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Exploring Beyond the Obvious: Social Skills Needed for Agricultural Communication Baccalaureate Graduates

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Exploring Beyond the Obvious: Social Skills Needed for Agricultural Communication Baccalaureate Graduates

Abstract

This national study sought to expand on current research to identify the importance of and graduates' ability to perform selected social skills to aid in curricula evaluation and small program development. Using three evaluation groups – agricultural communication graduates, communication industry professionals, and agricultural communication faculty members – 193 individuals responded to the online survey. The most important social skills were those associated with having work values and transitioning into an organization to be a productive member in the workplace. Graduates placed a higher importance on social skills than the other two evaluation groups. All three evaluation groups showed some agreement on graduates' highest ability to perform several social skills: The ability to be trustworthy, trained, reliable, professional, dedicated, and behave ethically were assigned the highest mean ability. A significant difference was found with the ability graduates afforded themselves in having common sense, being professional, and encompassing maturity versus the other two evaluation groups. Recommendations included incorporating and identifying social skills into instruction for students. Group work, presentations, internships, and student organizations were proposed as opportunities for social skill attainment. Agricultural leadership principles, oral communication, and professional development courses were recommended for new and developing agricultural communication programs that could serve to incorporate the most important social skills. Faculty members could benefit from research that can identify more effective measures to evaluate social skill attainment. Recommendations for future research included a similar assessment with technical skills and for other elements of the Agricultural Communication Program System Model to be assessed.

Keywords

Program evaluation, agricultural communication, agricultural communication program system model, social-skill importance, social-skill ability, three-tiered assessment

Cover Page Footnote/Acknowledgements

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Introduction

Agricultural communication programs have experienced continual growth since the first agricultural communication program was established in the early 1900s. Industry and student demand has aided in the development of approximately 40 programs nationwide with student enrollment ranging from seven to 360, averaging 69 students per program, with most programs expecting an increase over the next five years since Miller, Large, Rucker, Shoulders, and Buck (2015) conducted their survey of agricultural communication programs across the nation. However, limited collegiate faculty members in agricultural communication programs have placed a tremendous amount of responsibility on only a few people (Weckman, Witham, & Telg, 2000). Although the number of faculty members per agricultural communication program has increased since 2000, these small clusters of faculty have been responsible for teaching, advising, student recruitment, mentoring, club advisement, and graduate placement (Miller et al., 2015; Weckman et al., 2000) in addition to other responsibilities in research and outreach. The strain on faculty members has forced many agricultural communication programs to rely on journalism and mass communication departments to deliver content, erecting a barrier when fully assessing student preparedness (Irani & Doerfert, 2013; Tucker, Whaley, & Cano, 2003). Additionally, agricultural industry professionals have reported the need for skillset improvements for agricultural communication graduates (Irlbeck & Akers, 2009). With faculty responsibilities and industry needs, agricultural communication faculty members must be more selective and strategic in their course offerings to create a manageable workload and ensure graduates are adequately prepared for the workforce.

Many employers believe college graduates as a whole have failed to convert their education into practical application. Employers in all sectors of the workforce have reported that college graduates lack broad-based knowledge of various skills, while graduates believe they are better prepared than their employers do (Casner-Lott & Barrington, 2006; Hart Research Associates, 2015; Northeastern University, 2013). Employers have mixed reviews on how the current generation in the workforce – Millennials – have been performing (Deal, Altman, & Rogelberg, 2010; Oblinger, 2003; Taylor & Ketter, 2010). Several researchers have taken different approaches in evaluating agricultural communication graduates' skills and knowledge as well as assessing the skills needed by these students. In particular, social skills – often referred to as "people skills" – have been an area of interest to educators due to the demand from employers. Social skills are often the first observed in an interview and provide a competitive edge for job candidates (Coates, 2006; Schulz, 2008).

Irlbeck and Akers (2009) conducted a study in which 45 industry professionals, representing various national agricultural communication industry organizations, were asked about agricultural communication graduates' workplace habits and communication skills. Graduates were seen as trustworthy, easy to work with, and reliable. In contrast, common sense and organization were viewed as areas needing improvement (Irlbeck & Akers, 2009). Employers specified a need for improvement in several other workplace habits for graduates: "getting along with colleagues, pay and advancement, business etiquette, paying their dues, less reliance on email and more face-to-face communications, negotiating, office environment, time management, professional ethics, and critical thinking" (Irlbeck & Akers, 2009, p. 67).

