to help meet this need.

The National FFA Organization recognized the need for the FFA to reinforce instruction in agricultural communications by developing a specific career development event for agricultural communications. The event was demonstrated at the 1999 National FFA Convention and will be open for national competition to state winners at the 2000 national convention. Historically, the establishment of a national CDE has greatly expanded interest in a particular area of instruction and serves as a major reason for students to enroll in agricultural education (Blakely et al., 1993).

For the national CDE, agricultural communications teams will develop a communications plan prior to the event (National FFA Organization, 1999). This document will be essential to explain how the group proposes to publicize an event or issue within their community. On site, the students

will participate in various activities including an actual news conference, then use the information gathered to complete individual practicums in news story writing, press release writing, radio broadcasting and graphic design. Teams will also compete as a whole in an editing exercise and a general communications quiz (Official FFA Manual, 1999).

Need For Curriculum Review

Since the 1950's, large-scale curriculum reforms have been introduced in most educational systems worldwide (Lewhy, 1991). Curriculum reform is appropriate and necessary at all educational levels (Sprecker, 1996). Academic programs should periodically be reviewed and evaluated to review educational objectives (The Carnegie Foundation for the Advancement of Teaching, 1978). In a national study reviewing university agricultural communications curricula, it was recommended course offerings in agricultural communications be continually expanded and updated to reflect the technological advancements of today and the future (Bailey-Evans, 1994).

Curricular planners need to answer such questions as "What will the world be like in the Twenty-first Century?" and "What characteristics will our graduates need to be successful at the turn of the century?" (Sledge et al., 1987, p. 119). According to Sprecker (1996), keeping the curriculum up-to-date is as important today as it has ever been.

If agricultural education programs are going to survive, they must be able to adjust to new situations and environments that help to improve the on-the-job effectiveness of future graduates (Coorts, 1987; Slocombe &

Baughner, 1988; Scanlon, Bruening, & Cordero 1996). In a 1996 study Scanlon, Bruening and Cordero stated that in addition to student input, curricula change is often influenced by input from current and future employers. Input from employers, peers, faculty and students produces a pattern that can be used as a model to modify and upgrade the curricula. According to Erpelding and Mugler (1987), educators must broaden their approach to provide competence rather than mere knowledge and to stimulate occupational and civic effectiveness, not only analytical capability.

The decision to create a course or curriculum should not be taken lightly since it will require committing a great deal of time and effort (Diamond, 1989). The assessment and review needed before any realistic, innovative change in curricula is accomplished must start with an examination of the strengths and weaknesses of current curricular design (Larson & Holiberg, 1987).

Groups Involved in Curriculum Review

According to Krueger (1988), any revisions in curriculum should start with a thorough overview of the needs of the targeted clientele group. In order for realistic priorities for instructional development to occur, the curriculum planning process should involve all who are affected by the program (Diamond, 1989; Sledge et al., 1987). Teachers, parents, students, administrators, employers, and employees should participate in planning and evaluating of curriculums (Sprecker, 1996). All five of these segments of the population have essential roles for the input, development, acceptance and

outcome of a holistic curricular revitalization effort (Bjoraker, 1987; Wilkinson, 1987). Every teacher needs to participate in curriculum planning “at least to the extent of gaining an adequate understanding of the ends and means” (Tyler, 1975, p. 126).

Leaders in business and industry are valuable sources of information on the skills and knowledge needed for graduates to successfully enter a career; they can provide information on educational experiences necessary for satisfying life in the cultural setting and society of the next century (Sprecker, 1996). The agricultural industry represents the consumer or benefactor of curricular reform. Industry is a valuable resource for critical input and for measuring the quality of the academic program (Bjoraker, 1987; Wilkinson, 1987).

Whether a curriculum is just being formulated or is undergoing revision, it is vitally important to ensure that its content reflects the needs of the work world (Finch & Crunkilton, 1989). According to Sprecker (1996) the frustrating aspect of determining curriculum content lies in identifying that which is truly relevant to both instructional and occupational settings. She adds that for many students, integration of education and the world of work does not really begin until after graduation.

Curriculum/Competency Studies Related to Agricultural Communications

University Studies

In the early 1990's, a group of researchers developed a discipline and competency-based curriculum for university agricultural communications

programs nationwide (Terry et al., 1994). This was the initial formal assessment of its kind since 1905 when the first agricultural communications curriculum was established (Bailey-Evans, 1994). The authors listed a set of disciplines and competencies that received a 70% agreement rating (from employers, students and university faculty) and recommended that these be used by universities to develop or enhance their agricultural communications curriculum. These researchers stated this represented a “model” curriculum that met the needs of employers, employees, educators and students.

A study by Bailey-Evans (1994) concluded the following communications disciplines should be included in the agricultural communications curriculum: advertising, journalism, photography, public relations, public speaking and telecommunications. She found that the following agriculture disciplines should be included: agricultural communications, agricultural economics, agricultural leadership, agronomy, animal science, environmental science and food sciences technology. According to Bailey-Evans, the agricultural communications curriculum should also include business, marketing, computer applications, internship experiences and international relations.

Specker (1998) conducted a study in Florida to determine the opinions of instructors, practitioners, and alumni concerning curricular requirements of agricultural communication students at the University of Florida. Sprecker found the curriculum at the University of Florida was too broad. She recommended a course be developed to give a brief introduction to the different areas of communication. The different areas Sprecker recommended

were advertising, public relations, electronic media and policy. A major recommendation of her study was that the agricultural communications students need to have room to “specialize” and take more in-depth courses.

High School Studies

Only a handful of studies have been conducted which have evaluated university curriculum for agricultural communications students (Specker & Rudd 1998; Bailey-Evans, 1994; Evans & Bolick, 1982; Duncan, 1957; Evans & Kroupa, 1976). At the high school level, there appears to be even fewer studies aimed at the agricultural communications student. The majority of information available from states which offer agricultural communications courses indicates the curriculum was developed through input from secondary agricultural education teachers, rather than a valid research process. The curriculum also appears to be specific to a local community or state and have been developed to match state guidelines for agricultural education programs. Examples of these state/local guidelines follow.

Texas Essential Knowledge and Skills

The state of Texas has identified the essential knowledge and skills (TEKS) (Appendix A) that should be included in the high school agricultural communications courses in Texas (IMS, 1998).

Although this information is useful, it fails to identify many of the common skills and specific areas that have been identified in university studies. It would be difficult for a high school agricultural education

instructor to construct a curriculum based on this limited information (J. Lockaby, Personal Communication, February 4, 2000).

Pine Ridge Florida High School Agriscience
Technology and Communications Academy

Although a statewide agricultural communications curriculum is not currently available in Florida, an agricultural communications program is being proposed at one high school within the state (Pine Ridge High School). The draft proposal for expected outcomes are found in Appendix B. The proposed expectations have yet to be validated through the use of research involving teachers, employers and others.

St James, Missouri High School
Agricultural Communications Courses

An agricultural communications program has been established at St. James High School in St. James, Missouri (Birkenholz & Craven, 1996). The program identified a number of competencies that should be attained by the students upon completion of the program. These competencies can be found in Appendix C.

Oklahoma Department of Vocational and Technical
Education Agricultural Communications Duty/Task List

The state of Oklahoma has identified the occupational duty/task list for an agricultural communications program (Oklahoma Department of Vocational and Technical Education, 1999). Oklahoma identifies the following occupations for students after completing their program:

1. Entry level agricultural communications specialist: Oral and Written Communications.

2. Entry level agricultural communications specialist: Advertising/Marketing.
3. Entry level agricultural communication specialist: Radio/TV-Electronic Media.

The guidelines distinguish between a duty and a task by using the following definition:

. . . duty represents an area of responsibility comprised of related tasks. A task is a meaningful unit of work. A task is measurable and/or observable and is independent of other tasks. A task contains an action verb and an object that is necessary for the action. The performance of the task requires the application of one or more skills. (p. 2)

The duties and tasks identified in this guide can be found in Appendix D.

The Delphi Technique

The Delphi technique has been used extensively in agricultural education since 1984 (Martin & Frick, 1998). According to Sackman (1974), it was developed at the Rand Corporation in the 1940's as a means of eliciting expert opinions in a systematic manner. The Delphi's original application was in the area of forecasting, but it quickly expanded into investigations of the fields of business, science, medicine, and education. Cornish (1977) credits Olaf Helmer and Norman Dalkey at the Rand Corporation for developing the technique as a way of finding the most reliable means of gaining the consensus of a group of experts about the likely pattern of future events concerning the American national defense. Borg and Gall (1983) state that this technique can be used to identify problems, define needs, establish priorities, and identify and evaluate solutions. They suggest it is especially

useful in school settings as it makes the findings easier to implement. Finch and Crunkilton (1989) report the Delphi technique is an effective means to reach consensus regarding the content of a particular curriculum.

The Delphi Process

Although differences exist within the use of the Delphi, Chizari (1990) reports that certain key elements are considered to be common by a number of authors (Anderson & Jones, 1986; Sutphin, 1981; Buriak & Shinn, 1988; Dalkey, 1968; Ulschack, 1983). Common elements include: (a) use of a panel of experts to determine opinions, (b) anonymity of panel members (to other members), (c) iteration and controlled feedback of individual responses, and (d) groups responses in describing panel judgments.

Hostrop (1975) described the Delphi process as involving seven steps:

1. Participants who usually remain anonymous to one another are asked to list their opinion on a specific topic in the form of brief written statements to prepared questionnaires, such as recommended activities or predictions for the future.
2. Participants are then asked to evaluate their total listing against some criterion, such as importance, chance of success, etc.
3. Next the statements made by the participants are received and are clarified by the investigator.
4. Each participant then receives the refined list and a summary of responses to the items and, if in the minority, is asked to revise his opinion or to indicate reason(s) for remaining in the minority.
5. The statements made by the participants are again received by the investigator who further clarifies, refines, and summarizes the responses.

6. Each participant then receives the further refined topical list that includes both an updated summary of responses and a summary of minority opinions. Each participant is also given a final chance to revise his opinions.
7. Finally, the investigator receives the last round of questionnaires, which he then summarizes in a final report. (pp. 68-69)

Ulschack (1983) prepared a flow chart that provides an overview of the typical Delphi technique. He illustrates a procedure that involves a minimum of two rounds for developing consensus (see Figure 2.1).

Number of Rounds Needed

There appears to be no set number of rounds for determining consensus, although Martino (1972) suggests three as a good rule of thumb. Sutphin (1981) reported the number of rounds needed for convergence of opinion may vary depending on the nature of the study. Two or three rounds are normally sufficient in a Delphi study according to Anderson and Jones (1986). They are supported by Linstone and Turoff (1975) who wrote that three rounds were sufficient to attain reliability in responses, and that additional rounds tend to show very little change. They also note that excessive repetition upsets participants and encourages non response. According to Brooks (1972), a minimum of two rounds is necessary to reach consensus in Delphi studies.

Delphi Questionnaire Design

In designing questionnaires for each of the rounds in a Delphi study, Martino (1972) indicates the first questionnaire should be completely unstructured and open-ended. Bunning, as cited in Anderson and Jones

(1986), insists the number of questions on the first round should be limited and only limited space should be provided for panel members to respond.

The questionnaire for round two is developed with a list of events from round one (Brooks, 1972). In round three, the researcher compiles the data from round two and provides feedback to the respondents (Sutphin, 1981). Hood (1984) describes the third and final round as a process that requires respondents to submit their projects. Sutphin (1981) notes the task of the researcher is to bring closure to the rounds by analyzing the data obtained in light of the objectives of the study.

Panel Selection

The identification of available, qualified people is a critical prerequisite for a successful Delphi (Anderson & Jones, 1986; Delbecq et al., 1986; Hood, 1984). Delbecq et al. (1986) identified four characteristics of an effective panel of experts. They indicated they should:

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

Figure 2.1. A Typical Overview of the Delphi Process (Ulschack, 1983).

Helmer (1966) and Dalkey (1968) indicated a key factor for the panel is expertise. Helmer notes the “use of expert judgement, though often unsystematic, is an absolute necessity” (p. 11). Buriak and Shinn (1988) claim expert opinion and intuition tempered with sound judgement must be used in developing an established knowledge base in agricultural education. Dalkey (1968) lists five approaches to identifying experts to be used in the Delphi panel:

1. Allow panel members to evaluate their own competence.
2. Check the number of publications by experts.
3. Include means whereby panel members can state how confident they were in answering the question.
4. Administer a standard intelligence test.
5. Expand the group, if you are unsure that the experts include all relevant information.

Dalkey (1968) discounts using the third approach (having members indicate their level of confidence) as he found little correlation between reported confidence and the accuracy of response. He also concluded the fourth approach (IQ test) was not an effective method for selecting experts.

Several researchers including Brooks (1972), Davidson (1979) and Sutphin (1981) have used and suggest expert knowledge through third parties. Chizari (1990) contends that using experts

nominated by leaders in a particular field is an effective method of identifying panel members. Anderson and Jones (1986) support a nomination process for identifying members for the panel of experts.

Size of the Panel

There appear to be broad guidelines for the size of the Delphi panel of experts. Delbecq et al. (1986) state the size of the panel is variable, but suggest the group size be a minimum of 10-15, if the group is homogenous. Swanson (1981) notes the number of panelists is not a major concern but recommends that panels not be fewer than 25. He further notes panels exceeding a few hundred is likely too large.

Sutphin (1981) and Ornstein and Miller (1980) note a wide variance in the size of the panel of experts. Chizari (1990) lists several Delphi studies that had panels ranging in size from 26 to 506.

Summary

The review of the literature and research in the field indicates agricultural education is an integral part of today's high schools. The agricultural education program has changed dramatically during the last half of the 20th century and is poised to change even more in the 21st century. One important change in the program is continued emphasis on education about

agriculture and conversational literacy about agriculture. Agricultural educators emphasize the need for courses in agricultural communications at the high school level in order to promote these two changes.

Although several studies have been conducted to review curriculum needs for agricultural communications programs taught at the university level, there is a dearth of information on what should be taught in agricultural communications at the high school level. Educators agree curriculum review is an important part of the educational process and industry leaders, teachers and others should be involved in reviewing the curriculum.

Competencies students should possess upon completion of course work is important to agricultural education. Recent federal legislation emphasizes the need to identify such competencies. No national study has been conducted which has identified the competencies students should possess upon completion of high school agricultural communications courses. Therefore this study will attempt to identify these competencies.

CHAPTER III

METHODOLOGY

The purpose of the study was to develop a competency-based curriculum for high school agricultural communications courses, using input from university agricultural communications faculty, agricultural science instructors, and industry leaders. As a means of identifying these competencies, answers to the following questions were sought:

1. What specific topics should be included in a high school curriculum for agricultural communications?
2. For each topic identified, what competencies should agricultural communications students possess upon completion of the program?
3. For each competency identified, at what scholastic level should they be introduced to the student?

Research Design

Delphi was the principle procedure used to conduct this study. Chizari (1990) defined the Delphi technique as “an iterative procedure for determining the consensus of a group of experts in a given field with regard to some issue” (p. 42). He noted the purpose of the technique is to develop consensus on a particular issue without bringing subjects in personal contact with each other. During the beginning of the Delphi technique, it is expected that the group (panel) of experts will have a variety of different opinions about the issues in question. At the completion of the Delphi, the group

members should have reached consensus on the issues being studied (Chizari, 1990).

Brooks (1972) states that the number of rounds for a Delphi study can be predetermined or continued until group consensus is reached. Sutphin (1981) indicates that the number of rounds necessary to arrive at convergence of opinion may vary depending on the nature of the study. Anderson and Jones (1986) report that two or three rounds are usually sufficient in conducting a Delphi study. Chizari (1990) contends that the Delphi technique, in its most basic form, should consist of at least three different instruments which are often referred to as round one, round two, and round three. This study utilized a three-round Delphi technique, using an initial instrument designed by the researcher, to reach a consensus from a panel of experts based on multiple responses.

Selection of the Panel

The panel of experts for the Delphi study consisted of individuals who were directly involved in agricultural communications and/or high school agricultural education programs. According to Anderson and Jones (1986), it is vital that the participants in a Delphi study feel personally involved in the problem of concern to the researcher, have pertinent information to share, are motivated to see the process through and value the type of information which will be produced. They suggest that once the general characteristics of the desired respondents are identified, the panel of experts can be selected by

a nomination process in which key people in the target group nominate those who would be in the position to provide necessary information.

