

## **Perceptions of Oklahoma Agricultural Education Teachers' about Selected Agricultural Communications Competencies: A Case for Curriculum Reform**

Stephanie Mitchell Hanson, Oklahoma State University  
Shelly Sitton, Oklahoma State University  
Craig Edwards, Oklahoma State University

### **Abstract**

*Appropriate curriculum for secondary agricultural education (AGED) is of paramount importance, including resources that support learning in agricultural communications (AGCM). Better understanding the views of AGED teachers regarding their knowledge about the competencies required of students who pursue careers in AGCM as well as perceptions of their ability to teach the curriculum used to assist students in acquiring that competence is equally important. This descriptive study assessed teachers' knowledge and perceived ability regarding the aforesaid. It relied on a purposeful sample of Oklahoma AGED teachers. The teachers responded to 48 items describing their perceptions of importance for selected AGCM competencies and their perceived ability to teach those skills; the items were grouped into five constructs. Two five-point, summated-rated scales were employed to measure "Importance" and "Ability." Reliability estimates by competency construct (i.e., Cronbach's alpha) ranged from 0.71 to 0.92. Selected personal and professional characteristics of the teachers also were collected. The overall response rate for the survey was 238/431 or 55.22%. Results of this study should better inform developers of AGCM curriculum for the secondary AGED audience, teacher educators who provide related preservice and inservice education, and university-level AGCM educators who teach aspiring secondary AGED instructors.*

### **Introduction**

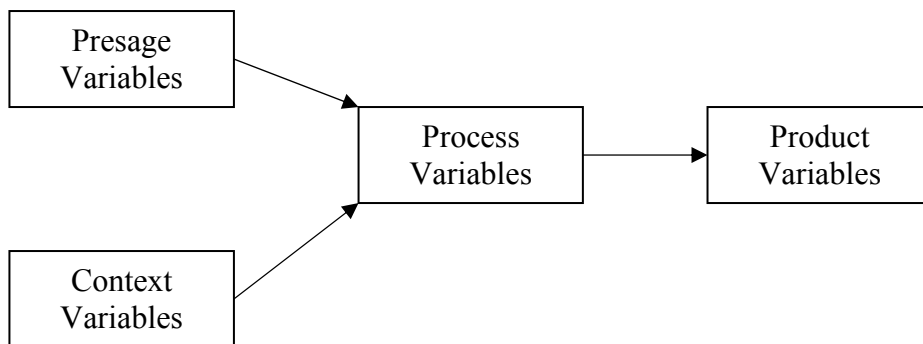
A need exists for the disciplines of agricultural communications and agricultural education to work together in the secondary education system. The National Research Council [NRC] (1988) reported students of agricultural education programs should be well-versed and understand the basic principles of agriculture and communication. Their report, albeit published 20 years ago, stated people were becoming more removed from farm life; the same can be said for 2008, making it imperative agriculturalists communicate effectively and efficiently what is occurring in agriculture. In addition, Terry and Bailey-Evans (1995) stated the discipline of agricultural communications has become an important part of achieving the mission of agricultural education in and about agriculture. As the profession of agricultural communications continues to develop and refine its current mission in society, the academic programs must relate to this mission (Buck & Paulson, 1995). Moreover, agricultural education teachers need to have the skills and knowledge base to teach the fundamentals of communication for students to gain adequate knowledge to reach their full communication potential (Connors & Elliot, 1994).

As agriculture and communication methods and objectives have changed, so have the competencies needed to become an agricultural communicator (Akers, 2000; Sprecker & Rudd,

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

### **Conceptual Framework**

According to Dunkin and Biddle (1974), four types of variables contribute to the teaching and learning process: presage variables, context variables, process variables and product variables (see Figure 1). Presage variables, which were the variables considered in this study, "concern the characteristics of teachers that may be examined for their effects on the teaching process" (Dunkin & Biddle, 1974, p. 39). Presage variables were relevant to this study because Oklahoma secondary agricultural education teachers were asked to report selected personal and professional characteristics as well as their perceptions on agricultural communications competencies for secondary agricultural education curriculum. These variables may include, but are not limited to, teacher formative experiences (such as gender and years teaching agricultural education), teacher training experiences (such as alma mater institution and highest degree earned), and teacher properties (such as whether the respondent was currently teaching agricultural communications) (Dunkin & Biddle).