Morgan's (2010) study determined the skills needed by agricultural communication undergraduates as perceived by industry professionals, as well. Some of the highest-ranked skills were conducting activities in an ethical manner, meeting deadlines, being dependable, having a strong work ethic, being reliable, having organizational skills, demonstrating professional/business etiquette in workplace, and being able to multitask (Morgan, 2010).

Morgan and Rucker (2013) explored a faculty perspective of the skills needed by agricultural communication undergraduates. Some of the highest-ranked skills were professional competence, critical thinking, ability to communicate orally and in writing, ethics, listening, and intellectual prowess (Morgan & Rucker, 2013). Morgan and Rucker (2013) also compared faculty members' responses in their study to the agricultural industry professionals' responses in Morgan's (2010) study to determine whether a difference in opinion existed concerning the skills needed for agricultural communication undergraduates. Morgan and Rucker (2013) found that faculty placed the highest rank on skills related to writing, critical thinking, communication, and intellectual prowess. In comparison, industry professionals placed a higher importance on ethics, responsibility, professionalism, and organizational skills. This analysis also showed that faculty members appeared to be more focused on skills related to communications and students' ability to think, while industry professionals were focused on global skills that included accomplishing tasks.

To put the skills needed in context with the content being taught to agricultural communication students, Cannon, Specht, and Buck (2016) evaluated 17 agricultural communication programs' undergraduate course offerings, including programs that offered either a major, minor, or concentration in agricultural communication. In order of frequency, researchers classified 172 courses into 21 content-based categories: writing (n = 24), introduction (n = 15), internship (n = 14), writing for publications (n = 11), graphic design (n = 10), professionalism (n = 9), broadcasting (n = 8), issues (n = 8), advertising and public relations (n = 7), web production (n = 7), capstone experience (n = 6), presentations (n = 6), photography (n = 6), technology (n = 6), campaigns (n = 4), oral and written communication (n = 4), risk/crisis communication (n = 4), field experience (n = 3), research (n = 3), study abroad (n = 3), and international (n = 2; Cannon et al., 2016).

Researchers have recommended that faculty members consider the results from such studies to enhance curricula and develop career-ready graduates (Akers, Vaughn, & Lockaby, 2001; Hart Research Associates, 2015; Irlbeck & Akers, 2009; Robinson, 2006; Terry, Lockaby, & Bailey-Evans, 1995). Several researchers have identified the skills agricultural communication graduates need to be successful, but limited research exists on the importance of each social skill and graduates' ability to perform those skills. Additionally, previous research has yet to capture a complete evaluation of agricultural communication baccalaureate graduates with input from three specific evaluation groups – communication industry professionals, agricultural communication graduates, and agricultural communication faculty members – in a single study that would take advancements in technology, current news, and job market shifts into consideration.

To serve current needs and contribute to existing research, the focus of this study was to explore the importance of selected social skills and graduates' ability to perform those social skills, incorporating feedback from – agricultural communication graduates, communication industry professionals, and agricultural communication faculty members – with the intent to aid in curricula evaluation and assist in small or emerging agricultural communication program development. The following objectives guided this study:

RO1: Determine the importance of selected social skills for agricultural communication baccalaureate graduates as perceived by all three evaluation groups.
RO2: Determine the ability to perform the selected social skills for agricultural communication baccalaureate graduates as perceived by all three evaluation groups.
RO3: Compare the perceived importance of social skills for agricultural communication baccalaureate graduates among all three evaluation groups.
RO4: Compare the perceived ability to perform social skills for agricultural communication baccalaureate graduates among all three evaluation groups.

Conceptual Framework

Curriculum assessments have been a collective process that require input from several sources: current students, graduates, and stakeholders. Program feedback can aid in identifying productive and hindering practices. The absence of proper assessments can lead to deteriorating academic programs (Chen, 2015). This process ultimately identifies how well the academic program is operating and what changes need to be made to justify its existence (Doerfert & Miller, 2006; Tucker et al., 2003).