The technique suggested by Anderson and Jones was used to select one segment of the panel of experts. State supervisors of agricultural education from all 50 states were used as third parties to nominate agricultural education teachers in their state, each of whom had a strong interest in agricultural communications. The intention of this nomination process was to identify the high school agriculture teachers in the United States who were most knowledgeable of the field of agricultural communications.

The initial contact with the state supervisors began on January 11, 2000, and included a: (a) cover letter; (b) self-addressed, stamped envelope; and (c) nomination form. The cover letter explained the focus of the study and asked the state supervisors to nominate three secondary agricultural science teachers from their own state who—in their opinion—had a strong interest in agricultural communications (see Appendix E). An enclosed nomination form provided space for state supervisors to submit the names, addresses, and telephone numbers of the potential respondents (see Appendix F). State supervisors were asked to return the completed form by February 1, 2000.

Follow-up letters were mailed to the non-responding state supervisors on February 14, 2000. A copy of the follow-up letter can be found in Appendix G. During the period of February 21-March 2, 2000, all supervisors who had not responded were contacted via telephone.

As anticipated, a number of state supervisors were unable to provide names of individuals who were currently teaching agricultural

communications. The most common reason state supervisors reported for not nominating teachers was that they had no one currently teaching in this area, primarily because of a lack of curriculum materials. However, one state supervisor indicated he did not favor teaching agricultural communications at the high school level and thus was unwilling to submit nominees. The nomination process resulted in 33 individuals from 27 states who served as the high school teaching experts for this study.

The second segment of the panel of experts consisted of agriculture industry leaders. The individuals selected for this segment were the executive officers of seven agricultural communications-related professional organizations. The seven organizations were:

1. Agricultural Communicators of Tomorrow (ACT).
2. Agricultural Communicators in Education (ACE),
3. Agricultural Relations Council (ARC),
4. American Agricultural Editors' Association (AAEA)
5. Cooperative Communicators Association (CCA),
6. Livestock Publication Council (LPC), and
7. National Association of Farm Broadcasters (NAFB).

These organizations are recognized agricultural communications professional organizations in the United States. Publications listing the officers for each of the organizations was used to determine the most current list of individuals to be contacted and to obtain their addresses and phone numbers. The list produced names and addresses for 21 individuals who were included on the panel.

The third subgroup of the panel of experts was university faculty that were teaching agricultural communications courses during the 1999-2000 school year. A list of agricultural communications faculty prepared by the national Agricultural Communicators of Tomorrow student organization was utilized as the frame for this segment of the panel. Twenty-one university faculty were included in the initial panel.

The three subgroups comprised a total of 75 individuals who were asked to participate in Round One of the study.

Instrumentation

The initial instrument was designed by the researcher and followed procedures utilized by Chizari (1990). An open-ended instrument consisting of three questions was developed. Studies conducted by Bailey-Evans (1994) and Sprecker (1996) were reviewed to assist in determining appropriate questions. An in-depth review of the literature was also conducted.

The purpose of the initial instrument (see Appendix H) was to develop questions that would elicit responses from the panel of experts regarding the topics to include in high school agricultural communications courses. Emphasis was placed on the competencies high school students should possess upon completion of these courses. The three questions included on the initial instrument were:

1. What topics should be included in a high school agricultural communications course?

2. How should the curriculum at the high school level differ from a university course?
3. What competencies should a student possess after completing a course in agricultural communications?

Additional instruments were developed for Round Two and Round Three using information gained from each preceeding round.

Reliability and Validity

Validity

The questions for the instrument used in Round One were validated for content regarding their appropriateness to the purpose of the study by a panel of faculty and graduate students in the Department of Agricultural Education & Communications at Texas Tech University. This group was encouraged to list several items for each question to determine if they were appropriate to use to identify topics of instruction. They also were asked to identify other questions that might need to be included.

Pilot Test

To further enhance validity and reduce the possibility of measurement error, the open-ended instrument developed by the researcher and panel of faculty and graduate students was pilot tested in Texas using agricultural communicators, agricultural students, and agriscience teachers who were not included in the selected panel of experts. These individuals were asked to provide answers to the questions. In addition to answering the questions, the

individuals were asked to correct, improve and make changes to enhance the instrument's clarity and understanding. Additional space on the questionnaire was provided for comments. The pilot test took place during the month of January, 2000.

Following completion of the pilot test, the researcher made revisions based on the results and suggestions from those involved in the pilot test.

Reliability

Buriak and Shinn (1988) cite Dalkey regarding reliability for Delphi studies. Dalkey indicates that when the number of participants per group is greater than 13, the question of process reliability can satisfactorily be answered. Martino (1972) reports a panel of 15 members is sufficiently large to obtain a high degree of reliability by the Delphi procedure. Ulschack (1983) indicates that up to 100 people in one group is acceptable for Delphi studies, while Ornstein and Miller (1980) contend that the typical Delphi approach involves 20 to 100 experts. The size of the initial panel for this study was 75 individuals, well within the acceptable range suggested by experts for the use of the Delphi technique.

Data Collection

Initial contact with the panel of experts began immediately following the pilot test. Prior to mailing the instrument, panel members were contacted by phone to ascertain their willingness to participate in the study.

Round One

The initial instrument used in Round One was mailed on March 3, 2000. In addition to the instrument, a cover letter was included explaining the nature and importance of the study as well as an explanation of the Delphi technique (see Appendix I). Also included was a self-addressed, stamped envelope. Panel members were requested to return the completed questionnaire by March 15, 2000. Following Dillman's (1978) suggestions, a postcard was mailed to all panel members on March 23, 2000 (see Appendix J). According to Dillman, sending a reminder of this type serves as both a thank-you to those who have responded and a friendly and courteous reminder for those who have not.

An additional questionnaire and a cover letter was mailed to the non-respondents on April 10, 2000 (see Appendix K). This also followed recommended procedures by Dillman (1978) who stated "the three weeks that have elapsed since the first mailing make it probable that the original questionnaire, if it has not been lost or thrown away, will at least be difficult to find" (p. 187). The cover letter stressed the importance of having all people respond and reminded the individuals they were a select group.

During the week of April 17-21, 2000, all individuals who had not responded were called and/or faxed. This was in accordance with suggestions by Dillman (1978), Chizari (1990) and Delbecq et al. (1986) who emphasized the need for extensive follow-ups when using the Delphi technique. The initial mailing, along with the follow-ups, produced responses from 57 of the original 75 members, resulting in an overall response rate of 76%.

Round Two

Responses from Round One were summarized using frequencies, percentages and ranks. Similar responses were collapsed and reworded to convey the intent of different responses. Chizari (1990) accomplished this by placing each response on a 3x5 card and sorting the cards into stacks of similar responses under each question. A technique similar to this was used for this study, using a Macintosh computer and the Cut and Paste Commands in Microsoft Word, Version 6.0. Three independent readers completed this technique on the round one responses. The three readers then came together to collapsed similar responses. Where appropriate, verbs on the responses were changed to performance terms so they could be utilized as competencies. A total of 82 competencies were identified from the instrument in Round One.

In Round Two, the panel of experts was presented with an instrument (see Appendix L) which asked them to do two things: (1) rate the 82 competencies that emerged from Round One in terms of appropriateness for a high school agricultural communications curriculum, and (2) identify the scholastic level at which each competency level should be introduced.

The panel was asked to rate each competency using a four-point Likert scale with 1 = "Strongly Disagree," 2 = "Disagree," 3 = "Agree," and 4 = "Strongly Agree." The scale was used to determine each panel member's level of agreement as to the inclusion of the competency into a high school agricultural communications curriculum.

The percentage of the panel who agreed or strongly agreed with each competency was used to measure overall level of agreement. This was in accordance with Gross (1981) who stated that round two should ask the panel of experts to evaluate the list of opinions using certain criteria. Swanson (1981) notes that round two should concentrate on the opinions shared by a majority from the first and should show a considerable narrowing of opinion. Sutphin (1981) states that round two should provide respondents an opportunity to reevaluate their reaction in round one, while Gray (1972) contends that respondents should be asked in round two to list any additional items that are not in the composite list. The researcher determined *a priori* that only those competencies that received a 75% level of agreement or higher would be used for inclusion in the curriculum.

In addition to evaluating the 82 competencies, panel members were asked to list additional competencies missed in Round One. They were also asked to identify the scholastic level where each competency should be introduced, using the following scale: 1 = "High School Freshman," 2 = "High School Sophomore," 3 = High School Junior, 4 = "High School Senior," and 5 = "College." The purpose of the rating was two-fold: (1) to give guidelines as to the order in which each competency should be taught, and (2) to determine if the competency was appropriate for the high school level.

The mailing for Round Two consisted of: (a) a cover letter (see Appendix M); (b) the Round Two instrument (see Appendix L), and (c) a self-addressed envelope. The initial mailing of the instrument was made on May 2, 2000 to the 56 members that responded to Round One. One individual

from the original 57 respondents asked to be dropped from the panel. A follow up card was mailed on May 5, 2000 (see Appendix N). During the week of May 15-17, all non-respondents were called and/or faxed. Forty-three of the 56 individuals responded in Round Two for a total response rate of 77%.

The instrument for Round Two was formatted in booklet form to measure 8.5" x 4.25". It was printed on lightly colored paper for possible faxing purposes and stapled along the spine. A cover with computer generated clipart was also prepared.

Round Three

Round Three served as the final round for the study. Delbecq et al. (1986) noted that the final questionnaire provides closure by allowing the panel to vote on items developed in questionnaire #1 and clarified in questionnaire #2. Responses from Round Two were summarized using frequencies, percentages and ranks. These data were analyzed for preparation of the questionnaire used in Round Three (see Appendix O)

Because of the remarkable consensus found on the 82 items in Round Two, only the 11 new competencies identified in Round Two were submitted to the panel in Round Three for members' evaluation.

The materials sent to the panel in Round Three included: (a) a cover letter (see Appendix P), (b) the Round Three instrument (see Appendix O), and (c) a self-addressed envelope. The materials were sent to 41 of the 43 members who responded in Round Two on May 25, 2000 by priority mail. Two of the panel members indicated they would be out of the country during

the time period for Round Three so they were unable to participate in the last round. Panel members were requested to return the instrument by June 5, 2000. A follow-up card was mailed to all respondents on June 2, 2000 (see Appendix Q). All non-respondents respondents were contacted by phone or fax the June 7-9. Thirty six individuals responded for a total response rate of 88%.

The Round Three instrument was formatted similar to the one in Round Two.

Analysis of Data

A three-digit code number was used to identify each panel member and was assigned to each survey prior to mailing. This code enabled the researcher to track each survey received and to prepare appropriate follow-up procedures.

For Rounds One, Two and Three, data were entered by assigning a numerical value to each variable in the instrument. Responses were summarized using the Statistical Package for Social Sciences on a Macintosh computer.

CHAPTER IV

FINDINGS

This study sought to answer the following three questions:

1. What specific topics should be included in a high school curriculum for agricultural communications?
2. For each topic identified, what competencies should agricultural communications students possess upon completion of the program?
3. For each competency identified, at what scholastic level should they be introduced to the student?

Round One

The instrument used in Round One consisted of three open-ended research questions:

1. What topics should be included in a high school agricultural communications course?
2. How should the curriculum at the high school level differ from a university course?
3. What competencies should a student possess after completing a course in agricultural communications?

This format was utilized to generate a number of initial responses to each question. Responses to all three questions were carefully analyzed, converged, and edited for grammatical errors without changing the content.

Response to Question One

The open-ended question regarding what topics should be included in a high school agricultural communications course produced 262 responses from the panel. Analysis of the responses produced the following 11 topic areas:

1. Writing
2. Computer/Information Technology
3. Agricultural Industry
4. Communications History
5. Professional Development
6. Research/Information Gathering
7. Ethics
8. Public Relations/Advertising/Marketing
9. Leadership Development
10. Legislative Issues
11. Communication Skills

Response to Question Two

The second question on the round one instrument asked panel members to comment on how a high school agricultural communications course should differ from a university course. There was a wide variety of responses from the panel, with the most common statement being “Basic in High School; Advanced in College.” Based on these comments, the researcher determined there was a need for identifying the scholastic level for each

competency utilized in the study and included a section related to this in Round Two.

Response to Question Three

The third question in the first round generated numerous responses from the panel of experts. These responses were converged into 82 competencies and sorted into the 11 topic areas identified in Question One. Where appropriate, performance terms were inserted for verbs that were considered to be vague or not measurable. These eighty-two competencies are listed in Appendix R.

Round Two

In Round Two, the panel of experts was presented with an instrument which asked them to do two things: (1) rate the 82 competencies that emerged from Round One in terms of appropriateness for a high school agricultural communications curriculum, and (2) identify the scholastic level at which each competency level should be introduced.

Agreement Level for Competencies

The panel was asked to rate each competency using a four-point Likert scale with 1 = "Strongly Disagree," 2 = "Disagree," 3 = "Agree," and 4 = "Strongly Agree." The scale was used to determine each panel member's level of agreement as to the inclusion of the competency into a high school agricultural communications curriculum.

The percentage of the panel who agreed or strongly agreed with each competency was used to measure overall level of agreement. The researcher determined *a priori* that only those competencies that received a 75% level of agreement or higher would be used for inclusion in the curriculum. Results of the panel's level of agreement for each competency are illustrated in Table 4.1.

Table 4.1 Agreement levels for each competency by panel in Round Two.

<u>Competency</u>	<u>Topic Area</u>	<u>% of Agreement^a</u>
1. Identify the components and format of news releases	Writing	100.0
2. Write a professional letter	Writing	100.0
3. Utilize correct grammar	Writing	100.0
4. Utilize correct spelling	Writing	100.0
5. Utilize correct punctuation	Writing	100.0
6. Identify what makes a topic newsworthy	Writing	100.0
7. Utilize appropriate agricultural terminology	Agricultural Industry	100.00
8. Identify current issues and concerns in the agricultural industry	Agricultural Industry	100.0
9. List qualities of an effective communicator	Communication History	100.0
10. Identify the various career opportunities in agricultural communications	Professional Development	100.0

Table 4.1 Continued

<u>Competency</u>	<u>Topic Area</u>	<u>% of Agreement^a</u>
11. Demonstrate professional/business etiquette	Professional Development	100.0
12. Demonstrate a proper work ethic	Professional Development	100.0
13. Demonstrate listening skills	Professional Development	100.0
14. Research both sides of an issue	Research/ Information Gathering	100.0
15. Check facts	Research/ Information Gathering	100.0
16. Identify biased information	Research/ Information Gathering	100.0
17. Identify sources for information	Research/ Information Gathering	100.0
18. Discuss the role of public relations in agricultural companies	Public Relations /Advertising /Marketing	100.0
19. Discuss the role of public relations in farm organizations	Public Relations /Advertising /Marketing	100.0

Table 4.1 Continued

<u>Competency</u>	<u>Topic Area</u>	<u>% of Agreement^a</u>
20. Speak intelligently before a group	Legislative Issues	100.0
21. Properly use a 35 mm camera	Legislative Issues	100.0
22. Effectively interview a person	Writing	97.7
23. Write a quality thank-you note	Writing	97.7
24. Use e-mail properly	Computer/ Information Technology	97.7
25. Identify barriers to effective communication	Communication History	97.7
26. Interview for employment	Professional Development	97.7
27. Work in a team activity	Professional Development	97.7
28. Demonstrate proper phone skills	Professional Development	97.7
29. Work under pressure	Professional Development	97.7

Table 4.1 Continued

<u>Competency</u>	<u>Topic Area</u>	<u>% of Agreement^a</u>
30. Identify the importance of correctly reporting the facts	Ethics	97.7
31. Deliver a formal, oral presentation using clear enunciation, gestures, tone & vocabulary	Leadership Development	97.7
32. Give an effective interview	Leadership Development	97.7
33. Identify the basic workings of the government system and how it affects the agricultural industry	Legislative Issues	97.7
34. Properly use a digital camera	Communication Skills	97.7
35. Demonstrate different methods of communication	Communication History	97.6
36. Write a news release	Writing	95.4
37. Accurately proofread a document	Writing	95.4
38. Utilize the basic principals involved in technical writing	Writing	95.4
39. Seek, gather and synthesize information	Research/ Information Gathering	95.4