*Figure 1. A Model for the Study of Classroom Teaching. (Taken from Parr, Edwards, and Leising, in press, p. 4)*

### **Purpose/Objectives**

The purpose of this research was to determine Oklahoma agricultural education teachers' perceptions of importance of and their ability to teach agricultural communications competencies, especially as they relate to the secondary curriculum for agricultural education. Specifically, the objectives were as follows:

1. To describe selected personal and professional characteristics of Oklahoma agricultural education teachers;
2. To determine the importance of selected agricultural communications competencies, as perceived by Oklahoma agricultural education teachers; and
3. To determine Oklahoma agricultural education teachers' perceived ability to teach selected agricultural communications competencies.

## **Methods/Procedures**

### *Sample Selection and Data Collection*

The target population for this descriptive study included Oklahoma secondary agricultural education teachers ( $N = 431$ ). The accessible population, which was derived from the target population, was Oklahoma secondary agricultural education teachers who attended their respective district meeting at the 2006 CareerTech Summer Conference in Tulsa, Oklahoma. All teachers are required to attend the summer conference and one of five district meetings; registration indicated all were in attendance at the conference. Thus, for the purposes of this study, it was assumed all agricultural education teachers attended their district meeting. Completed instruments were collected from each of the five districts.

The instrument for this study was presented to agricultural education teachers during the five district meetings for them to complete. Due to time limitations, however, respondents who had not completed the instrument could take it with them, complete it, and mail it to the researchers. Self-addressed envelopes were provided for those who took their instrument with them. During the district meetings, 235 instruments were returned; three instruments were received via postal mail. The overall response rate was 238, or 55.22%. Due to the possibility of non-response error (Dillman, 2000), caution should be taken regarding the generalizability of this study's findings beyond the participating respondents.

### *Instrumentation*

Because no instrument was readily available, an instrument was developed to assess the perception of importance and teaching ability of agricultural communications competencies as perceived by Oklahoma secondary agricultural education teachers. Multiple components were used to design and validate the instrument, specifically the curriculum guides published by the Oklahoma Department of Career and Technology Education's Curriculum and Instructional Materials Center [CIMC] (2001, 2002, 2003) and the agricultural communications competencies identified by Akers (2000).

To create the instrument, the researcher identified competencies potentially taught in a high school agricultural communications course in Oklahoma. This was done by using the Akers (2000) study to identify the competencies and their topic areas that should be taught to high school students and by using the existing CIMC curriculum guides (CIMC, 2001; CIMC, 2002; CIMC, 2003). Subsequently, 31 competencies identified by Akers (2000) were not included in this study's instrument because they did not have a correlating CIMC test question or because

they were identified in the Akers (2000) study as being collegiate-level competencies. The remaining 51 competencies were included as part of the instrument used for the pilot study.

The CIMC curriculum guides (CIMC, 2001; CIMC, 2002; CIMC, 2003) provided insight as to what agricultural communications constructs could be taught to high school students if the instructor teaching the class chose to use the guide. These curriculum guides are available by purchase to all high school agricultural education teachers to use when teaching agricultural communications courses in Oklahoma.

After comparing competencies that should be taught in high school agricultural communications courses as identified by Akers (2000) and what competencies could be taught based on the CIMC curriculum guides (CIMC, 2001; CIMC, 2002; CIMC, 2003), Akers' (2000) related topic areas were combined and conceptualized as five constructs: 1) Communication Skills/Computer/Information Technology; 2) Communication History; 3) Research/Information Gathering/Writing; 4) Ethics/Leadership Development/Professional Development; and 5) Public Relations/Advertising/Marketing.

The competencies were put into table format in the instrument and two five-point, summated-rating scales were developed to determine the respondents' perceived importance of agricultural communications competencies and their perceived ability in teaching the specific competencies. The instrument was constructed this way to make assessment of the identified agricultural communications competencies easier for the respondents to self-evaluate in a shorter amount of time.

To the left of each competency was a scale for respondents perceived importance of the competency for the secondary agricultural education curriculum. The scale ranged from high importance to low importance (A = "High Importance," B = "Much Importance," C = "Some Importance," D = "Low Importance," and E = "No Importance"). For the purpose of interpreting the results, the researcher used the following numerical scale: 5.00 – 4.50 = "High Importance," 4.49 – 3.50 = "Much Importance," 3.49 – 2.50 = "Some Importance," 2.49 – 1.50 = "Low Importance," and 1.49 – 1.00 = "No Importance" (Boone, Gartin, Boone, & Hughes, 2006).