Finch and Crunkilton's (1984) program system model was adapted by researchers for this study. After reflecting on contemporary program evaluation research that has used Finch and Crunkilton's (1984) program system model in the agricultural communication field (Cannon, Specht, & Buck, 2016; Morgan, 2012; Morgan & Rucker, 2013) and considering those researchers' additions, researchers in this study revised the model to provide more clarity in how the model operates, illustrate how previous research has contributed to the model, and identify areas still requiring further exploration (Figure 1). In particular, the *feedback* component in the model was vague and failed to specifically identify what variables have been used to measure this component and also omitted previous researchers' contributions. Therefore, *important skills for graduates* and *perceived career readiness of graduates* were added as variables used to measure feedback. Using additions made to the model by Cannon et al. (2016) as guidance, researchers in this study added more variables to the *transformation* component by considering how agricultural communication students are prepared in the process. Lastly, the program system model was retitled as the *Agricultural Communication Program System Model* to emphasize how the needs of the agricultural communication discipline are unique.

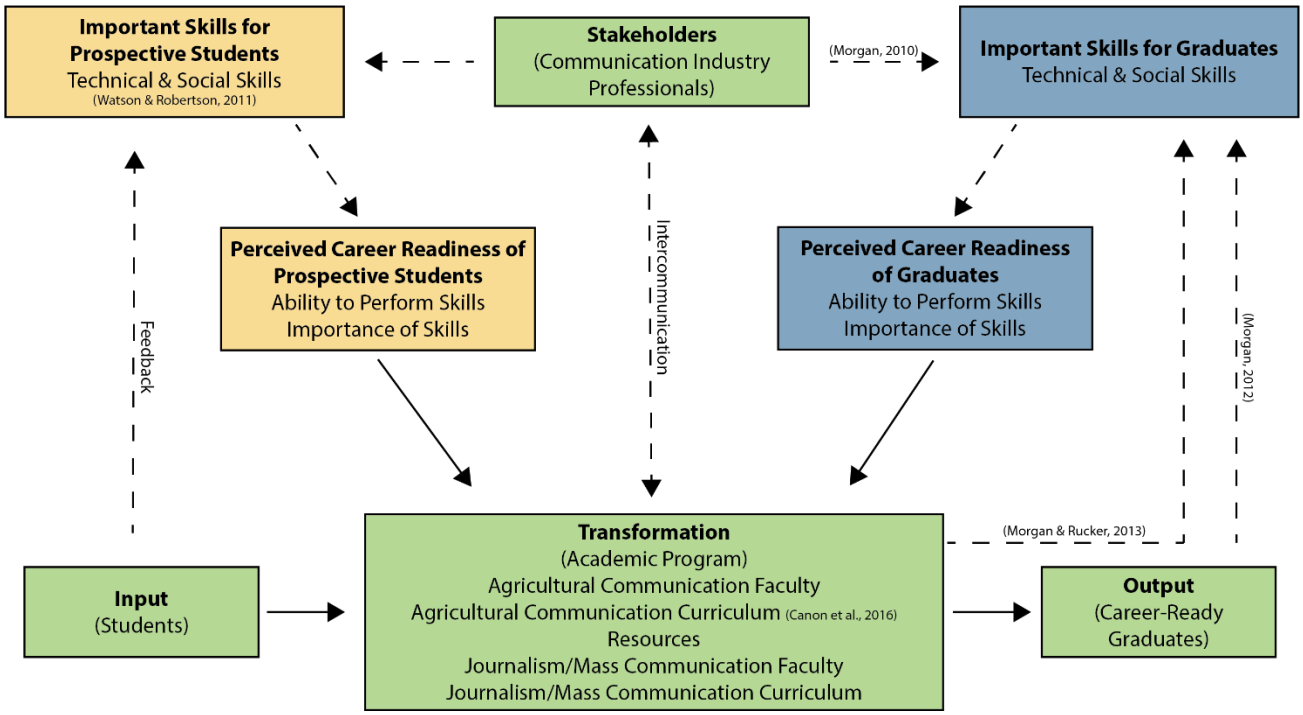

Figure 1. Agricultural Communication Program System Model.