Table 4.1 Continued

<u>Competency</u>	<u>Topic Area</u>	<u>% of Agreement^a</u>
40. Distinguish between right and wrong	Ethics	95.4
41. Properly use a video camera	Communication Skills	95.4
42. Write a feature story	Writing	95.3
43. Write a caption for photos	Writing	95.3
44. Perform basic word processing	Computer/ Information Technology	95.3
45. Converse knowledgeably on the different areas in agriculture	Agricultural Industry	95.3
46. Identify the key elements of a public relations campaign	Public Relations /Advertising /Marketing	95.3
47. Utilize desktop publishing techniques	Computer/ Information Technology	95.2

Table 4.1 Continued

<u>Competency</u>	<u>Topic Area</u>	<u>% of Agreement^a</u>
48. Identify appropriate file formats when using scanning programs	Computer/ Information Technology	95.2
49. Determine whether a topic would be best covered a news article or feature article	Writing	93.1
50. Create a resume	Writing	93.1
51. Identify various professional communication organizations	Professional Development	93.1
52. Identify the importance of an advertising campaign	Public Relations /Advertising /Marketing	93.0
53. Discuss the techniques and principles involved in public speaking	Leadership Development	93.0
54. Utilize correct parliamentary procedure	Leadership Development	93.0
55. Effectively scan a document	Writing	92.9
56. Write for broadcast	Writing	90.7
57. Effectively edit a story	Writing	90.7

Table 4.1 Continued

<u>Competency</u>	<u>Topic Area</u>	<u>% of Agreement^a</u>
58. Write a speech	Writing	90.7
59. Identify strategies to improve communications	Communication History	90.7
60. Prepare a public relations campaign	Public Relations /Advertising /Marketing	90.7
61. Prepare a 4-6 minute speech within a 30-minute preparation time	Leadership Development	90.7
62. Deliver a radio broadcast	Communication Skills	90.7
63. Create and design a web page	Computer/ Information Technology	90.5
64. Develop a multimedia presentation	Computer/ Information Technology	90.5
65. Write for the web	Writing	88.4
66. Discuss libel law	Legislative Issues	88.4
67. Discuss the Freedom of Information Act	Legislative Issues	88.4

Table 4.1 Continued

<u>Competency</u>	<u>Topic Area</u>	<u>% of Agreement^a</u>
68. Deliver a TV broadcast	Communication Skills	88.4
69. Discuss the role of public relations in advertising agencies	Public Relations /Advertising /Marketing	86.1
70. Describe the history of agricultural communications	Communication History	86.0
71. Describe the communication model	Communication History	86.0
72. Demonstrate sales skills	Public Relations /Advertising /Marketing	86.0
73. Utilize graphic editing programs	Computer/ Information Technology	85.7
74. Interpret statistics	Research/ Information Gathering	83.8
75. Identify the basics of corporate communications	Public Relations /Advertising /Marketing	83.8
76. Utilize an Associated Press stylebook	Writing	83.7

Table 4.1 Continued

<u>Competency</u>	<u>Topic Area</u>	<u>% of Agreement^a</u>
77. Define media literacy, basic elements and techniques	Communication History	80.9
78. Identify the steps in the printing/developing process	Communication Skills	79.0
79. Interpret the basics of the commodities market	Public Relations /Advertising /Marketing	76.8
80. Apply common sense logic to an economic trend analysis	Public Relations /Advertising /Marketing	76.7
81. Analyze and Apply technical data & procedures found in service manuals	Research/ Information Gathering	69.0
82. Utilize a nonlinear video-editing program	Computer/ Information Technology	65.0

^aThe percentage of individuals who gave a rating of either 3 ("Agree") or 4 ("Strongly Agree")

There was an extremely high level of agreement by the panel on the competencies included in Round Two. One hundred percent of the panel agreed or strongly agreed that eighty competencies should be included in the high school agricultural communications curriculum. Two of the competencies fell below the 75% level of agreement—the lowest rated

competency was “Utilize a non linear video-editing program,” which had a 65% level of agreement.

Competencies receiving 100% levels of agreement were “Identify the components and format of news releases,” “Write a professional letter,” “Utilize correct grammar,” “Utilize correct spelling,” “Utilize correct punctuation,” “Identify what makes a top newsworthy,” “Utilize appropriate agricultural terminology,” “Identify current issues and concerns in the agricultural industry,” “List qualities of an effective communicator,” “Identify the various career opportunities in agricultural communications,” “Demonstrate professional/business etiquette,” “Demonstrate a proper work ethic,” “Demonstrate listening skills,” “Research both sides of an issue,” “Check facts,” “Identify biased information,” “Identify sources for information,” “Discuss the role of public relations in agricultural companies,” “Discuss the role of public relations in agricultural organizations,” “Speak intelligently before a group,” and “Properly use a 35 mm camera.”

Competencies receiving a 90-99% level of agreement were “Effectively interview a person” (97.7%), “Write a quality thank-you note” (97.7%), “Use e-mail properly” (97.7%), “Identify barriers to effective communication” (97.7%), “Interview for employment” (97.7%), “Work in a team activity” (97.7%), “Demonstrate proper phone skills” (97.7%), “Work under pressure” (97.7%), “Identify the importance of correctly reporting the facts” (97.7%), “Deliver a formal, oral presentation using clear enunciation, gestures, tone and vocabulary” (97.7%), “Give an effective interview,” “Identify the basic workings of the government systems and how it affects the agricultural

industry” (97.7%), “Properly use a digital camera” (97.7%), “Demonstrate different methods of communication” (97.6), “Write a news release” (95.4%), “Accurately proofread a document” (95.4%), “Utilize the basic principals involved in technical writing” (95.4%), “Seek, gather and synthesize information” (95.4%), “Distinguish between right and wrong” (95.4%), “Properly use a video camera” (95.4%), “Write a feature story” (95.3%), “Write a caption for photos” (95.3%), “Perform basic word processing” (95.3%), “Converse knowledgeably on the different areas in agriculture” (95.3%), “Identify the key elements of a public relations campaign” (95.3%), “Utilize desktop publishing techniques” (95.2%), “Identify appropriate file formats when using scanning programs” (95.2%), “Determine whether a topic would be best covered a news article or feature article” (93.1%), “Create a resume” (93.1%), “Identify various professional communication organizations” (93.1%), “Identify the importance of an advertising campaign” (93.0%), “Discuss the techniques and principles involved in public speaking” (93.0%), “Utilize correct parliamentary procedure” (93.0%), “Effectively scan a document” (92.9%), “Write for broadcast” (90.7%) “Effectively edit a story” (90.7%), “Write a speech” (90.7%), “Identify strategies to improve communication” (90.7%), “Prepare a public relations campaign” (90.7%), “Prepare a 4-6 minute speech within a 30-minute preparation time” (90.7%), “Deliver a radio broadcast” (90.7%), “Create and design a web page” (90.5%), and “Develop a multimedia presentation” (90.5%).

Competencies receiving a 80-89% level of agreement were “Write for the web” (88.4%), “Discuss libel law” (88.4%), “Discuss the Freedom of

Information Act” (88.4%), “Deliver a TV broadcast” (88.4%), “Discuss the role of public relations in advertising agencies” (86.1%), “Describe the history of agricultural communications” (86.0%), “Describe the communications model” (86.0%), “Demonstrate sales skills” (86.0%), “Utilize graphic editing programs” (85.7%), “Interpret statistics” (83.8%), “Identify the basics of corporate communications” (83.8%), “Utilize an Associated Press stylebook” (83.7%), and “Define media literacy” (80.9%).

Competencies receiving a 75-79% level of agreement were “Identify the steps in the printing/developing process” (79.0%), “Interpret the basics of the commodities market” (76.8%), and “Apply common sense logic to an economic trend analysis” (76.7%).

Two competencies did not meet the 75% agreement criteria. The two competencies were “Analyze and apply technical data and procedures found in service manuals” (69.0%), and “Utilize a nonlinear video-editing program” (65.0%).

Identification of Scholastic Level for Each Competency

Panel members were asked to identify the scholastic level where each competency should be introduced, using the following scale: 1 = “High School Freshman,” 2 = “High School Sophomore,” 3 = “High School Junior,” 4 = “High School Senior,” and 5 = “College.” The purpose of the rating was two-fold: (1) to give guidelines as to the order in which each competency should be taught, and (2) to determine if the competency was appropriate for the high school level.

Introduction Level for Writing Competencies

Results of the panel's level of agreement as to when the writing competencies should be introduced to the students are presented in Table 4.2. The panel found that it was appropriate to introduce all of the writing competencies at the high school level. For five of the competencies, a majority of the panel felt they should be taught at the freshman level. These five competencies and the percentage of the respondents who felt they should be introduced at the freshman level were "Write a quality thank-you note" (73.8%), "Utilize correct spelling" (73.2%), "Utilize correct punctuation" (73.2%), "Utilize correct grammar" (70.7%) and "Write a speech" (50.0%). The panel was evenly divided in their agreement that one writing competency, "Identify what makes a topic newsworthy," should be introduced at the sophomore level (35.7%) or the junior level (35.7%).

Table 4.2 Panel's level of agreement in round two regarding when each writing competency should be introduced

Competency	<u>Percentage of Panel Agreeing with Introduction Level</u>				
	Freshman	Sophomore	Junior	Senior	College
1. Write a quality thank-you note	73.8*	14.3	11.9	0.0	0.0
2. Utilize correct spelling	73.2*	9.8	14.6	2.4	0.0
3. Utilize correct punctuation	73.2*	9.8	14.6	2.4	0.0
4. Utilize correct grammar	70.7*	12.2	14.6	2.4	0.0

Table 4.2 Continued

Competency	Percentage of Panel Agreeing with Introduction Level				
	Freshman	Sophomore	Junior	Senior	College
5. Write a speech	50.0*	11.9	23.8	9.5	4.8
6. Identify what makes a topic newsworthy	14.3	35.7* ^a	35.7* ^a	14.3	0.0
7. Identify the components and format of news releases	11.6	20.9	48.8*	18.6	0.0
8. Create a resume	21.4	11.9	47.6*	7.1	11.9
9. Accurately proofread a document	19.0	19.0	40.5*	11.9	9.5
10. Write a professional letter	30.2	23.3	39.5*	4.7	2.3
11. Utilize an Associated Press stylebook	7.3	12.2	39.0*	26.8	14.6
12. Write a news release	7.1	21.4	38.1*	28.6	4.8
13. Write for the web	4.8	9.5	35.7*	26.2	23.8
14. Write a feature story	7.1	7.1	33.3* ^a	33.3* ^a	19.0
15. Effectively edit a story	2.4	16.7	33.3* ^a	33.3* ^a	14.3

Table 4.2 Continued

Competency	Percentage of Panel Agreeing with Introduction Level				
	Freshman	Sophomore	Junior	Senior	College
16. Effectively interview a person	11.9	21.4	28.6* ^a	28.6* ^a	9.5
17. Write for broadcast	2.3	4.7	25.6	39.5*	27.9
18. Utilize the basic principles involved in technical writing	14.3	16.7	23.8	26.2*	19.0

* = Mode,

*^a = Bi-Modal

Eleven additional writing competencies were identified as best introduced at the junior level. Those competencies with a mode level of agreement at the junior level were “Identify what makes a topic newsworthy” (48.8%), “Create a resume” (47.6%), “Write captions for photos” (42.9%), “Determine whether a topic would be best covered as a news article or feature article” (40.5%), “Accurately proofread a document” (40.5%), “Write a professional letter” (39.5%), “Utilize an associated press stylebook” (39.0%), “Write a news release” (38.1%), “Write for the web” (35.7%), “Write a feature story” (33.3%), “Effectively edit a story” (33.3%) and “Effectively interview a person” (28.6%). The last three competencies, “Write a feature story,” “Effectively edit a story,” and “Effectively interview a person” had a bi-modal level of agreement, with the same percentage rating them as being best introduced at the senior level.

Two competencies were also rated as being best introduced at the senior level, according to the mode level of agreement. Those two

competencies were “Write for broadcast” (39.5%) and “Utilize the basic principles involved in technical writing” (26.2%).

Introduction Level for Computer/Information Technology Competencies

Results of the panel’s level of agreement as to when the computer/information technology competencies should be introduced are presented in Table 4.3. The panel found it was appropriate to introduce all but one of the computer/information technology competencies at the high school level. A majority of the panel indicated two of the competencies were best introduced at the freshman level. These two competencies and their level of agreement with freshman introduction were “Perform basic word processing” (76.7%) and “Use e-mail properly” (55.8%).

Three computer/information technology competencies were identified as being best introduced at the junior level, according to the mode level of agreement. These competencies and their respective levels of agreement for junior introduction were “Effectively scan a document” (31%), “Develop a multimedia presentation” (26.2%) and “Utilize graphic editing programs” (26.2%). The last competency, “Utilize graphic editing programs,” was bi-modal with 26.2% of the panel agreeing that it should be best taught at the senior level. Other competencies rated as senior level for introduction were “Create and design a web page” (34.9%), “Utilize desktop publishing techniques” (33.3%) and “Identify appropriate file formats when using scanning programs” (31.0%). The final competency in the computer/information technology topic, “Utilize a nonlinear video-editing

program,” was rated by a majority of the panel (60.0%) as being best introduced at the college level.

Table 4.3 Panel’s level of agreement in round two regarding when each computer/information technology competency should be introduced

Competency	<u>Percentage of Panel Agreeing with Introduction Level</u>				
	Freshman	Sophomore	Junior	Senior	College
1. Perform basic word processing	76.7*	16.3	7.0	0.0	0.0
2. Use e-mail properly	55.8*	30.2	14.0	0.0	0.0
3. Effectively scan a document	19.0	21.4	31.0*	26.2	2.4
4. Develop a multimedia presentation	21.4	19.0	26.2*	11.9	21.4
5. Utilize graphic editing programs	9.5	14.3	26.2 ^{*a}	26.2 ^{*a}	23.8
6. Create and design a web page	2.3	16.3	30.2	34.9*	16.3
7. Utilize desktop publishing techniques	7.1	19.0	28.6	33.3*	11.9
8. Identify appropriate file formats when using scanning programs	14.3	21.4	28.6	31.0*	4.8
9. Utilize a nonlinear video-editing program	2.5	7.5	10.0	20.0	60.0*

* = Mode, ^{*a} = Bi-Modal

Introduction Level for Agricultural Industry Competencies

There were three competencies identified in the agricultural industry area. The panel's level of agreement as to when these competencies should be introduced are exhibited in Table 4.4. The panel found all three competencies suitable for introduction at the high school level. Nearly one-half (48.8%) of the panel felt one competency, "Utilize appropriate agricultural technology," should be introduced at the freshman level. Although the panel was more divided as to where the competency "Identify current issues and concerns in the agricultural industry" should be introduced, the most common response was introduction at the sophomore level (27.9%). The most common response for the final competency, "Converse knowledgeably on the different areas in agriculture," was evenly split between introduction at the junior level and introduction at the senior level (25.6% each).

Introduction Level for Communication History Competencies

The panel's level of agreement as to when the communication history competencies should be introduced are exhibited in Table 4.5. One competency, had a wide range of opinions as to when it should be introduced. The most common response for introduction of the competency, "List qualities of an effective communicator," was evenly split between the freshman and junior level (27.9% each). The remainder of the communication history competencies had junior introduction level as the most common response by the panel.

Table 4.4 Panel's level of agreement in round two regarding when each agricultural industry competency should be introduced

Competency	<u>Percentage of Panel Agreeing with Introduction Level</u>				
	Freshman	Sophomore	Junior	Senior	College
1. Utilize appropriate agricultural terminology	48.8*	18.6	20.9	9.3	2.3
2. Identify current issues and concerns in the agricultural industry	20.7	27.9*	25.6	18.6	7.0
3. Converse knowledgeably on the different areas in agriculture	16.3	23.3	25.6* ^a	25.6* ^a	9.3

* = Mode

*^a = Bi-Modal

These competencies and the percentage of the panel who agreed they should be introduced at the junior level were “Identify barriers to effective communication” (46.5%), “Identify strategies to improve communication” (39.5%), “Describe the communications model” (35.7%), “Define media literacy, basic elements and techniques” (35.7%), “Describe the history of agricultural communications” (32.6%) and “Demonstrate different methods of communications” (31.0%).