To the right of the competency was a similar five-point scale. This section was created to determine the respondents' perceived ability in teaching the specific agricultural communications competencies. The scale ranged from high ability to no ability (A = "Very High Ability," B = "High Ability," C = "Average Ability," D = "Low Ability," and E = "No Ability"). For the purpose of interpreting the results, the researcher used the following numerical scale: 5.00 – 4.50 = "Very High Ability," 4.49 – 3.50 = "High Ability," 3.49 – 2.50 = "Average Ability," 2.49 – 1.50 = "Low Ability," and 1.49 – 1.00 = "No Ability" (Boone et al.).

Face and content validity were determined by a panel of experts, including faculty in agricultural communications and agricultural education, who reviewed the instrument and determined the questions asked were appropriate for use in the study. Following review by the panel of experts, a pilot test was conducted at a meeting with agricultural education teachers from neighboring states. Based on the results from the pilot study, three competencies were removed to improve the instrument's reliability estimate; consequently, 48 agricultural

communications competencies were assessed by the study's respondents. Reliability estimates (Cronbach's alpha) ranged from 0.71 to 0.89 for perceived importance and from 0.75 to 0.92 for the perceived ability of the five constructs.

Data were analyzed using SPSS for Windows Version 15.0 to calculate means and standard deviations for the competency items. Frequencies and percentages also were calculated for selected personal and professional characteristics of the respondents.

## **Findings/Results**

### *Selected Characteristics of Oklahoma Agricultural Education Teachers*

Based on the results of this study, 84.45% of respondents were male, 70.17% had earned only a bachelor's degree, and 80.25% had graduated from Oklahoma State University. One-hundred-seven teachers (44.96%) responded they were teaching prior to 1996, and 112 (47.06%) responded they were not (7.98% non-response to this question). It was in 1996 that agricultural education majors at the specified university were first required to take an upper-division agricultural communications course. The largest percentage of respondents indicated they had taught secondary agricultural education courses for one to five years (31.93%). The second largest percentage of respondents had taught 20 or more years (23.95%). Of the respondents, 60.59% did not currently teach an agricultural communications course; additionally, 57.35% of teachers who had taught an agricultural communications course had taught it for one to two years.

Of the agricultural education teachers who indicated they had taught an agricultural communications course ( $n = 120$ ), 71 respondents (59.17%) used the CIMC curriculum guides. The results of the open-ended questions indicated that respondents who did not use the CIMC curriculum guides got their resources to teach agricultural communications from various locations, including books, Web sites, and self-made materials. It was also suggested by the teachers that more assistance is needed to teach agricultural communications curriculum, the layout of the existing curriculum was an issue and delivery via a computer-assisted approach needs to be considered.

### *Perception of Importance and Teaching Ability for Agricultural Communications Competencies*

As shown in Table 1, none of the communication skills and computer/information technology competencies ( $M = 3.84$ ), communication history competencies ( $M = 4.04$ ), public relations, advertising, and marketing competencies ( $M = 3.96$ ), or research, information gathering, and writing competencies ( $M = 3.96$ ) were perceived by respondents to be of "high importance." One competency for the ethics, leadership development, and professional development construct ( $M = 4.32$ ) was perceived by respondents to be of "high importance": "Demonstrate a proper work ethic" ( $M = 4.50$ ).

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

perceived by respondents to be of “much importance.” Respondents perceived the five agricultural communications constructs as being of “much importance” (Table 1).

This study found that agricultural education teachers did not perceive themselves to hold a “very high ability” to teach any agricultural communications competencies for the five constructs investigated. As shown in Table 1, respondents perceived themselves to have a “high ability” to teach the following competencies for communication skills and computer/information technology: “Use e-mail properly” ( $M = 3.71$ ) and “Perform basic word processing” ( $M = 3.62$ ). Respondents perceived they held a “high ability” to teach the remaining competencies for these two constructs. Further, the teachers perceived themselves as having a “high ability” to teach three competencies in the communications history construct: “List qualities of an effective communicator” ( $M = 3.67$ ); “Identify barriers to effective communication” ( $M = 3.51$ ); and “Demonstrate different methods of communication” ( $M = 3.56$ ). Respondents also perceived they had a “high ability” to teach 13 competencies under the ethics, leadership development, and professional development construct: “Demonstrate professional/business etiquette” ( $M = 3.79$ ); “Demonstrate a proper work ethic” ( $M = 4.16$ ); “Demonstrate listening skills” ( $M = 3.86$ ); “Speak intelligently before a group” ( $M = 3.88$ ); “Interview for employment” ( $M = 3.89$ ); “Work in a team activity” ( $M = 3.87$ ); “Work under pressure” ( $M = 3.93$ ); “Identify the importance of correctly reporting the facts” ( $M = 3.74$ ); “Deliver a formal, oral presentation using clear, enunciation, gesture, tone and vocabulary” ( $M = 3.78$ ); “Give an effective interview” ( $M = 3.70$ ); “Distinguish between right and wrong” ( $M = 4.13$ ); “Discuss the techniques and principles involved in public speaking” ( $M = 3.71$ ) and “Prepare a 4-6 minute speech within a 30-minute preparation time” ( $M = 3.53$ ). They also perceived having a “high ability” to teach one public relations, advertising, and marketing competency (“Discuss the role of public relations in agricultural companies” [ $M = 3.57$ ]) as well as five research, information gathering, and writing competencies (“Utilize correct grammar” [ $M = 3.56$ ]; “Identify biased information” [ $M = 3.53$ ]; “Effectively interview a person” [ $M = 3.60$ ]; “Create a résumé” [ $M = 3.80$ ]; and, “Write a speech” [ $M = 3.69$ ]).