The focus of this study and contribution to the Agricultural Communication Program System Model was the perceived career readiness of graduates' social skills, assessing the importance and graduates' ability to perform the selected social skills. This evaluation was conducted with agricultural communication graduates, communication industry professionals, and agricultural communication faculty members.

Process

The original program system model is identified with the green-shaded boxes. New students remain as the model's *input* to provide individuals with the transformation process experience and to justify the academic program's existence. Originally called the *process*, the academic program is now labeled as the *transformation* to be more reflective of the progression students go through to become career-ready graduates. Journalism/mass communication faculty members and curricula were added to the transformation process to represent the content and interactions students receive outside of agricultural communication courses. *Stakeholders*, previously identified as the *environment*, still lie on the outside of the model. However, their influence on each element of the Agricultural Communication Program System Model remains the same. Stakeholders provide the individuals and financial elements that allow academic programs to function (Chen, 2015). Communication industry professionals were also specified in this revised model because they are the primary stakeholder group used in program evaluations for agricultural communication programs. The transformation remains as the intervention students will go through where their knowledge, behavior, and attitudes will change to develop them into career-ready graduates.

Feedback

The blue and yellow-shaded boxes illustrate pieces of the overall model that have and have not been explored and to provide a visual representation of the role each of those components play. Dotted lines denote a continual process, while a solid line denotes an end product designed to feed back directly into the academic program. Each dotted line that extends away from the evaluation groups serve as the *feedback* element of the program system model. New student feedback could serve as a benchmark for students entering the academic program. Graduate feedback provides the necessary information to initiate curricula development and determine the perceived career readiness of agricultural communication graduates. An additional line was created to illustrate the constant intercommunication that should exist between industry professionals and academic programs, serving as an additional communication channel that exceeds the traditional feedback industry professionals have provided in the program system model.

Methods

An online survey instrument was used in this national study that collected 212 responses, which resulted in 193 usable responses. Agricultural communication graduates from 2014 and 2015, communication industry professionals, and agricultural communication faculty members served as the three evaluation groups in this study. A total of 46 faculty members, 66 graduates, and 81 industry professionals were included in this study.

A purposive sampling technique was used to recruit all three evaluation groups. Agricultural communication faculty members were identified using a study conducted by Miller et al. (2015), which identified all agricultural communication programs in the United States. Faculty members' email addresses were obtained by searching these programs' university websites. Alumni lists were requested from faculty member participants to identify 2014 and 2015 agricultural communication graduates, and communication industry professionals were identified using online searches via boards of directors and membership lists from several agricultural and non-agricultural communication industry organizations. Kansas State University offered to promote this study in its departmental newsletter since the faculty members were unable to share graduates' email addresses with researchers in this study due to privacy issues, so it was unknown how many individuals received the newsletter. However, demographic information was used to ensure that each respondent received a major, minor, or concentration in agricultural communication and that they had graduated within the last 2.5 years. Respondents from this newsletter were included in the 193 usable responses.

Qualtrics© mailer function was used to distribute the instrument and collect data in this study. A modified Dillman, Smyth, and Christian's (2014) Tailored Design was used in the distribution of the survey instrument to increase the response rate. Initial email invitations were sent to all industry professionals, faculty members, and graduates. Four contacts were used with each group, as response from the fifth contact and beyond have been shown to produce minimal additional data (Israel & Gouldthorpe, 2013). Even though efforts were made to reduce nonresponse, there was a 37.37% response rate for the graduate survey and a 33.33% response rate for the combined communication industry professional and agricultural communication faculty survey instrument.

The data collected and reported in this study originated from dissertation work completed by the lead author, so the information reported in this study was limited to the purpose and objectives outlined for this manuscript. Using two different versions of the survey instrument – a graduate survey instrument and an industry and faculty survey instrument – respondents were

presented with 45 social skills, which were adopted from previous studies that assessed needed skills for agricultural communication graduates to be successful in the workforce (Bailey-Evans, 1994; Irlbeck & Akers, 2009; Morgan & Rucker, 2013; Morgan, 2010; Robinson, 2006; Terry et al., 1995). To ensure each evaluation group was assessing entry-level agricultural communication graduates, communication industry professionals were asked to rate newly hired graduates' ability to perform the selected skills, faculty members/instructors were asked to rate graduates' ability to perform the selected skills by graduation day, and graduates were asked to rate their current ability to perform the selected skills.