Table 4.5 Panel's level of agreement in round two regarding when each communication history competency should be introduced

Competency	<u>Percentage of Panel Agreeing with Introduction Level</u>				
	Freshman	Sophomore	Junior	Senior	College
1. List qualities of an effective communicator	27.9 ^{*a}	23.3	27.9 ^{*a}	18.6	2.3
2. Identify barriers to effective communication	18.6	11.6	46.5*	11.6	11.6
3. Identify strategies to improve communication	16.3	14.0	39.5*	20.9	9.3
4. Describe the communications model	14.3	7.1	35.7*	16.7	26.2
5. Define media literacy, basic elements and techniques	9.5	7.1	35.7*	21.4	26.2
6. Describe the history of agricultural communications	9.3	16.3	32.6*	14.0	27.9
7. Demonstrate different methods of communications	23.8	16.7	31.0*	23.8	4.8

* = Mode

^{*a} = Bi-Modal

Introduction Level for Professional Development Competencies

Results of the panel's level of agreement as to when the professional development competencies should be introduced are presented in Table 4.6.

The panel's most common response for nearly half of the competencies was freshman introduction. These competencies and the percent of the panel who

agreed with freshman introduction were “Demonstrate listening skills” (61.9%), “Work in a team activity” (52.4%), “Demonstrate proper phone skills” (46.5%) and “Demonstrate proper work ethic” (46.5%). Two competencies, “Work under pressure” (41.9%) and “Demonstrate professional/business etiquette” (33.3%) most common rating was junior level.

Three competencies, “Interview for employment” (39.5%), “Identify various professional communications organizations” (38.1%) and “Identify the various career opportunities in agricultural communications” (35.7%) were most commonly rated as senior level.

Introduction Level for Research/Information Gathering Competencies

Results of the scholastic level percentages for the competencies in the research/information gathering topic are presented in Table 4.7. The panel rated most of the competencies as advanced, with the most common rating for each competency at the junior level or above. Five competencies were found to be appropriate at the junior level. Those competencies and the percentage of panel members that rated the competency as junior level were “Identify biased information” (44.2%), “Identify sources for information” (42.9%), “Check facts” (41.9%), “Research both sides of an issue” (39.5%) and “Analyze and apply technical data and procedures found in service manuals” (31.7%).

Table 4.6 Panel's level of agreement in Round Two regarding when each professional development competency should be introduced

Competency	Percentage of Panel Agreeing with Introduction Level				
	Freshman	Sophomore	Junior	Senior	College
1. Demonstrate listening skills	61.9*	14.3	9.5	14.3	0.0
2. Work in a team activity	52.4*	14.3	14.3	19.0	0.0
3. Demonstrate proper phone skills	46.5*	23.3	14.0	16.3	0.0
4. Demonstrate a proper work ethic	46.5*	9.3	16.3	25.6	2.3
5. Work under pressure	16.3	9.3	41.9*	23.3	9.3
6. Demonstrate professional/ business etiquette	16.7	16.7	33.3*	28.6	4.8
7. Interview for employment	11.6	20.9	27.9	39.5*	0.0
8. Identify various professional communications organizations	9.5	4.8	26.2	38.1*	21.4
9. Identify the various career opportunities in agricultural communications	23.8	9.5	31.0	35.7*	0.0

* = Mode

The competency "Seek, gather and synthesize information" was most commonly rated as senior level (30.2%). The last research/information gathering competency, "Interpret statistics," had the same percentage of

panel members (34.9%) rating the competency at senior and college level, which were the most common responses.

Introduction Level for Ethics Competencies

There were two competencies under the topic of ethics in this survey. Results of the panel's level of agreement for introduction at each scholastic level are presented in Table 4.8. One competency, "Distinguish between right and wrong," was rated by a majority of the panel (69.0%) as a freshman level competency. The other ethic competency, "Identify the importance of correctly reporting the facts," had two common responses with an equal number of panel members rating this competency as a freshman level or junior level (31.0% each).

Introduction Level for Public Relations/ Advertising/ Marketing Competencies

Results of the panel's level of agreement as to when the public relations/advertising/marketing competencies should be introduced are presented in Table 4.9. Half of the competencies had a most common rating of junior level. The junior level competencies and the percentage of panel members that rated them were "Identify the key elements of a public relations campaign" (37.2%), "Discuss the role of public relations in agricultural companies" (37.2%), "Discuss the role of public relations in farm organizations" (34.9%), "Demonstrate sales skills" (28.6%) and "Identify the importance of an advertising campaign" (27.9%). Two of the above mentioned competencies "Discuss the role of public relations in farm organizations" and

“Identify the importance of an advertising campaign” had the same number of panel members rating them as senior level.

Table 4.7 Panel’s level of agreement in Round Two regarding when each research/information gathering competency should be introduced

Competency	<u>Percentage of Panel Agreeing with Introduction Level</u>				
	Freshman	Sophomore	Junior	Senior	College
1. Identify biased information	7.0	18.6	44.2*	23.3	7.0
2. Identify sources for information	19.0	16.7	42.9*	14.3	7.1
3. Check facts	25.6	23.3	41.9*	7.0	2.3
4. Research both sides of an issue	7.0	25.6	39.5*	20.9	7.0
5. Analyze and apply technical data & procedures found in service manuals	2.4	17.1	31.7*	22.0	26.8
6. Seek, gather and synthesize information	11.6	20.9	25.6	30.2*	11.6
7. Interpret statistics	0.0	9.3	20.9	34.9*	34.9*

* = Mode

The competency, “Prepare a public relations campaign,” had equal percentages of panel members (37.2%) rating it as a senior or college level for the most common responses. Four additional competencies had college level as the most common response. These competencies and the percentage of members that rated them as college level were “Apply common sense logic to an economic trend analysis” (50.0%), “Identify the basics of corporate

communications” (44.2%), “Interpret the basics of the commodities market” (41.5%) and “Discuss the role of public relations in advertising agencies” (38.1%).

Table 4.8 Panel’s level of agreement in round two regarding when each ethics competency should be introduced

Competency	<u>Percentage of Panel Agreeing with Introduction Level</u>				
	Freshman	Sophomore	Junior	Senior	College
1. Distinguish between right and wrong	69.0*	7.1	16.7	4.8	2.4
2. Identify the importance of correctly reporting the facts	31.0 ^{*a}	23.8	31.0 ^{*a}	11.9	2.4

* = Mode,

^{*a} = Bi-Modal

Table 4.9 Panel’s level of agreement in Round Two regarding when each public relations/ advertising/ marketing competency should be introduced

Competency	<u>Percentage of Panel Agreeing with Introduction Level</u>				
	Freshman	Sophomore	Junior	Senior	College
1. Identify the key elements of a public relations campaign	0.0	7.0	37.2*	30.2	25.6
2. Discuss the role of public relations in agricultural companies	0.0	7.0	37.2*	30.2	25.6
3. Discuss the role of public relations in farm organizations	0.0	7.0	34.9 ^{*a}	34.9 ^{*a}	23.3
4. Demonstrate sales skills	11.9	11.9	28.6*	23.8	23.8

Table 4.9 Continued

Competency	<u>Percentage of Panel Agreeing with Introduction Level</u>				
	Freshman	Sophomore	Junior	Senior	College
5. Identify the importance of an advertising campaign	7.0	11.6	27.9 ^{*a}	27.9 ^{*a}	25.6
6. Apply common sense logic to an economic trend analysis	2.4	7.1	7.1	33.3	50.0 [*]
7. Identify the basics of corporate communications	0.0	9.3	20.9	25.6	44.2 [*]
8. Interpret the basics of the commodities market	4.9	7.3	19.5	26.8	41.5 [*]
9. Discuss the role of public relations in advertising agencies	0.0	7.1	26.2	28.6	38.1 [*]

* = Mode

^{*a} = Bi-ModalIntroduction Level for Leadership Development Competencies

Table 4.10 illustrates the results of the panel's level of agreement as to when the leadership development competencies should be introduced. The majority of the leadership development competencies had a most common rating of freshman level. The freshman level competencies and the percentage of the panel agreeing with freshmen introduction were "Utilize correct parliamentary procedure" (65.0%), "Discuss the techniques and

principles involved in public speaking” (64.3%), “Deliver a formal, oral presentation using clear enunciation gestures, tone and vocabulary” (54.8%) and “Speak intelligently before a group” (39.0%).

The final two leadership development competencies were most commonly rated as junior level. The two competencies and the percentage of panel members that rated them as junior level were “Give an effective interview” (47.6%) and “Prepare a 4-6 minute speech within a 30-minute preparation time” (41.5%).

Introduction Level for Legislative Issues Competencies

Results of the panel’s level of agreement as to when the legislative issues competencies should be introduced are presented in Table 4.11. The panel’s most common rating for introduction of each of these competencies was at either the senior or college level. One competency, “Identify the basic workings of the government system and how it effects the agricultural industry” had 48.8% of the panel rating it as senior level. The other two competencies, “Discuss libel law” (51.2%) and “Discuss the Freedom of Information Act” (44.2%), were most commonly rated as college level competencies (51.2% and 44.2%, respectively).

Table 4.10 Panel's level of agreement in Round Two regarding when each leadership development competency should be introduced

Competency	<u>Percentage of Panel Agreeing with Introduction Level</u>				
	Freshman	Sophomore	Junior	Senior	College
1. Utilize correct parliamentary procedure	65.0*	20.0	7.5	7.5	0.0
2. Discuss the techniques and principles involved in public speaking	64.3*	14.3	9.5	7.1	4.8
3. Deliver a formal, oral presentation using clear enunciation, gestures, tone & vocabulary	54.8*	19.0	19.0	7.1	0.0
4. Speak intelligently before a group	39.0*	24.4	26.8	9.8	0.0
5. Give an effective interview	14.3	21.4	47.6*	16.7	0.0
6. Prepare a 4-6 minute speech within a 30-minute preparation time	14.6	24.4	41.5*	14.6	4.9

* = Mode

Table 4.11 Panel's level of agreement in Round Two regarding when each legislative issues competency should be introduced

Competency	<u>Percentage of Panel Agreeing with Introduction Level</u>				
	Freshman	Sophomore	Junior	Senior	College
1. Identify the basic workings of the government system and how it affects the agricultural industry	0.0	9.3	20.9	48.8*	20.9
2. Discuss libel law	0.0	4.7	18.6	25.6	51.2*
3. Discuss the Freedom of Information Act	0.0	7.0	14.0	34.9	44.2*

* = Mode

Introduction Level for Communication Skills Competencies

Table 4.12 shows the results of the panel's level of agreement as to when the communication skill competencies should be introduced. One competency, "Properly use a 35 mm camera," had a tie for the most common response with 32.6% of the panel members rating it for introduction at either the sophomore or junior level.

Three competencies were most commonly rated as being appropriate for introduction at the junior level. Those three competencies and the percentage of panel members rating it at the junior level were "Properly use a digital camera" (40.5%), "Properly use a video camera" (31.0%) and "Identify the steps in the printing/developing process" (26.2%). The final two communication skill competencies were most commonly rated as college level. The two competencies and the percentage of panel members rating them as

college level were, “Deliver a radio broadcast” (35.7%) and “Deliver a TV broadcast” (42.9%).

Table 4.12 Panel’s level of agreement in round two regarding when each communication skill competency should be introduced

Competency	<u>Percentage of Panel Agreeing with Introduction Level</u>				
	Freshman	Sophomore	Junior	Senior	College
1. Properly use a 35 mm camera	18.6	32.6* ^a	32.6* ^a	11.6	4.7
2. Properly use a digital camera	4.8	23.8	40.5*	16.7	14.3
3. Properly use a video camera	4.8	23.8	31.0*	23.8	16.7
4. Identify the steps in the printing/developing process	4.8	23.8	26.2*	23.8	21.4
5. Deliver a radio broadcast	0.0	11.9	26.2	26.2	35.7*
6. Deliver a TV broadcast	0.0	11.9	19.0	26.2	42.9*

* = Mode,

*^a = Bi-Modal

Identification of Additional Competencies

The panel was asked to identify additional competencies for each topic area beyond the 82 that were identified in Round One. Eleven additional competencies were identified. These competencies and their topic areas are illustrated in Table 4.13.

Table 4.13 Additional competencies identified in Round Two.

<u>Competency</u>	<u>Topic Area</u>
1. Write a news story	Writing
2. Effectively utilize the Internet	Computer/ Information Technology
3. Discuss the importance of belonging to professional organizations	Professional Development
4. List the benefits of attending professional organization meetings	Professional Development
5. Demonstrate the ability to cite sources correctly	Research/ Information Gathering
6. Demonstrate the ability to be an effective spokesperson for agriculture	Leadership Development
7. Identify bias in media stories	Ethics
8. Identify different audiences	Public Relations/Advertising/ Marketing
9. Target different audiences	Public Relations/ Advertising/ Marketing
10. Identify bias in media stories	Ethics
11. Identify different audiences	Public Relations/Advertising/ Marketing

Round Three

Because of the strong consensus found on the 82 items in Round Two, only the 11 new competencies identified in Round Two were submitted to the panel in Round Three for members' evaluation.

Agreement Level for Competencies

The format in Round Three was identical to Round Two. The panel was asked to rate each competency using a four-point Likert scale with 1 = “Strongly Disagree,” 2 = “Disagree,” 3 = “Agree,” and 4 = “Strongly Agree.” The scale was used to determine each panel member’s level of agreement as to the inclusion of the competency into a high school agricultural communications curriculum.

The percentage of the panel who agreed or strongly agreed with each competency was used to measure overall level of agreement. The researcher again determined that only those competencies that received a 75% level of agreement or higher would be used for inclusion in the curriculum. Results of the panel’s level of agreement for each competency are illustrated in Table 4.14.

Again there was an extremely high level of agreement by the panel on the competencies included in Round Three. One hundred percent of the panel agreed or strongly agreed that one competency should be included in the high school agricultural communications curriculum. The competency receiving 100% level of agreement was “Effectively utilize the Internet.”

Competencies receiving a 90-99% level of agreement were “Demonstrate the ability to cite sources” (97.1%), “Write a news story” (97.1%), “Discuss how current bills will affect agriculture” (97.0%), “Demonstrate the ability to be an effective spokesperson for agriculture” (94.1%), “Identify bias in media stories” (91.2%), “Identify different audiences” (91.1%) and “Target different audiences” (90.6).

Table 4.14 Agreement levels for each competency by panel in Round Three

<u>Competency</u>	<u>Topic Area</u>	<u>% of Agreement^a</u>
1. Effectively utilize the Internet	Computer/ Information Technology	100.0
2. Demonstrate the ability to cite sources correctly	Research/ Information Gathering	97.1
3. Write a news story	Writing	97.1
4. Discuss how current bills will affect agriculture	Legislative Issues	97.0
5. Demonstrate the ability to be an effective spokesperson for agriculture	Leadership Development	94.1
6. Identify bias in media stories	Ethics	91.2
7. Identify different audiences	Public Relations /Advertising /Marketing	91.1
8. Target different audiences	Public Relations /Advertising/ Marketing	90.6
9. Identify current legislative bills that affect agriculture	Legislative Issues	88.2
10. Discuss the importance of belonging to professional organizations	Professional Development	85.3
11. List the benefits of attending professional organization meetings	Professional Development	82.3

^aThe percentage of individuals who gave a rating of either 3 (Agree) or 4 (Strongly Agree)

Competencies receiving a 80-89% level of agreement were “Identify current legislative bills that affect agriculture” (88.2%), “Discuss the importance of belonging to professional organizations” (85.3%) and “List the benefits of attending professional organization meetings” (82.3%).

Identification of Scholastic Level for Each Competency

The format in Round Three was identical to Round Two. Panel members were asked to identify the scholastic level where each competency should be introduced, using the following scale: 1 = “High School Freshman,” 2 = “High School Sophomore,” 3 = “High School Junior,” 4 = “High School Senior,” and 5 = “College.” The purpose of the rating was two-fold: (1) to give guidelines as to the order in which each competency should be taught, and (2) to determine if the competency was appropriate for the high school level.

Introduction Level for Round Three Competencies

Results of the panel’s level of agreement as to when the competencies should be introduced are presented in Table 4.15. Two competencies had a common introduction level identified as freshman. These two competencies and the percentage of the respondents who felt they should be introduced at the freshman level were “Effectively utilize the Internet” (52.8%) and “Demonstrate the ability to cite sources correctly” (31.4%).

There were four competencies that the panel most commonly identified as being most appropriate for the junior level. The four competencies, as well as the percentage of members that rated it as junior level, were “Write a news story” (44.4%), “Demonstrate the ability to be an effective spokesperson

for agriculture” (34.3%), “Identify different audiences” (27.8%) and “Identify bias in media stories” (27.8%). The competency, “Identify bias in media stories,” had the same percentage (27.8%) of the panel members rating it as a senior level course. One other competency had a bi-modal response which included introduction at the senior or college level. This competency, “Discuss how current bills will affect agriculture,” had an equal number of the panel (41.7%) members rating it as senior or college level.