Overall construct means indicated that respondents held a perception of “high ability” to teach competencies in communications history ( $M = 3.54$ ) and ethics/leadership development/professional development ( $M = 3.84$ ). Respondents perceived that they held an “average ability” to teach competencies in communication skills/computer/information technology ( $M = 3.24$ ), public relations/advertising/marketing construct ( $M = 3.45$ ), and research/information gathering/writing ( $M = 3.35$ ) (Table 1).

Table 1

*Oklahoma Agricultural Education Teachers' Perceived Importance of and Ability to Teach Agricultural Communication Competencies by Construct (N = 238)*

<i>Construct</i> Competency	<u>Importance</u>		<u>Teaching</u> <u>Ability</u>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>Communication Skills and Computer/Information Technology</i>				
Properly use a 35mm camera	3.68	0.94	3.41	0.98
Use e-mail properly	4.14	0.82	3.71	0.95
Properly use a digital camera	4.05	0.82	3.45	0.86
Properly use a video camera	3.77	0.86	3.43	0.82
Perform basic word processing	4.17	0.79	3.62	0.87
Utilize desktop publishing techniques	3.90	0.78	3.22	0.89
Properly identify appropriate file formats when using scanning programs	3.77	0.82	3.12	0.94
Effectively scan a document	3.83	0.91	3.31	0.86
Create and design a Web page	3.84	0.93	2.76	1.14
Develop a multimedia presentation	3.96	0.76	3.20	0.92
Utilize graphic editing programs	3.60	0.84	2.76	0.96
Identify the steps in the printing/developing process	3.50	0.93	2.70	1.04
Construct Means	3.84	0.58	3.24	0.66
<i>Communication History</i>				
List qualities of an effective communicator	4.14	0.73	3.67	0.72
Identify barriers to effective communication	3.91	0.79	3.51	0.77

<i>Construct</i>	<u>Importance</u>		<u>Teaching Ability</u>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Competency				
Demonstrate different methods of communication	4.07	0.75	3.56	0.75
Identify strategies to improve communications	4.00	0.77	3.44	0.73
Construct Means	4.04	0.55	3.54	0.56
<i>Ethics, Leadership Development, and Professional Development</i>				
Demonstrate professional/business etiquette	4.31	0.68	3.79	0.79
Demonstrate a proper work ethic	4.50	0.69	4.16	0.81
Demonstrate listening skills	4.35	0.70	3.86	0.80
Speak intelligently before a group	4.49	0.73	3.88	0.76
Interview for employment	4.44	0.74	3.89	0.74
Work in a team activity	4.30	0.68	3.87	0.78
Work under pressure	4.32	0.70	3.93	0.83
Identify the importance of correctly reporting the facts	4.16	0.76	3.74	0.84
Deliver a formal, oral presentation using clear enunciation, gesture, tone and vocabulary	4.42	0.70	3.78	0.79
Give an effective interview	4.12	0.75	3.70	0.81
Distinguish between right and wrong	4.49	0.73	4.13	0.89
Discuss the techniques and principles involved in public speaking	4.21	0.74	3.71	0.86
Prepare a 4-6 minute speech within a 30-minute preparation time	4.01	0.87	3.53	0.91