Ability to perform each skill was measured on a five-point Likert-type scale where 0 = *I Don't Know*, 1 = *No Ability,* 2 = *Low Ability,* 3 = *Moderate Ability,* and 4 = *High Ability.* All evaluation groups were asked to indicate the importance of the social skills on a four-point Likert-type scale where 1 = *No Importance,* 2 = *Low Importance,* 3 = *Moderate Importance,* and 4 = *High Importance.* Measurement scales were adapted from previous studies (Blackburn, Robinson, & Field, 2015; DiBenedetto, 2015), and Cronbach's alpha coefficients were calculated post data collection to confirm the reliability of the constructs used in the survey instruments: social-skill importance construct (α = .93) and social-skill ability construct (α = .98). Real limits were created to prevent gaps between intervals, allowing for clearly defined parameters to help with the interpretation of the importance of and graduates' ability to perform the selected skills (Colwell & Carter, 2012). The real limits set for the importance scale were 1.00 – 1.49 = *no importance,* 1.50 – 2.49 = *low importance,* 2.50 – 3.49 = *moderate importance,* and 3.50 – 4.00 = *high importance,* and the real limits set for the ability to perform scale were 1.00 – 1.49 = *no ability,* 1.50 – 2.49 = *low ability,* 2.50 – 3.49 = *moderate ability,* and 3.50 – 4.00 = *high ability.* The answer option 0 = *I Don't Know* on the ability scale was treated as a missing value and not included in analysis.

Data were analyzed using SPSS© 22. Descriptive statistics were used to analyze social-skill ability and importance, and data were reported using means and standard deviations. Social-skill ability and importance were analyzed using a one-way, between groups analysis of variance. Gabriel's pairwise tests were used for the follow-up analysis to account for the unequal sample sizes.

A Pearson Chi-square analysis was used to compare early and late respondents to address the external validity threat of nonresponse (Miller & Smith, 1983). For the graduate survey instrument used in this study, a Chi-square analysis was used to compare where early and late respondents lived when they grew up (χ^2 = 1.63, ρ = .44) and by their immediate family's involvement in the agricultural industry (χ^2 = 2.65, ρ = .27). The same statistical comparison was calculated for the industry and faculty survey instrument, using where early and late respondents lived when they grew up (χ^2 = 4.38, ρ = .22) and their immediate family's involvement in the agricultural industry (χ^2 = .04, ρ = .98). No statistically, significant difference was observed between early and late respondents for either survey instrument.

Table 1 captures the demographics for all respondents and have been separated by evaluation groups. The 66 graduates represented 10 universities with 74.2% (*n* = 49) females and 25.8% (*n* = 17) males. The majority of graduates (92.4%, n = 61) identified as Caucasian/White. The age range for graduate respondents was 24 to 72 with a mean age of 30.92 (*SD* = 9.55). Eighty-one industry professionals from 58 organizations were represented in this study: 34 agricultural organizations, 14 non-agricultural organizations, and 10 communication departments in colleges of agriculture, with 37% (*n* = 30) males and 63% (*n* = 51) females. The majority (91.4%, n = 74) of industry professionals identified as Caucasian/White. The age range for industry professionals was 25 to 68 with a mean age of 50.92 (*SD* = 12.66). A total of 46 faculty members representing

25 universities consisted of 43.5% (*n* = 20) males and 54.3% (*n* = 25) females, and the majority identified as Caucasian/White (89.1%, n = 41). The age range for faculty members was 31 to 71 with a mean age of 49.28 (*SD* = 12.22).

Table 1. Demographics of respondents

Characteristic	*f*	%
Graduates (*n* = 66)		
Gender		
Male	17	25.8
Female	49	74.2
Hispanic	5	7.6
Race		
Asian or Pacific Islander	1	1.5
Caucasian/White	61	92.4
Latino	1	1.5
Industry Professionals (*n* = 81)		
Gender		
Male	30	37.0
Female	51	63.0
Hispanic	2	2.5
Race		
Black or African American	1	1.2
Asian or Pacific Islander	1	1.2
Caucasian/White	74	91.4
Faculty Members (*n* = 46)		
Gender		
Male	20	43.5
Female	25	54.3
Hispanic	1	2.2
Race		
Black or African American	2	4.3
Asian or Pacific Islander	1	2.2
Caucasian/White	41	89.1
American Indian or Alaska Native	2	4.3

Note. Some frequencies may not total group sizes due to missing values.