Four other competencies were most commonly identified by the panel as being appropriate for introduction at the college level. Those competencies and the percentage of panel members rating them as college level were “Identify current legislative bills that affect agriculture” (47.1%), “List the benefits of attending professional organization meetings” (41.7%), “Discuss the importance of belonging to professional organizations” (33.3%) and “Target different audiences” (30.6%).

Table 4.15 Panel's level of agreement in Round Three regarding when each competency should be introduced.

Competency	Percentage of Panel Agreeing with Introduction Level				
	Freshman	Sophomore	Junior	Senior	College
1. Computer/ Information Technology – Effectively utilize the Internet	52.8*	25.0	16.7	2.8	2.8
2. Research/ Information Gathering – Demonstrate the ability to cite sources correctly	31.4*	17.1	28.6	11.4	11.4
3. Writing – Write a new story	13.9	16.7	44.4*	19.5	5.6
4. Leadership Development – Demonstrate the ability to be an effective spokesperson for agriculture	14.3	5.7	34.3*	31.4	14.3
5. Public Relations/ Advertising/ Marketing – Identify different audiences	5.6	19.4	27.8*	25.0	22.2
6. Ethics – Identify bias in media stories	8.3	13.9	27.8* ^a	27.8* ^a	22.2
7. Legislative issues – Discuss how current bills will affect agriculture	2.8	0.0	13.9	41.7* ^a	41.7* ^a

Table 4.15 Continued

Competency	<u>Percentage of Panel Agreeing with Introduction Level</u>				
	Freshman	Sophomore	Junior	Senior	College
8. Legislative issues – Identify current legislative bills that affect agriculture	0.0	0.0	20.6	32.4	47.1*
9. Professional Development – List the benefits of attending professional organization meetings	5.6	8.3	25.0	19.4	41.7*
10. Professional Development – Discuss the importance of belonging to professional organizations	8.3	5.6	27.8	25.0	33.3*
11. Public Relations/ Advertising/ Marketing – Target different audiences	2.8	16.7	22.2	27.8	30.6*

* = Mode,

*^a = Bi-Modal

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The major purpose of this study was to identify competencies that should be attained by high school students who complete courses in agricultural communications. Identification of the competencies came from industry leaders, high school agricultural education teachers, and agricultural communications university faculty. Teachers and faculty used in the study were individuals who were teaching in the United States during the 1999-2000 school year. Industry leaders were 1999-2000 national officers from seven professional organizations in the United States whose primary goal is enhancement of agricultural communications.

As a means of accomplishing the purpose of the study, answers to the following questions were sought:

1. What specific topics should be included in a high school curriculum for agricultural communications?
2. For each topic identified, what competencies should agricultural communications students possess upon completion of the program?
3. For each competency identified, at what scholastic level should they be introduced to the student?

Procedure

A three-round Delphi technique was the principle procedure used to conduct this study. The state supervisors of agricultural education from all 50

states were used as third parties to nominate agriscience teachers in their state with a strong interest in agricultural communications. The nomination process resulted in 33 individuals from 27 states who served as the high school teaching experts for this study. The second segment of the panel of experts consisted of agriculture industry leaders. The individuals selected for this segment were the executive officers of seven agricultural communications-related professional organizations. The seven organizations were: (1) Agricultural Communicators of Tomorrow (ACT); (2) Agricultural Communicators in Education (ACE); (3) Agricultural Relations Council (ARC); (4) American Agricultural Editors' Association (AAEA); (5) Cooperative Communicators Association (CCA); (6) Livestock Publication Council (LPC); and (7) National Association of Farm Broadcasters (NAFB). The list produced names and addresses for 21 individuals who were included in the panel. The third subgroup of the panel of experts was university faculty that were teaching agricultural communications courses during the 1999-2000 school year. A list of agricultural communications faculty prepared by the national Agricultural Communicators of Tomorrow student organization was utilized as the frame for this segment of the panel. Twenty-one university faculty were included in the initial panel. The three subgroups comprised a total of 75 individuals who were asked to participate in Round One of the study.

From the reviewed literature, an open-ended questionnaire consisting of three questions was developed: (1) What topics should be included in a high school agricultural communications course? (2) How should the

curriculum at the high school level differ from a university course? (3) What competencies should a student possess after completing a course in agricultural communications? These questions were validated for content regarding their appropriateness to the objectives of the study by a panel of faculty and graduate students in the Department of Agricultural Education & Communications at Texas Tech University. This group was encouraged to list several items for each question to determine if they are appropriate to use to identify topics of instruction. They also were asked to identify other questions that might need to be included. The instrument was pilot tested in Texas using agricultural communicators, agricultural students, and agriscience teachers who were not included in the selected panel of experts. These individuals were asked to provide answers to the questions. In addition to answering the questions, the individuals were asked to correct, improve and make changes that enhanced the instrument's clarity and understanding. Additional space on the questionnaire was provided for comments. Following completion of the pilot test, the researcher made revisions based on the results and suggestions from those involved in the pilot test.

The Round One questionnaire consisted of three open-ended questions. The panel of experts were asked to list several answers to each open-ended question under investigation. Frequencies, percentages, and ranks were used to summarize the responses to this round. Similar responses were collapsed and reworded to convey the intent of different responses. Non-response follow-up procedures included a postcard mailed three weeks later. A certified

letter, along with another questionnaire, was mailed at the end of the fifth week. A total response of 76% was achieved for this round.

In Round Two, the panel of experts was presented with an instrument which asked them to do two things: (1) rate the 82 competencies that emerged from Round One in terms of appropriateness for a high school agricultural communications curriculum, and (2) identify the scholastic level at which each competency level should be introduced. The panel was asked to rate each competency using a four-point Likert scale with 1 = "Strongly Disagree," 2 = "Disagree," 3 = "Agree," and 4 = "Strongly Agree." The scale was used to determine each panel member's level of agreement as to the inclusion of the competency into a high school agricultural communications curriculum. The researcher determined *a priori* that only those competencies that received a 75% level of agreement or higher would be used for inclusion in the curriculum. In addition to evaluating the 82 competencies, panel members were asked to list additional competencies missed in Round One. They were also asked to identify the scholastic level where each competency should be introduced, using the following scale: 1 = "High School Freshman," 2 = "High School Sophomore," 3 = High School Junior, 4 = "High School Senior," and 5 = "College." The purpose of the rating was two-fold: (1) to give guidelines as to the order in which each competency should be taught, and (2) to determine if the competency was appropriate for the high school level. A follow-up card was sent to non-respondents one week later. All non-respondents were called and/or faxed. Forty-three of the 56 individuals

responded for a total response rate of 77%. Frequencies, percentages, and ranks were used to evaluate the second round responses.

Round Three served as the final round for the study. Because of the remarkable consensus found on the 82 items in Round Two, only the 11 new competencies identified in Round Two were submitted to the panel in Round Three for members' evaluation. The instrument was sent to 41 of the 43 members who responded in Round Two by priority mail. Two of the panel members indicated they would be out of the country during the time period for Round Three so they were unable to participate in the last round. A follow-up card was mailed one week later. Three weeks later all non respondents were contacted by phone or fax. Thirty-six individuals responded for a total response rate of 88%.

The Round Three instrument was formatted similar to the one in Round Two. Frequencies, percentages, and ranks were used to evaluate the third round responses.

Summary of Findings

Topics in a High School Agricultural Communications Course

The open-ended question regarding what topics should be included in a high school agricultural communications course produced 262 responses from the panel. Analysis of the responses produced the following 11 topic areas:

(1) Writing; (2) Computer/Information Technology; (3) Agricultural Industry; (4) Communications History; (5) Professional Development; (6) Research/Information Gathering; (7) Ethics; (8) Public

Relations/Advertising/Marketing; (9) Leadership Development; (10) Legislative Issues; and (11) Communication Skills.

High School Agricultural Communications Competencies

Ninety-three competencies were identified and evaluated by the panel of experts. One hundred percent of the panel agreed or strongly agreed that ninety one competencies should be included in the high school agricultural communications curriculum. Competencies receiving 100% levels of agreement were “Identify the components and format of news releases,” “Write a professional letter,” “Utilize correct grammar,” “Utilize correct spelling,” “Utilize correct punctuation,” “Identify what makes a top newsworthy,” “Utilize appropriate agricultural terminology,” “Identify current issues and concerns in the agricultural industry,” “List qualities of an effective communicator,” “Identify the various career opportunities in agricultural communications,” “Demonstrate professional/business etiquette,” “Demonstrate a proper work ethic,” “Demonstrate listening skills,” “Research both sides of an issue,” “Check facts,” “Identify biased information,” “Identify sources for information,” “Discuss the role of public relation in agricultural companies,” “Discuss the role of public relation in agricultural organizations,” “Speak intelligently before a group,” “Effectively utilize the Internet” and “Properly use a 35 mm camera.”

Competencies receiving a 90-99% level of agreement were “Effectively interview a person” (97.7%), “Write a quality thank-you note” (97.7%), “Use e-mail properly” (97.7%), “Identify barriers to effective

communication”(97.7%), “Interview for employment” (97.7%), “Work in a team activity” (97.7%), “Demonstrate proper phone skills” (97.7%), “Work under pressure” (97.7%), “Identify the importance of correctly reporting the facts” (97.7%), “Deliver a formal, oral presentation using clear enunciation, gestures, tone and vocabulary”(97.7%), “Give an effective interview”, “Identify the basic workings of the government systems and how it affects the agricultural industry” (97.7%), “Properly use a digital camera” (97.7%), “Demonstrate different methods of communication” (97.6), “Demonstrate the ability to cite sources” (97.1%), “Write a news story” (97.1%), “Discuss how current bills will affect agriculture” (97.0%), “Write a news release” (95.4%), “Accurately proofread a document” (95.4%), “Utilize the basic principals involved in technical writing” (95.4%), “Seek, gather and synthesize information” (95.4%), “Distinguish between right and wrong” (95.4%), “Properly use a video camera” (95.4%), “Write a feature story” (95.3%), “Write a caption for photos” (95.3%), “Perform basic word processing” (95.3%), “Converse knowledgeably on the different areas in agriculture” (95.3%), “Identify the key elements of a public relations campaign” (95.3%), “Utilize desktop publishing techniques” (95.2%), “Identify appropriate file formats when using scanning programs” (95.2%), “Demonstrate the ability to be an effective spokesperson for agriculture” (94.1%), “Determine whether a topic would be best covered a news article or feature article” (93.1%), “Create a resume” (93.1%), “Identify various professional communication organizations” (93.1%), “Identify the importance of an advertising campaign” (93.0%), “Discuss the techniques and principles involved in public speaking”

(93.0%), “Utilize correct parliamentary procedure” (93.0%), “Effectively scan a document” (92.9%), “Identify bias in media stories” (91.2%), “Identify different audiences” (91.1%), “Write for broadcast” (90.7%) “Effectively edit a story” (90.7%), “Write a speech” (90.7%), “Identify strategies to improve communication” (90.7%), “Prepare a public relations campaign” (90.7%), “Prepare a 4-6 minute speech within a 30-minute preparation time” (90.7%), “Deliver a radio broadcast” (90.7%), “Create and design a web page” (90.5%), “Target different audiences” (90.6) and “Develop a multimedia presentation” (90.5%).

Competencies receiving a 80-89% level of agreement were “Write for the web,” (88.4%), “Discuss libel law” (88.4%), “Discuss the Freedom of Information Act” (88.4%), “Deliver a TV broadcast” (88.4%), “Identify current legislative bills that affect agriculture” (88.2%), “Discuss the role of public relations in advertising agencies” (86.1%), “Describe the history of agricultural communications” (86.0%), “Describe the communications model” (86.0%), “Demonstrate sales skills” (86.0%), “Utilize graphic editing programs” (85.7%), “Discuss the importance of belonging to professional organizations” (85.3%), “Interpret statistics” (83.8%), “Identify the basics of corporate communications” (83.8%), “Utilize an Associated Press stylebook” (83.7%), “List the benefits of attending professional organization meetings” (82.3%) and “Define media literacy” (80.9%).

Competencies receiving a 75-79% level of agreement were “Identify the steps in the printing/developing process” (79.0%), “Interpret the basics of the

commodities market” (76.8%), and “Apply common sense logic to an economic trend analysis” (76.7%).

Two competencies did not meet the 75% agreement criteria. The two competencies were “Analyze and apply technical data and procedures found in service manuals” (69.0%), and “Utilize a nonlinear video-editing program” (65.0%).

Identification of Scholastic Level for each Competency

The ninety-three competencies were categorized by the 11 topics that were identified. Within each topic area, the panel identified the scholastic level at which each competency should be introduced. Mode responses for the scholastic level of introduction were identified and used in reporting the results.

Introduction Level for Writing Competencies

The panel found that it was appropriate to introduce all of the writing competencies at the high school level. For five of the competencies, a majority of the panel felt they should be taught at the freshman level. These five competencies and the percentage of the respondents who felt they should be introduced at the freshman level were “Write a quality thank-you note” (73.8%), “Utilize correct spelling” (73.2%), “Utilize correct punctuation” (73.2%), “Utilize correct grammar” (70.7%) and “Write a speech” (50.0%). The panel was evenly divided in their agreement that one writing competency ,

“Identify what makes a topic newsworthy,” should be introduced at the sophomore level (35.7%) or the junior level (35.7%).

Twelve additional writing competencies were identified as best introduced at the junior level. Those competencies with a mode level of agreement at the junior level were “Identify what makes a topic newsworthy” (48.8%), “Create a resume” (47.6%), “Write a news story” (44.4%), “Write captions for photos” (42.9%), “Determine whether a topic would be best covered as a news article or feature article” (40.5%), “Accurately proofread a document” (40.5%), “Write a professional letter” (39.5%), “Utilize an associated press stylebook” (39.0%) “Write a news release” (38.1%), “Write for the web” (35.7%), “Write a feature story” (33.3%), “Effectively edit a story” (33.3%) and “Effectively interview a person” (28.6%). The last three competencies, “Write a feature story,” “Effectively edit a story,” and “Effectively interview a person” had a bi-modal level of agreement, with the same percentage rating them as being best introduced at the senior level.

Two competencies were also rated as being best introduced at the senior level, according to the mode level of agreement. Those two competencies were “Write for broadcast” (39.5%) and “Utilize the basic principles involved in technical writing” (26.2%).

Introduction Level for Computer/Information Technology Competencies

The panel found that it was appropriate to introduce all but one of the computer/information technology competencies at the high school level. A majority of the panel indicated that three of the competencies were best

introduced at the freshman level. These three competencies and their level of agreement with freshman introduction were “Perform basic word processing” (76.7%), “Use e-mail properly” (55.8%) and “Effectively utilize the Internet” (52.8%).

Three computer/information technology competencies were identified as being best introduced at the junior level, according to the mode level of agreement. These competencies and their respective levels of agreement for junior introduction were “Effectively scan a document” (31%), “Develop a multimedia presentation” (26.2%) and “Utilize graphic editing programs” (26.2%). The last competency, “Utilize graphic editing programs,” was bi-modal with 26.2% of the panel agreeing that it should be best taught at the senior level. Other competencies rated as senior level for introduction were “Create and design a web page” (34.9%), “Utilize desktop publishing techniques” (33.3%) and “Identify appropriate file formats when using scanning programs” (31.0%). The final competency in the computer/information technology topic, “Utilize a nonlinear video-editing program,” was rated by a majority of the panel (60.0%) as being best introduced at the college level.

Introduction Level for Agricultural Industry Competencies

The panel found all three agricultural industry competencies are suitable for introduction at the high school level. Nearly one-half (48.8%) of the panel felt one competency, “Utilize appropriate agricultural technology,” should be introduced at the freshman level. Although the panel was more

divided as to where the competency “Identify current issues and concerns in the agricultural industry” should be introduced, the most common response was introduction at the sophomore level (27.9%). The most common response for the final competency, “Converse knowledgeably on the different areas in agriculture,” was evenly split between introduction at the junior level and introduction at the senior level (25.6% each).