<i>Construct</i> Competency	<u>Importance</u>		<u>Teaching Ability</u>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Construct Means	4.32	0.49	3.84	0.59
<i>Public Relations, Advertising, and Marketing</i>				
Discuss the role of public relations in agricultural companies	4.13	0.76	3.57	0.87
Discuss the role of public relations in farm organizations	4.01	0.78	3.48	0.77
Identify key elements of a public relations campaign	3.79	0.81	3.27	0.82
Demonstrate sales skills	3.95	0.78	3.47	0.89
Construct Means	3.96	0.61	3.45	0.64
<i>Research, Information Gathering, and Writing</i>				
Identify the components and format of news releases	3.82	0.81	3.25	0.79
Utilize correct grammar	4.48	0.67	3.56	0.77
Identify what makes a topic newsworthy	3.90	0.78	3.48	0.77
Identify biased information	3.95	0.77	3.53	0.79
Effectively interview a person	4.02	0.85	3.60	0.82
Write a news release	4.05	0.77	3.47	0.81
Accurately proofread a document	4.22	0.72	3.46	0.83
Seek, gather and synthesize information	3.99	0.74	3.48	0.80
Write a feature story	3.82	0.78	3.29	0.80
Create a résumé	4.45	0.74	3.80	0.86
Write for broadcast	3.47	0.93	3.00	0.95

<i>Construct</i>	<u>Importance</u>		<u>Teaching Ability</u>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Competency				
Effectively edit a story	3.75	0.83	3.26	0.84
Write a speech	4.28	0.70	3.69	0.86
Write for the Web	3.60	0.90	2.75	0.97
Utilize an Associated Press Stylebook	3.37	0.98	2.66	1.09
Construct Means	3.96	0.50	3.35	0.54
Overall Composite Mean	4.02		3.48	

### Conclusions, Recommendations and Implications

Concerning research objective number one, this study found Oklahoma secondary agricultural education teachers were male, held a bachelor's degree earned at a specific Midwestern university, did not teach agricultural communications courses, and started their teaching careers after 1996, indicating the majority of teachers have successfully completed at least one junior-level agricultural communications writing course. Most of the agricultural education teachers who taught an agricultural communications course had done so for fewer than two years; most used the Curriculum and Instructional Materials Center curriculum guides as their primary teaching resource.

For research objective number two, this study found Oklahoma secondary agricultural education teachers perceived 46 of 48 agricultural communications competencies in five construct areas held "much importance" for the high school agricultural education curriculum. Akers (2000) reported a similar finding from agricultural communications faculty and industry professionals.

Regarding research objective number three, this study found Oklahoma secondary agricultural education teachers perceived themselves to have "high ability" to teach competencies in both the ethics, leadership development, and professional development and the communications history constructs. However, they perceived their ability to teach competencies in the communications skills, computer and information technology construct, public relations, advertising, and marketing construct, and research, information gathering, and writing competencies construct as only average.

CIMC curriculum guides were not being used by all Oklahoma agricultural education teachers who are teaching agricultural communications courses. Core agricultural communications competencies should be established so uniformity in teaching agricultural communications courses can be accomplished and requisite curriculum materials developed. Collegiate-level competencies (Akers, 2000) should not be included in high school curriculum and should be removed from the CIMC curriculum guides.

A large number and variety of agricultural communications competencies were identified in this research as being important. Although it may be impossible for every secondary agricultural education student to study each of these areas in depth, it is important students be provided an introduction to the various areas of agricultural communications identified as important. The professional development needs of agricultural educators must be determined if collegiate programs are to “prepare and provide an abundance of fully qualified and highly motivated agricultural educators at all levels” (Osborne, n.d., p. 8). If it is hoped to establish a “national curriculum” for teaching agricultural communications in secondary agricultural education, more research is needed to determine other states’ agricultural education teachers’ perceptions about agricultural communications competencies. Such research can help determine strategies to “provide a rigorous, relevant, standards-based curriculum in agricultural, food, and natural resources systems” (Osborne, n.d., p. 3) for both secondary and postsecondary agricultural education programs.

Additional research also is needed to determine perceptions of important agricultural communications competencies held by other stakeholder groups, such as agricultural communications faculty, agricultural education teacher education faculty, state agricultural education program staff and the agricultural communications industry.

The results of the open-ended questions indicated respondents who did not use the CIMC curriculum guides got their resources to teach agricultural communications from various locations, including books, Web sites, and self-made materials. It also was suggested that more assistance is needed to teach agricultural communications curriculum, the layout of the curriculum is an issue, and computer-assisted delivery needs to be considered. To increase knowledge of agricultural communications competencies in the five construct areas, in-service, summer courses or other professional development activities should be provided for agricultural education teachers who are teaching or wish to teach an agricultural communications course.

Finally, current agricultural communications courses for agricultural education students need to be evaluated to determine if these students are taught competencies they would teach in their future high school classrooms. In addition, more agricultural communications courses should be made available to agricultural education majors at the collegiate level to continue to increase aspiring agricultural education teachers’ knowledge of agricultural communications competencies.

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