Results

Each evaluation group assessed all 45 social skills. Table 2 summarizes the five most important social skills as perceived by professionals, graduates, and faculty members. Table 3 identifies graduates' perceived ability to perform the top five social skills by each evaluation group, respectively. Individual mean values for social skill importance and ability are discussed in Tables 4 and 5.

Table 2. Social skill importance summary table

Industry Professionals	Graduates	Faculty Members
Ability to Behave Ethically	Ability to Behave Ethically	Ability to be Professional

Ability to be Trustworthy	Ability to use Common Sense	Ability to Listen
Ability to be Reliable	Ability to Have Good Work Ethic	Ability to use Critical Thinking
Ability to Listen	Ability to Listen	Ability to be Dependable
Ability to be Dependable	Ability to Problem Solve	Ability to Have Good Work Ethic

Note. Skills are ordered from highest mean importance to lowest mean importance

Table 3. Social skill ability summary table

Industry Professionals	Graduates	Faculty Members
Ability to Behave Ethically	Ability to Have Good Work Ethic	Ability to Behave Ethically
Have a Positive Attitude	Ability to be Trustworthy	Ability to be Trustworthy
Ability to be Optimistic	Ability to Behave Ethically	Ability to be Dedicated
Ability to be Trained	Ability to be Reliable	Ability to be Professional
Ability to be Dependable	Ability to be Dependable	Have a Positive Attitude

Note. Skills are ordered from highest mean ability to lowest mean ability

Importance of Social Skills

When asked to rate the level of importance for social skills (Table 4), communication industry professionals placed the highest mean importance on the ability to behave ethically (*M* = 4.00, *SD* = 00), be trustworthy (*M* = 4.00, *SD* = 00), be reliable (*M* = 4.00, *SD* = 00), to listen (*M* = 3.99, *SD* = .11), be dependable (*M* = 3.99, *SD* = .11), have a good work ethic (*M* = 3.98, *SD* = .16), be professional (*M* = 3.98, *SD* = .16), be trained (*M* = 3.96, *SD* = .19), and the ability to have good time management (*M* = 3.95, *SD* = .22).

The highest mean importance for social skills as perceived by agricultural communication graduates was placed on the ability to behave ethically (*M* = 4.00, *SD* = .00), use common sense (*M* = 4.00, *SD* = .00), have a good work ethic (*M* = 3.98, *SD* = .12), to listen (*M* = 3.98, *SD* = .12), to problem solve (*M* = 3.98, *SD* = .12), be professional (*M* = 3.98, *SD* = .12), be trustworthy (*M* = 3.98, *SD* = .12), and the ability to be reliable (*M* = 3.98, *SD* = .12).

Agricultural communication faculty members/instructors placed the highest mean importance for social skills on the ability to be professional (*M* = 3.98, *SD* = .15), to listen (*M* = 3.96, *SD* = .21), use critical thinking (*M* = 3.96, *SD* = .21), be dependable (*M* = 3.96, *SD* = .21), have good work ethic (*M* = 3.93, *SD* = .25), to problem solve (*M* = 3.93, *SD* = .25), be trustworthy (*M* = 3.93, *SD* = .25), and the ability to be trained (*M* = 3.93, *SD* = .25).