Introduction Level for Communication History Competencies

One communication history competency had a wide range of opinions as to when it should be introduced. The most common response for introduction of the competency, “List qualities of an effective communicator,” was evenly split between the freshman and junior level (27.9% each). The remainder of the communication history competencies had junior introduction level as the most common response by the panel. These competencies and the percentage of the panel who agreed they should be introduced at the junior level were “Identify barriers to effective communication” (46.5%), “Identify strategies to improve communication” (39.5%), “Describe the communications model” (35.7%), “Define media literacy, basic elements and techniques” (35.7%), “Describe the history of agricultural communications” (32.6%) and “Demonstrate different methods of communications” (31.0%).

Introduction Level for Professional Development Competencies

The panel’s most common response for nearly half of the competencies in professional development was freshman introduction. These competencies

and the percent of the panel who agreed with freshman introduction were “Demonstrate listening skills” (61.9%), “Work in a team activity” (52.4%), “Demonstrate proper phone skills” (46.5%) and “Demonstrate proper work ethic” (46.5%). Two competencies, “Work under pressure” (41.9%) and “Demonstrate professional/business etiquette” (33.3%) most common rating was junior level. Three competencies, “Interview for employment” (39.5%), “Identify various professional communications organizations” (38.1%) and “Identify the various career opportunities in agricultural communications” (35.7%) were most commonly rated as senior level. Two competencies “List the benefits of attending professional organization meetings” (41.7%) and “Discuss the importance of belonging to professional organizations” (33.3%) were most commonly rated as college level.

Introduction Level for Research/Information Gathering Competencies

The panel rated most of the research/ information gathering competencies as advanced, with the most common rating for all but one competency at the junior level or above. One competency, “Demonstrate the ability to cite sources correctly,” had 31.4% of the rating it as freshman level. Five competencies were found to be appropriate at the junior level. Those competencies and the percentage of panel members that rated the competency as junior level were “Identify biased information” (44.2%), “Identify sources for information” (42.9%), “Check facts” (41.9%), “Research both sides of an issue” (39.5%) and “Analyze and apply technical data and procedures found in service manuals” (31.7%).

The competency “Seek, gather and synthesize information” was most commonly rated as senior level (30.2%). The last research/information gathering competency, “Interpret statistics,” had the same percentage of panel members (34.9%) rating the competency at senior and college level, which were the most common responses.

Introduction Level for Ethics Competencies

There were three competencies under the topic of ethics in this survey. One competency, “Distinguish between right and wrong,” was rated by a majority of the panel (69.0%) as a freshman level competency. One competency, “Identify bias in media stories,” had an equal percentage of panel members (27.8%) rating it both junior and senior level. The other ethic competency, “Identify the importance of correctly reporting the facts,” had two common responses with an equal number of panel members rating this competency as a freshman level or junior level (31.0% each).

Introduction Level for Public Relations/ Advertising/ Marketing Competencies

Half of the public relations/ advertising/ marketing competencies had a most common rating of junior level. The junior level competencies and the percentage of panel members that rated them as junior were “Identify the key elements of a public relations campaign” (37.2%), “Discuss the role of public relations in agricultural companies” (37.2%), “Discuss the role of public relations in farm organizations” (34.9%), “Demonstrate sales skills” (28.6%), “Identify the importance of an advertising campaign” (27.9%) and “Identify different audiences” (27.8%). Two of the above mentioned competencies

“Discuss the role of public relations in farm organizations” and “Identify the importance of an advertising campaign” had the same number of panel members rating them as senior level.

The competency, “Prepare a public relations campaign,” had equal percentages of panel members (37.2%) rating it as a senior or college level for the most common responses. Five additional competencies had college level as the most common response. These competencies and the percentage of members that rated them as college level were “Apply common sense logic to an economic trend analysis” (50.0%), “Identify the basics of corporate communications” (44.2%), “Interpret the basics of the commodities market” (41.5%) and “Discuss the role of public relations in advertising agencies” (38.1%) and “Target different audiences” (30.6%).

Introduction Level for Leadership Development Competencies

The majority of the leadership development competencies had a most common rating of freshman level. The freshman level competencies and the percentage of the panel agreeing with freshmen introduction were “Utilize correct parliamentary procedure” (65.0%), “Discuss the techniques and principles involved in public speaking” (64.3%), “Deliver a formal, oral presentation using clear enunciation gestures, tone and vocabulary” (54.8%) and “Speak intelligently before a group” (39.0%).

The final three leadership development competencies were most commonly rated as junior level. The three competencies and the percentage of panel members that rated them as junior level were “Give an effective

interview” (47.6%), “Prepare a 4-6 minute speech within a 30-minute preparation time” (41.5%) and “Demonstrate the ability to be an effective spokesperson for agriculture” (34.3%).

Introduction Level for Legislative Issues Competencies

The panel’s most common rating for introduction of each of the legislative issue competencies was at either the senior or college level. One competency, “Identify the basic workings of the government system and how it effects the agricultural industry” had 48.8% of the panel rating it as senior level. One competency, “Discuss how current bills will affect agriculture,” had the same percentage (41.7%) of panel members rating it as senior or college level. The other three competencies, “Discuss libel law” (51.2%), “Identify current legislative bills that affect agriculture” (47.1%) and “Discuss the Freedom of Information Act” (44.2%), were most commonly rated as college level competencies (51.2% and 44.2%, respectively).

Introduction Level for Communication Skills Competencies

One communication skill competency, “Properly use a 35 mm camera,” had a tie for the most common response with 32.6% of the panel members rating it for introduction at either the sophomore or junior level.

Three competencies were most commonly rated as being appropriate for introduction at the junior level. Those three competencies and the percentage of panel members rating it at the junior level were “Properly use a digital camera” (40.5%), “Properly use a video camera” (31.0%) and “Identify the steps in the printing/developing process” (26.2%). The final two

communication skill competencies were most commonly rated as college level. The two competencies and the percentage of panel members rating them as college level were, “Deliver a radio broadcast” (35.7%) and “Deliver a TV broadcast” (42.9%).

Conclusions

The conclusions for the study are based on interpretations of data presented in the study and are restricted to the populations surveyed. They also are subject to the limitations outlined in Chapter I of the study. It is important to note that mode responses from the panel were used to determine when a competency should be introduced. In several instances where the response was bi-modal, the highest scholastic level of introduction was utilized to interpret the results.

Based on this information, the researcher makes the following conclusions:

1. The following topic areas are appropriate for use in developing a curriculum in agricultural communications for high school students:

- Writing,
- Computer/Information Technology,
- Agricultural Industry,
- Communications History,
- Professional Development,
- Research/Information Gathering,
- Ethics,

- Public Relations/Advertising/Marketing,
- Leadership Development,
- Legislative Issues,
- Communication Skills.

2. The following represents the major topic areas and competencies that should be utilized in developing an introductory agricultural communications curriculum for high school freshmen and sophomores:

Writing

- Write a quality thank-you note,
- Utilize correct spelling,
- Utilize correct punctuation,
- Utilize correct grammar,
- Write a speech.

Computer/Information Technology

- Perform basic word processing,
- Use e-mail properly,
- Effectively utilize the Internet.

Agricultural Industry

- Utilize appropriate agricultural terminology,
- Identify current issues and concerns in the agricultural industry.

Professional Development

- Demonstrate listening skills,
- Work in a team activity,

- Demonstrate proper phone skills,
- Demonstrate a proper work ethic.

Research/Information Gathering

- Demonstrate the ability to cite sources correctly.

Ethics

- Distinguish between right and wrong.

Leadership Development

- Utilize correct parliamentary procedure,
- Discuss the techniques and principles involved in public speaking,
- Deliver a formal, oral presentation using clear enunciation, gestures, tone and vocabulary,
- Speak intelligently before a group.

3. The following represents the major topic areas and competencies that should be utilized in developing an intermediate agricultural communications curriculum for high school juniors:

Writing

- Identify what makes a topic newsworthy,
- Identify the components and format of news releases,
- Create a resume,
- Accurately proofread a document,
- Write a professional letter,
- Utilize an Associated Press Stylebook,
- Write a news release,

- Write for the web,
- Write a news story.

Computer/Information Technology

- Effectively scan a document,
- Develop a multimedia presentation.

History

- Describe the history of agricultural communications,
- Demonstrate different methods of communications,
- List qualities of an effective communicator,
- Identify barriers to effective communication,
- Define media literacy, basic elements and techniques,
- Identify strategies to improve communication,
- Describe the communication model.

Professional Development

- Develop the ability to work under pressure,
- Demonstrate professional/business etiquette.

Research/Information Gathering

- Identify biased information,
- Identify sources of information,
- Check facts,
- Research both sides of an issue,
- Analyze and apply technical data and procedures found in service manuals.

Ethics

- Identify the importance of correctly reporting the facts.

Public Relations/Advertising/Marketing

- Identify the key elements of a public relations campaign,
- Discuss the role of public relations in agricultural companies,
- Demonstrate sales skills,
- Identify different audiences.

Leadership Development

- Give an effective interview,
- Prepare a 4-6 minute speech within a 30-minute preparation time,
- Demonstrate the ability to be an effective spokesperson for agriculture.

Legislative Skills

- Identify the basic workings of the government system and how it affects the agricultural industry.

Communications Skills

- Properly use a 35 mm camera,
- Properly use the digital camera,
- Properly use a video camera, and
- Identify the steps in the printing/ developing process.

4. The following represents the major topic areas and competencies that should be utilized in developing an advanced agricultural communications curriculum for high school seniors:

Writing

- Write a feature story,
- Effectively edit a story,
- Effectively interview a person,
- Write for broadcast,
- Utilize the basic principles involved in technical writing.

Computer Information Technology

- Utilize graphic editing programs,
- Create and design a web page,
- Utilize desktop publishing techniques,
- Identify appropriate file formats when using scanning programs.

Agricultural Industry

- Converse knowledgeably on the different areas in agriculture.

Professional Development

- Interview for employment,
- Identify various professional communications organizations,
- Identify the various career opportunities in agricultural communications.

Research/Information Gathering

- Seek, gather and synthesize information.

Public Relations/Advertising/Marketing

- Discuss the role of public relations in farm organizations,
- Identify the importance of an advertising campaign.

Legislative Issues

- Identify the basic workings of the government system and how it affects the agricultural industry.

Ethics

- Identify bias in media stories.

5. The following represents major competencies that are not suitable for high school instruction, but rather should be introduced at the college level:

- Utilize a nonlinear video-editing program,
- Interpret statistics,
- Prepare a public relations campaign,
- Apply common sense logic to an economic trend analysis,
- Identify the basics of corporate communications,
- Interpret the basics of the commodities market,
- Discuss the role of public relations in advertising agencies,
- Discuss libel law,
- Discuss the Freedom of Information Act,
- Deliver a radio broadcast,
- Deliver a TV broadcast,
- Discuss how current bills will affect agriculture,

- Identify current legislative bills that affect agriculture,
- List the benefits of attending professional organization meetings,
- Discuss the importance of belonging to professional organizations,
- Target different audiences.

Recommendations

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

1. The seventy-six competencies identified in this study should be utilized to develop curriculum materials for high school agriscience students. The materials should be developed in three separate units: (a) Introductory Agricultural Communications, (b) Intermediate Agricultural Communications, and (c) Advanced Agricultural Communications. The introductory unit should be utilized for high school freshman and sophomores, the intermediate unit for high school juniors, and the advanced unit for high school seniors.
2. In order to facilitate the development of such curriculum materials, the list of competencies should be disseminated to agricultural educators in the nation. Potential disseminators include the National FFA Organization, the U. S. Department of Education, and the National Council for Agricultural Education.
3. The National Council for Agricultural Education should utilize the competencies in developing a proposal for submission to the

National FFA Foundation Board of Trustees to secure funding for preparing curriculum materials in agricultural education for use by high school agricultural education instructors.

4. Curricula using these competencies should be pilot tested to determine if changes/additions are needed.
5. The national FFA organization should utilize the competencies in developing and implementing the new National FFA Agricultural Communications Career Development Event.
6. Additional studies should be conducted on the state or regional level to determine if changes or additions need to be made in the competencies in order to be most effective within a particular state or region.

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APPENDIX A
TEXAS ESSENTIAL KNOWLEDGE AND SKILLS

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS

1. Career development relating to entrepreneurship and employment opportunities
 - Resource allocations
 - Information processing
 - Interpersonal relations
 - Social, organizational, and technological systems
 - Selections and application
 - Personal and occupational safety practices in the workplace
 - Supervised agricultural experience activities
2. Agricultural communications in relation to utilizing appropriate spoken communication techniques and procedures
 - Communicating verbally
 - Communicating non-verbally
 - Researching and communicating factual information
 - Preparing and delivering speeches
 - Identifying interviewing skills and procedures
 - Developing your speaking style
3. Effective written communication skills
 - Identifying your writing style
 - Targeting an audience and choosing a method of delivery
 - Recognizing bias information in written materials
 - Preparing a written informative report
4. Effective Visual Communications
 - Using photography in effective communication
 - Preparing video-essays and photo-essays
 - Using technology in agricultural communications

APPENDIX B

PINE RIDGE HIGH SCHOOL AGRISCIENCE

TECHNOLOGY AND COMMUNICATIONS ACADEMY

**PINE RIDGE HIGH SCHOOL AGRISCIENCE
TECHNOLOGY AND COMMUNICATIONS ACADEMY**

- Understand the needs and used of various digital media in agriculture
- Demonstrate the application if the principles of design to the production of visual communication via multimedia technology.
- Recognize the impact of computer technology on society and on the individual in regard to aesthetic judgments
- Use computers and selected peripherals to create and publish a variety of mass media.
- Utilize traditional and desktop publishing skills in the production of a variety of media.
- Demonstrate proficiency in the application of journalistic writing strategies to report scientific and technical information in the agricultural/environmental sciences to general audiences.
- Establish a context from which to consider expanded applications of agricultural communications.
- Demonstrate an awareness of the role of computers in current information processing and image making and career options in agricultural communications.
- Understand the ability of the Web to merge artistic disciplines into one integrated communications medium.
- Realize the global accessibility, cross-platform compatibility, networked distribution, and ever-improving technology of the Web.
- Use traditional design concepts and grids for consistent Web page layout and design.
- Create the structure and template of a Web page.
- Control the flow of the Web page through text, graphics, for, and hyperlinks.
- Apply the elements of effective written communication in agriculture, focusing on strategies and methods for agricultural information transfer through the world-wide-web.
- Focus on navigability and visual appeal

- Demonstrate the proper management of Web-site organization and site structure.
- Demonstrate the integration of multimedia within Internet- and Web-based applications.
- Analyze Web publications for their effectiveness and understand the strategies for correcting mistakes.
- Identify career opportunities pertaining to agricultural communications and Internet and web-based design.

APPENDIX C
ST. JAMES, MISSOURI, HIGH SCHOOL
AGRICULTURAL COMMUNICATIONS COURSES

ST. JAMES, MISSOURI, HIGH SCHOOL
AGRICULTURAL COMMUNICATIONS COURSES

- List different types of communications
- Discuss the components of communication
- Set personal goals
- Define self motivation
- Demonstrate ability to utilize a day planner/calendar to be organized
- Write a resume
- Interview for a job
- Conduct a job interview
- Design a business card
- Demonstrate the ability to write a personal letter
- Write a news story
- Deliver a prepared public speech
- Deliver an extemporaneous public speech
- Plan a sales display
- Demonstrate the ability to deliver a radio broadcast
- Demonstrate the ability to deliver a television broadcast
- Plan, organize, and lead a meeting using correct parliamentary procedure
- Plan, organize, and lead a meeting following an agenda
- Demonstrate the ability to do market research for a sales presentation
- Plan, organize, and deliver a sales presentation

APPENDIX D

**OKLAHOMA DEPARTMENT OF VOCATIONAL AND TECHNICAL
EDUCATION AGRICULTURAL COMMUNICATIONS DUTY/TASK LIST**

OKLAHOMA DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION AGRICULTURAL COMMUNICATIONS DUTY/TASK LIST

Entry level agricultural communications
specialist: Oral and Written Communications

- a. Demonstrate professional human relations and work skills
 - Project appropriate business image
 - Formulate short and long term goals and objectives
 - Practice time management and follow work schedule
 - Demonstrate professional interpersonal skills
 - Apply business work ethics
 - Practice stress management skills
 - Practice awareness and skills to be an effective team member.
 - Deal with confidential information
 - Address the ethical uses regarding ownership of information
- b. Apply communication strategies necessary and appropriate for effective business relations
 - Understand the communication theory
 - Demonstrate positive verbal and nonverbal communications
 - Apply positive verbal and non-verbal business communication skills
- c. Demonstrate knowledge of leadership
 - Identify leader characteristics
- d. Demonstrate knowledge of media as it relates to agriculture
 - Perform editing for all media
 - Demonstrate ability to perform journalistic writing
 - Demonstrate knowledge of broadcasting
 - Demonstrate knowledge of effective public relations
 - Demonstrate knowledge of photo editing
 - Demonstrate knowledge of photo captioning
- e. Demonstrate knowledge of problem-solving techniques and/or critical thinking skills
 - Applying problem solving techniques and/or critical thinking skills
- f. Demonstrate understanding of basic journalism
 - Demonstrate understanding of what is news
 - Demonstrate understanding of the social role of journalism

- Demonstrate knowledge of journalism in our society
- Distinguish between objectivity versus opinion

Entry level agricultural communications
specialist: Advertising/Marketing

a. Develop and maintain a customer-service attitude

- Explain the importance of product and company knowledge
- Demonstrate methods of handling competition
- Manage customer complaints
- Establish and maintain familiarity with services available for purchase by the customer
- Maintaining records used in the business
- Extend yourself by identifying promotional alternatives
- Thank customers for business
- Provide service to customers
- Demonstrate knowledge of Maslow's Hierarchy of Needs

b. Demonstrate knowledge of professional selling skills/needs satisfaction selling

- Demonstrate knowledge of probing skills
- Demonstrate knowledge of closing skills
- Demonstrate ability to handle skepticism
- Demonstrate ability to handle objections
- Demonstrate knowledge of feature-advantage-benefit selling
- Demonstrate knowledge of general customer buying tendencies and demographics
- Demonstrate knowledge of 80/20 rule.
- Demonstrate knowledge of the importance of good listening skills
- Demonstrate knowledge of opportunities as they relate to sales
- Demonstrate knowledge of needs as they relate to sales

c. Demonstrate knowledge of public relations and advertising applications

- Know your client
- Know your media choices
- Demonstrate knowledge of what media to use
- Demonstrate knowledge of event merchandising
- Demonstrate knowledge of advertising
- Demonstrate knowledge of creative production
- Demonstrate knowledge of negotiating the purchase

Entry level agricultural communications
specialist: Radio/TV – Electronic Media

a. Use technology to enhance the effectiveness of communications

- Operate electronic message technologies to include facsimile machines and e-mail
 - Use basic technology common in the computer industry
- b. Use connectivity software to perform business-related tasks as an end-user
- Describe the general structure of the connectivity
 - Describe and use connectivity application
 - Identify basic network components and understand the concepts behind the network
- c. Demonstrate understanding of PC multimedia software
- Demonstrate knowledge of graphics software
 - Demonstrate knowledge of sound software
 - Demonstrate knowledge of video software
 - Demonstrate knowledge of presentation software
 - Demonstrate knowledge of legal issues
- d. Demonstrate knowledge of print media including desktop publishing and graphics
- Demonstrate knowledge of the structure of a news story
 - Demonstrate knowledge of how to write headlines and captions
 - Demonstrate knowledge of copy/editing skills
 - Demonstrate knowledge of photography
 - Demonstrate knowledge of page layout
 - Demonstrate knowledge of the printing process
- e. Demonstrate understanding of radio
- Demonstrate knowledge of audio equipment
 - Demonstrate knowledge of basic radio skills
- f. Demonstrate knowledge of television
- Demonstrate knowledge of video equipment
 - Demonstrate knowledge of basic TV skills

APPENDIX E
COVER LETTER TO STATE SUPERVISOR

COVER LETTER TO STATE SUPERVISOR

January 11, 2000

«Title» «First» «Last»
«Job»
«Address»
«Address_2»
«City», «State» «Zip»

Dear «Title» «Last»:

As you may know, a number of states are implementing agricultural communications into the curriculum for high school agricultural education programs. The National FFA Organization also recently established an agricultural communications career development event. However, there appears to be a lack of information as to what should be taught in the area of agricultural communications. A thorough review of research shows there has never been a national study identifying what should be included in a high school agricultural communications course.

I am in the process of conducting a study to identify the competencies a student should possess following completion of a high school agricultural communications program. The data from this study can be used as a guideline to assist in developing agricultural communications courses nationwide.

The purpose of this letter is to ask your assistance in identifying individuals to be involved in the study. I am asking that you nominate three secondary agriculture teachers in your state who—in your opinion—have a strong interest in agricultural communications. Your nominees will be the only teachers from «State» who will be asked to participate in this study. When contacting these teachers, I would like to use your name to encourage their participation.

Please take a few minutes to nominate these teachers on the enclosed form. Please return the completed form in the self-addressed, stamped envelope by February 1, 2000.

Thank you for assisting with this important professional activity.

Sincerely,

Cindy Akers
Research Associate

APPENDIX F
STATE SUPERVISOR NOMINATION FORM

STATE SUPERVISOR NOMINATION FORM
High School Agriculture Science Teachers With
“Outstanding” Agricultural Communications Programs

Please write the name, address, and telephone number of your nominees below and return this form in the self-addressed, stamped envelope.

Name of Teacher _____

Address _____

Telephone _____

Name of Teacher _____

Address _____

Telephone _____

Name of Teacher _____

Address _____

Telephone _____

You may () may not () use my name when contacting these nominees.

(please sign)

APPENDIX G
STATE SUPERVISOR FOLLOW UP LETTER

STATE SUPERVISOR FOLLOW UP LETTER

February 14, 2000

«Title» «First» «Last»
«Job»
«Address»
«Address_2»
«City», «State» «Zip»

Dear «Title» «Last»:

Greetings, on January 14, 2000 you should have received a form which asked you to nominate 3 secondary agri-science teachers in your state who, in your opinion have a strong interest in agricultural communications. To this date, we have not received your response.

We realize that you have a busy schedule, however, we are asking for a few minutes of your time to nominate these teachers. Findings for this study could assist teachers in the development of agricultural communications courses.

Please return the enclosed form in the self-addressed, stamped envelope by February, 21, 2000. If you have already responded to this request, please disregard this letter.

Your help is greatly appreciated.

Sincerely,

Cindy Akers
Research Associate

APPENDIX H
ROUND ONE INSTRUMENT

ROUND ONE INSTRUMENT

High School Agricultural Communications Competencies

Round One

High School Agricultural Communications Competencies

There is an interest in teaching agricultural communications courses at the high school level. It is imperative that we receive your input on what should be included in a high school agricultural communications course. The following questions are designed to collect your opinions (in the broadest sense) on what you think should be taught to high school students enrolling in an agricultural communications course. Please thoughtfully answer each question.

To assist you in answering the enclosed questions, we have included the following definitions for clarification.

Competencies – Identifiable skills or abilities that are necessary for successful performance in an occupation a student might seek after the completion of a high school agricultural communications course. They should include general skills and specific tasks concerning their employment or occupation.

Topic – A subject that is taught. A field of study in agricultural communications.

Questions

Question 1: What topics should be included in a high school agricultural communications course? (List all that are appropriate -- If extra space is needed feel free to include extra pages)

Question 2: How should the curriculum at the high school level differ from a university course? (If extra space is needed feel free to include extra pages)

Continued on the Back

Question 3: What competencies should a student possess after completing a course in agricultural communications? (List all that are appropriate -- If extra space is needed feel free to include extra pages)

Thank you for your participation!
Please return before April 17, 2000

Cindy Akers
Texas Tech University
Department of Agricultural Education & Communications
Box 42131
Lubbock, TX 79409
(806)742-2816
Fax (806)742-2880
Cakers@ttu.edu
(Look for Round II in May)

APPENDIX I
ROUND ONE COVER LETTER

ROUND ONE COVER LETTER

March 3, 2000

«Title» «First» «Last»
«Company»
«Address»
«City», «State» «Zip»

Dear «Title» «Last»:

As you may know, a number of states have incorporated agricultural communications into the curriculum of high school agricultural education programs. The National FFA Organization also recently established an agricultural communications career development event. However, there appears to be a lack of information as to what should be taught in the area of agricultural communications. A thorough review of research shows there has never been a national study identifying what should be included in a high school agricultural communications course.

You have been nominated to assist in identifying the competencies a student should possess following completion of a high school agricultural communications course. The data from this study will be used as a guideline to assist in developing agricultural communications courses nationwide.

This study uses a Delphi technique, so you will receive two additional questionnaires. Responses of all participants will be used in developing the questionnaire for the second round of this study. The second and third questionnaires will be mailed independently.

Thank you in advance for the time you have taken from your busy schedule and the significant input given to this study. Your response will remain strictly confidential. Please return the enclosed questionnaire in the self addressed, stamped envelope by March 20, 2000.

Thanks again for your assistance.

Sincerely,

Cindy Akers
Research Assistant

Paul R. Vaughn, Ph.D.
Professor and Chair

APPENDIX J
ROUND ONE FOLLOW-UP CARD

ROUND ONE FOLLOW-UP CARD

Dear Panel of Experts,

March 24, 2000

This is just a reminder regarding the survey you received concerning High School Agricultural Communications Competencies. It is extremely important to the success of this study that you complete and return the survey before March 29, 2000. Your response will be a valuable asset to future agricultural communication curriculum projects.

If you have already returned the survey, please disregard this reminder. If you have misplaced the original survey, please contact me at (806) 742-2816 for an additional copy. Thank you for your valuable time.

Cindy Akers

Doctoral Candidate
Texas Tech University

APPENDIX K
ROUND ONE FOLLOW-UP LETTER

ROUND ONE FOLLOW-UP LETTER

April 10, 2000

«Title» «First» «Last»
«Association»
«Company»
«Address»
«City», «State» «Zip»

Dear «Title» «Last»:

A survey, “High School Agricultural Communications Competencies” was sent to you on March 3, 2000. As of this date we have not received your completed questionnaire.

We realize that you have a busy schedule. However, we are doing this study for the development of a strong agricultural communications curriculum at the high school level. Therefore, we are asking for a few minutes of your time to answer the three questions on the enclosed survey.

If you have already completed and returned this survey to me, please accept my sincere thank you. If not, please do so today so that I will receive it before **April 17, 2000**.

Your assistance with this study is greatly appreciated!

Sincerely,

Cindy Akers
Research Associate

Paul R. Vaughn PhD
Professor & Chair

APPENDIX L
ROUND TWO INSTRUMENT

ROUND TWO INSTRUMENT

High School Agricultural Communications Competencies

Round Two

Directions:

For each competency listed we are asking that you do TWO things. First, indicate your level of agreement as to whether the competency should be included in a high school agricultural communication course. Use the following to indicate your level of agreement: SD = Strongly Disagree, D = Disagree, A = Agree, and SA = Strongly Agree. Please circle your level for each competency. Second, indicate where the competency should be first introduced to the student using the following levels: FR = High School Freshman, SO = High School Sophomore, JR = High School Junior, SR = High School Senior, and CO = College. Please make sure you circle only one level of agreement and only one level where the competency should be taught.

WRITING

*After completing a course/unit in writing, the students
will have the ability to:*

SD	D	A	SA	1. Identify the components and format of news releases	FR	SO	JR	SR	CO
SD	D	A	SA	2. Write a news release	FR	SO	JR	SR	CO
SD	D	A	SA	3. Determine whether a topic would be best covered as a news article or feature article	FR	SO	JR	SR	CO
SD	D	A	SA	4. Write a feature story	FR	SO	JR	SR	CO
SD	D	A	SA	5. Utilize an Associated Press stylebook	FR	SO	JR	SR	CO
SD	D	A	SA	6. Write a professional letter	FR	SO	JR	SR	CO
SD	D	A	SA	7. Create a resume	FR	SO	JR	SR	CO
SD	D	A	SA	8. Accurately proofread a document	FR	SO	JR	SR	CO
SD	D	A	SA	9. Effectively edit a story	FR	SO	JR	SR	CO
SD	D	A	SA	10. Write for the web	FR	SO	JR	SR	CO
SD	D	A	SA	11. Utilize the basic principals involved in technical writing.	FR	SO	JR	SR	CO
SD	D	A	SA	12. Write for broadcast	FR	SO	JR	SR	CO
SD	D	A	SA	13. Effectively interview a person	FR	SO	JR	SR	CO

WRITING (Continued)

*After completing a course/unit in writing, the students
will have the ability to:*

SD	D	A	SA	15. Write a speech	FR	SO	JR	SR	CO
SD	D	A	SA	16. Write captions for photos	FR	SO	JR	SR	CO
SD	D	A	SA	17. Write a quality thank-you note	FR	SO	JR	SR	CO
SD	D	A	SA	18. Utilize correct grammar	FR	SO	JR	SR	CO
SD	D	A	SA	19. Utilize correct spelling	FR	SO	JR	SR	CO
SD	D	A	SA	20. Utilize correct punctuation	FR	SO	JR	SR	CO
SD	D	A	SA	21. Identify what makes a topic newsworthy	FR	SO	JR	SR	CO
SD	D	A	SA	22. Other _____	FR	SO	JR	SR	CO
SD	D	A	SA	23. Other _____	FR	SO	JR	SR	CO

COMPUTER/INFORMATION TECHNOLOGY

*After completing a course/unit on computer/information
technology, the students will have the ability to:*

SD	D	A	SA	1. Perform basic word processing	FR	SO	JR	SR	CO
SD	D	A	SA	2. Create and design a web page	FR	SO	JR	SR	CO
SD	D	A	SA	3. Use e-mail properly	FR	SO	JR	SR	CO
SD	D	A	SA	4. Utilize desktop publishing techniques	FR	SO	JR	SR	CO
SD	D	A	SA	5. Effectively scan a document	FR	SO	JR	SR	CO
SD	D	A	SA	6. Identify appropriate file formats when using scanning programs.	FR	SO	JR	SR	CO
SD	D	A	SA	7. Utilize graphic editing programs (PhotoShop, Illustrator, etc.)	FR	SO	JR	SR	CO
SD	D	A	SA	8. Develop a multimedia presentation (PowerPoint, etc.)	FR	SO	JR	SR	CO
SD	D	A	SA	9. Utilize a nonlinear video-editing program	FR	SO	JR	SR	CO

COMPUTER/INFORMATION TECHNOLOGY (Continued)

After completing a course/unit on computer/information technology, the students will have the ability to:

SD	D	A	SA	10. Other _____	FR	SO	JR	SR	CO
SD	D	A	SA	11. Other _____	FR	SO	JR	SR	CO

AGRICULTURAL INDUSTRY

After completing a course/unit on agricultural industry, the students will have the ability to:

SD	D	A	SA	1. Utilize appropriate agricultural terminology	FR	SO	JR	SR	CO
SD	D	A	SA	2. Identify current issues and concerns in the agricultural industry	FR	SO	JR	SR	CO
SD	D	A	SA	3. Converse knowledgeably on the different areas in agriculture	FR	SO	JR	SR	CO
SD	D	A	SA	4. Other _____	FR	SO	JR	SR	CO
SD	D	A	SA	5. Other _____	FR	SO	JR	SR	CO

COMMUNICATION HISTORY

After completing a course/unit on communication history, the students will have the ability to:

SD	D	A	SA	1. Describe the history of agricultural communications	FR	SO	JR	SR	CO
SD	D	A	SA	2. Describe the communications model	FR	SO	JR	SR	CO
SD	D	A	SA	3. Define media literacy, basic elements and techniques	FR	SO	JR	SR	CO
SD	D	A	SA	4. List qualities of an effective communicator	FR	SO	JR	SR	CO
SD	D	A	SA	5. Demonstrate different methods of communications	FR	SO	JR	SR	CO
SD	D	A	SA	6. Identify barriers to effective communication	FR	SO	JR	SR	CO
SD	D	A	SA	7. Identify strategies to improve communication	FR	SO	JR	SR	CO
SD	D	A	SA	8. Other _____	FR	SO	JR	SR	CO
SD	D	A	SA	9. Other _____	FR	SO	JR	SR	CO

PROFESSIONAL DEVELOPMENT
After completing a course/unit in professional development, the students will have the ability to:

SD	D	A	SA	1. Identify the various career opportunities in agricultural communications	FR	SO	JR	SR	CO
SD	D	A	SA	2. Demonstrate professional/business etiquette	FR	SO	JR	SR	CO
SD	D	A	SA	3. Demonstrate a proper work ethic	FR	SO	JR	SR	CO
SD	D	A	SA	4. Interview for employment	FR	SO	JR	SR	CO
SD	D	A	SA	5. Work in a team activity	FR	SO	JR	SR	CO
SD	D	A	SA	6. Demonstrate proper phone skills	FR	SO	JR	SR	CO
SD	D	A	SA	7. Demonstrate listening skills	FR	SO	JR	SR	CO
SD	D	A	SA	8. Work under pressure	FR	SO	JR	SR	CO
SD	D	A	SA	9. Identify various professional communications organizations	FR	SO	JR	SR	CO
SD	D	A	SA	10. Other _____	FR	SO	JR	SR	CO
SD	D	A	SA	11. Other _____	FR	SO	JR	SR	CO

RESEARCH/INFORMATION GATHERING
After completing a course/unit in research/information gathering, the students will have the ability to:

SD	D	A	SA	1. Research both sides of an issue	FR	SO	JR	SR	CO
SD	D	A	SA	2. Check facts	FR	SO	JR	SR	CO
SD	D	A	SA	3. Identify biased information	FR	SO	JR	SR	CO
SD	D	A	SA	4. Analyze and apply technical data & procedures found in service manuals	FR	SO	JR	SR	CO
SD	D	A	SA	5. Identify sources for information (Extension Service, library, government agency etc.)	FR	SO	JR	SR	CO
SD	D	A	SA	6. Interpret statistics	FR	SO	JR	SR	CO
SD	D	A	SA	7. Seek, gather and synthesize information	FR	SO	JR	SR	CO

**PUBLIC RELATIONS/ADVERTISING/
MARKETING (Continued)**

After completing a course/unit in public relations/advertising/marketing, the students will have the ability to:

SD	D	A	SA	9. Interpret the basics of the commodities market	FR	SO	JR	SR	CO
SD	D	A	SA	10. Identify the basics of corporate communications	FR	SO	JR	SR	CO
SD	D	A	SA	11. Other _____	FR	SO	JR	SR	CO
SD	D	A	SA	12. Other _____	FR	SO	JR	SR	CO

LEADERSHIP DEVELOPMENT

After completing a course/unit in leadership development, the students will have the ability to:

SD	D	A	SA	1. Utilize correct parliamentary procedure	FR	SO	JR	SR	CO
SD	D	A	SA	2. Deliver a formal, oral presentation using clear enunciation, gestures, tone & vocabulary	FR	SO	JR	SR	CO
SD	D	A	SA	3. Discuss the techniques and principles involved in public speaking	FR	SO	JR	SR	CO
SD	D	A	SA	4. Prepare a 4-6 minute speech within a 30-minute preparation time	FR	SO	JR	SR	CO
SD	D	A	SA	5. Give an effective interview	FR	SO	JR	SR	CO
SD	D	A	SA	6. Speak intelligently before a group	FR	SO	JR	SR	CO
SD	D	A	SA	7. Other _____	FR	SO	JR	SR	CO
SD	D	A	SA	8. Other _____	FR	SO	JR	SR	CO

LEGISLATIVE ISSUES

After completing a course/unit in legislative issues, the students will have the ability to:

SD	D	A	SA	1. Discuss libel law	FR	SO	JR	SR	CO
SD	D	A	SA	2. Discuss the Freedom of Information Act	FR	SO	JR	SR	CO

RESEARCH/INFORMATION

GATHERING (Continued)

After completing a course/unit in research/information gathering, the students will have the ability to:

SD	D	A	SA	8. Other _____	FR	SO	JR	SR	CO
SD	D	A	SA	9. Other _____	FR	SO	JR	SR	CO

ETHICS

After completing a course/unit in ethics, the students will have the ability to:

SD	D	A	SA	1. Identify the importance of correctly reporting the facts	FR	SO	JR	SR	CO
SD	D	A	SA	2. Distinguish between right and wrong	FR	SO	JR	SR	CO
SD	D	A	SA	3. Other _____	FR	SO	JR	SR	CO
SD	D	A	SA	4. Other _____	FR	SO	JR	SR	CO

PUBLIC RELATIONS/ADVERTISING/ MARKETING

After completing a course/unit in public relations/advertising/marketing, the students will have the ability to:

SD	D	A	SA	1. Identify the key elements of a public relations campaign	FR	SO	JR	SR	CO
SD	D	A	SA	2. Prepare a public relations campaign	FR	SO	JR	SR	CO
SD	D	A	SA	3. Discuss the role of public relations in agricultural companies	FR	SO	JR	SR	CO
SD	D	A	SA	4. Discuss the role of public relations in advertising agencies	FR	SO	JR	SR	CO
SD	D	A	SA	5. Discuss the role of public relations in farm organizations	FR	SO	JR	SR	CO
SD	D	A	SA	6. Identify the importance of advertising campaign	FR	SO	JR	SR	CO
SD	D	A	SA	7. Demonstrate sales skills	FR	SO	JR	SR	CO
SD	D	A	SA	8. Apply common sense logic to an economic trend analysis	FR	SO	JR	SR	CO

LEGISLATIVE ISSUES (Continued)

After completing a course/unit in legislative issues, the students will have the ability to:

SD	D	A	SA	3.	Identify the basic workings of the government system and how it affects the agricultural industry	FR	SO	JR	SR	CO
SD	D	A	SA	4.	Other _____	FR	SO	JR	SR	CO
SD	D	A	SA	5.	Other _____	FR	SO	JR	SR	CO

COMMUNICATION SKILLS

After completing a course/unit in communication skills, the students will have the ability to:

SD	D	A	SA	1.	Properly use a 35 mm camera	FR	SO	JR	SR	CO
SD	D	A	SA	2.	Identify the steps in the printing/developing process	FR	SO	JR	SR	CO
SD	D	A	SA	3.	Properly use a digital camera	FR	SO	JR	SR	CO
SD	D	A	SA	4.	Properly use a video camera	FR	SO	JR	SR	CO
SD	D	A	SA	5.	Deliver a TV broadcast	FR	SO	JR	SR	CO
SD	D	A	SA	6.	Deliver a radio broadcast	FR	SO	JR	SR	CO
SD	D	A	SA	7.	Other _____	FR	SO	JR	SR	CO
SD	D	A	SA	8.	Other _____	FR	SO	JR	SR	CO

Thank you for your participation!
Please return before May 15, 2000

Cindy Akers
Texas Tech University
Department of Agricultural Education
& Communications
Box 42131
Lubbock, TX 79409
(806)742-2816
Fax (806)742-2880
Cakers@ttu.edu
(Look for Round III in June)

.....
: If Round III needs to be sent :
: to a different address please :
: list new address below: :
: Address: :
: City: :
: State: :
: Zip: :
: Phone: :
:.....

APPENDIX M
ROUND TWO COVER LETTER

ROUND TWO COVER LETTER

May 2, 2000

«Title» «First» «Last»

«Association»

«Company»

«Address»

«City», «State» «Zip»

Dear «Title» «Last»:

Thank you for responding to the first round questionnaire in our study. Based upon your responses and those of your colleagues, a second questionnaire has been developed. This questionnaire asks you to give your opinions regarding what competencies should be included in a high school agricultural communications course.

As you look over Round II you may not see the exact competency you listed. If you feel I merged a competency that changed your original meaning, please include it at the bottom. I will make sure it is included in Round III.

I am also asking you to recommend at what level (i.e. high school freshman, college, etc.) these competencies should be introduced to students.

The findings from this study should improve agricultural communications courses at both the high school and university level. However, to accomplish this, every person must complete the questionnaire and return it.

Thank you in advance for the time you have taken from your busy schedule and the significant input you have given to this study. Your response will remain strictly confidential. **Please return the enclosed questionnaire in the self addressed, stamped envelope by May, 15, 2000.**

Thanks again for your assistance.

Sincerely,

Cindy Akers
Research Assistant

Paul Vaughn
Professor and Chair

APPENDIX N
ROUND TWO FOLLOW-UP CARD

ROUND TWO FOLLOW-UP CARD

Dear Panel of Experts,

May 5, 2000

This is just a reminder regarding the survey you received concerning **High School Agricultural Communications Competencies**. It is extremely important to the success of this study that you complete and return the survey before May 15, 2000. Your response will be a valuable asset to future agricultural communication curriculum projects.

If you have already returned the survey, please disregard this reminder. If you have misplaced the original survey, please contact me at (806) 742-2816 for an additional copy. Thank you for your valuable time.

Cindy Akers

Doctoral Candidate
Texas Tech University

APPENDIX O
ROUND THREE INSTRUMENT

ROUND THREE INSTRUMENT

High School Agricultural Communications Competencies

Round Three

Directions:

For each competency listed we are asking that you do **TWO** things. **First**, indicate your level of agreement as to whether the competency should be included in a high school agricultural communications course. Use the following to indicate your level of agreement: SD = Strongly Disagree, D = Disagree, A = Agree, and SA = Strongly Agree. Please circle your level for each competency. **Second**, indicate where the competency should be first introduced to the student using the following levels: FR = High School Freshman, SO = High School Sophomore, JR = High School Junior, SR = High School Senior, and CO = College.

Please make sure you circle only one level of agreement and only one level where the competency should be taught.

WRITING

After completing a course/unit in writing, the students will have the ability to:

SD	D	A	SA	1. Write a news story.	FR	SO	JR	SR	CO
----	---	---	----	------------------------	----	----	----	----	----

COMPUTER/INFORMATION TECHNOLOGY

After completing a course/unit on computer/information technology, the students will have the ability to:

SD	D	A	SA	1. Effectively utilize the Internet.	FR	SO	JR	SR	CO
----	---	---	----	--------------------------------------	----	----	----	----	----

PROFESSIONAL DEVELOPMENT

After completing a course/unit in professional development, the students will have the ability to:

SD	D	A	SA	1. Discuss the importance of belonging to professional organizations.	FR	SO	JR	SR	CO
----	---	---	----	---	----	----	----	----	----

SD	D	A	SA	2. List the benefits of attending professional organization meetings.	FR	SO	JR	SR	CO
----	---	---	----	---	----	----	----	----	----

RESEARCH/INFORMATION GATHERING

After completing a course/unit in research/information gathering, the students will have the ability to:

SD	D	A	SA	1. Demonstrate the ability to cite sources correctly.	FR	SO	JR	SR	CO
----	---	---	----	---	----	----	----	----	----

LEADERSHIP DEVELOPMENT

After completing a course/unit in leadership development, the students will have the ability to:

SD	D	A	SA	1. Demonstrate the ability to be an effective spokesperson for agriculture.	FR	SO	JR	SR	CO
----	---	---	----	---	----	----	----	----	----

ETHICS

After completing a course/unit in ethics, the students will have the ability to:

SD	D	A	SA	1. Identify bias in media stories.	FR	SO	JR	SR	CO
----	---	---	----	------------------------------------	----	----	----	----	----

PUBLIC RELATIONS/ADVERTISING/ MARKETING

After completing a course/unit in public relations/ advertising/marketing, the students will have the ability to:

SD	D	A	SA	1. Identify different audiences.	FR	SO	JR	SR	CO
----	---	---	----	----------------------------------	----	----	----	----	----

SD	D	A	SA	2. Target different audiences.	FR	SO	JR	SR	CO
----	---	---	----	--------------------------------	----	----	----	----	----

LEGISLATIVE ISSUES

After completing a course/unit in legislative issues, the students will have the ability to:

SD	D	A	SA	1. Identify current legislative bills that affect agriculture.	FR	SO	JR	SR	CO
----	---	---	----	--	----	----	----	----	----

SD	D	A	SA	2. Discuss how current bills will affect agriculture.	FR	SO	JR	SR	CO
----	---	---	----	---	----	----	----	----	----

Thank you for your participation!
Please return before June 5, 2000

Cindy Akers
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Department of Agricultural Education
& Communications
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Lubbock, TX 79409
(806)742-2816
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APPENDIX P
ROUND THREE COVER LETTER

ROUND THREE COVER LETTER

May 23, 2000

«Title» «First» «Last»
«Association»
«Company»
«Address»
«City», «State» «Zip»

Dear «Title» «Last»:

Thank you for responding to the second round questionnaire in our study. Based upon your responses and those of your colleagues, I am pleased to report that we found consensus on all competencies listed in the second round questionnaire. This means there is no need for you to review these competencies again.

However, some panel members included additional competencies in the other category, which need to be evaluated by the entire panel. The good news is that **there are only eleven competencies for you to evaluate in round three!**

The Round Three instrument is required to evaluate the panel's opinions on these additional competencies. You are being asked if you agree with these competencies as well as at what level (i.e. high school freshman, college, etc.) these competencies should be introduced to students.

Thank you in advance for the time you have taken from your busy schedule and the significant input you have given to this study. Your response will remain strictly confidential. **Please return the enclosed questionnaire in the self-addressed, stamped envelope by June 5, 2000. If you wish, you may fax your response to me at (806) 742-2880.**

Thanks again for your assistance.

Sincerely,

Cindy Akers
Research Assistant

APPENDIX Q
ROUND THREE FOLLOW-UP CARD

ROUND THREE FOLLOW-UP CARD

Dear Panel of Experts,

June 2, 2000

This is just a reminder regarding the survey you received concerning **High School Agricultural Communications Competencies**. It is extremely important to the success of this study that you complete and return the survey before June 8, 2000. Your responses will be a valuable asset to future agricultural communication curriculum projects. This should be the last survey.

If you have already returned the survey, please disregard this reminder. If you have misplaced the original survey, please contact me at (806) 742-2816 for an additional copy. Thank you for your valuable time.

Cindy Akers

Doctoral Candidate
Texas Tech University

APPENDIX R
EIGHTY-TWO COMPETENCIES IDENTIFIED IN ROUND ONE

EIGHTY-TWO COMPETENCIES IDENTIFIED IN ROUND ONE

Competencies

- Identify the components and format of news releases
- Write a news release
- Determine whether a topic would be best covered as a news article or feature article
- Write a feature story
- Utilize an Associated Press stylebook
- Write a professional letter
- Create a resume
- Accurately proofread a document
- Effectively edit a story
- Write for the web
- Utilize the basic principals involved in technical writing
- Write for broadcast.
- Effectively interview a person
- Write a speech
- Write captions for photos
- Write a quality thank-you note
- Utilize correct grammar
- Utilize correct spelling
- Utilize correct punctuation
- Identify what makes a topic newsworthy
- Perform basic word processing
- Create and design a web page
- Use e-mail properly
- Utilize desktop publishing techniques
- Effectively scan a document
- Identify appropriate file formats when using scanning programs.
- Utilize graphic editing programs (PhotoShop, Illustrator, etc.)
- Develop a multimedia presentation (PowerPoint, etc.)
- Utilize a nonlinear video-editing program
- Utilize appropriate agricultural terminology
- Identify current issues and concerns in the agricultural industry
- Converse knowledgeably on the different areas in agriculture
- Describe the history of agricultural communications
- Describe the communications model
- Define media literacy, basic elements and techniques
- List qualities of an effective communicator
- Demonstrate different methods of communications
- Identify barriers to effective communication
- Identify strategies to improve communication
- Identify the various career opportunities in agricultural communications
- Demonstrate professional/business etiquette
- Demonstrate a proper work ethic.

- Interview for employment
- Work in a team activity
- Demonstrate proper phone skills
- Demonstrate listening skills
- Work under pressure
- Identify various professional communications organizations
- Research both sides of an issue
- Check facts
- Identify biased information
- Analyze and apply technical data & procedures found in service manuals
- Identify sources for information (Extension Service, library, government agency etc.)
- Interpret statistics
- Seek, gather and synthesize information
- Identify the importance of correctly reporting the facts
- Distinguish between right and wrong
- Identify the key elements of a public relations campaign
- Prepare a public relations campaign
- Discuss the role of public relations in agricultural companies
- Discuss the role of public relations in advertising agencies
- Discuss the role of public relations in farm organizations
- Identify the importance of advertising campaign
- Demonstrate sales skills
- Apply common sense logic to an economic trend analysis
- Interpret the basics of the commodities market
- Identify the basics of corporate communications
- Utilize correct parliamentary procedure
- Deliver a formal, oral presentation using clear enunciation, gestures, tone & vocabulary
- Discuss the techniques and principles involved in public speaking
- Prepare a 4-6 minute speech within a 30-minute preparation time
- Give an effective interview
- Speak intelligently before a group
- Discuss libel law
- Discuss the Freedom of Information Act
- Identify the basic workings of the government system and how it affects the agricultural industry
- Properly use a 35 mm camera
- Identify the steps in the printing/developing process
- Properly use a digital camera
- Properly use a video camera
- Deliver a TV broadcast
- Deliver a radio broadcast