Table 4. Importance of social skills for agricultural communication graduates

Skill	Industry (*n* = 79) *M(SD)*	Graduates (*n* = 66) *M(SD)*	Faculty (*n* = 44) *M(SD)*
Ability to Behave Ethically	4.00(.00)	4.00(.00)	3.91(.29)
Ability to be Trustworthy	4.00(.00)	3.98(.12)	3.93(.25)
Ability to be Reliable	4.00(.00)	3.98(.12)	3.91(.29)
Ability to Listen	3.99(.11)	3.98(.12)	3.96(.21)
Ability to be Dependable	3.99(.11)	3.97(.17)	3.96(.21)
Ability to Have Good Work Ethic	3.98(.16)	3.98(.12)	3.93(.25)
Ability to be Professional	3.98(.16)	3.98(.12)	3.98(.15)
Ability to be Trained	3.96(.19)	3.95(.21)	3.93(.25)
Ability to Have Good Time Management	3.95(.22)	3.94(.24)	3.91(.29)
Ability to use Common Sense	3.94(.25)	4.00(.00)	3.84(.37)
Ability to Communicate Interpersonally	3.94(.24)	3.89(.31)	3.91(.29)

Ability to Problem Solve	3.93(.31)	3.98(.12)	3.93(.25)
Ability to be Adaptable	3.93(.26)	3.97(.17)	3.91(.29)
Ability to Communicate Intrapersonally	3.90(.41)	3.89(.31)	3.70(.59)
Ability to be Self-Motivated	3.90(.30)	3.92(.27)	3.82(.39)
Ability to Engage in Team Work	3.89(.35)	3.89(.36)	3.83(.38)
Ability to be Dedicated	3.89(.32)	3.94(.24)	3.70(.47)
Ability to use Critical Thinking	3.89(.32)	3.97(.17)	3.96(.21)
Professional Competence	3.89(.32)	3.95(.21)	3.83(.38)
Ability to Think Independently	3.88(.33)	3.95(.21)	3.89(.32)
Ability to be Deadline-Oriented	3.87(.34)	3.95(.21)	3.89(.32)
Have a Positive Attitude	3.86(.35)	3.85(.36)	3.66(.57)
Respectful of Others' Opinions, Values, & Beliefs	3.85(.36)	3.94(.30)	3.87(.34)
Ability to be Organized	3.80(.44)	3.95(.21)	3.78(.42)
Communicate with Individuals of all Educational Levels	3.78(.45)	3.94(.24)	3.70(.51)
Ability to Multitask	3.77(.48)	3.85(.36)	3.49(.63)
Ability to be Detail Oriented	3.75(.47)	3.88(.37)	3.69(.47)
Ability to use Professional/Business Etiquette	3.75(.47)	3.92(.27)	3.77(.42)
Ability to be Self-Aware	3.70(.52)	3.85(.36)	3.59(.54)
Communication Instinct	3.69(.52)	3.88(.33)	3.37(.85)
Ability to use Critical Analysis	3.69(.49)	3.82(.43)	3.70(.47)
Ability to Think Quickly	3.68(.50)	3.89(.36)	3.56(.50)
Appreciate Precision with Words	3.67(.55)	3.83(.41)	3.68(.52)
Encompass Maturity	3.67(.52)	3.95(.21)	3.77(.42)
Ability to be Creative	3.67(.50)	3.79(.48)	3.57(.50)
Ability to Dress Professionally	3.66(.58)	3.85(.44)	3.64(.53)
Appreciation of Language	3.63(.56)	3.77(.46)	3.54(.66)
Ability to be Optimistic	3.63(.54)	3.74(.47)	3.36(.53)
Network with Other Professionals	3.62(.54)	3.85(.44)	3.66(.48)
Ability to be Intuitive	3.59(.54)	3.80(.44)	3.51(.55)
Ability to be Confident	3.57(.55)	3.83(.38)	3.57(.50)
Ability to be Analytical	3.53(.63)	3.77(.46)	3.65(.48)
Ability to Strategize	3.52(.57)	3.80(.44)	3.53(.51)
Ability to use Persuasive Communication	3.49(.57)	3.79(.48)	3.54(.50)
Ability to be a Leader	3.39(.59)	3.73(.51)	3.44(.55)

Note. 1.00 – 1.49 = *no importance*, 1.50 – 2.49 = *low importance*, 2.50 – 3.49 = *moderate importance*, 3.50 – 4.00 = *high importance*. Skills are ordered from most important to least important per communication industry professionals.

Ability to Perform Social Skills

When asked to indicate graduates' ability to perform social skills (Table 5), communication industry professionals placed the highest mean ability on graduates' ability to behave ethically (*M* = 3.58, *SD* = .60), have a positive attitude (*M* = 3.58, *SD* = .55), be optimistic (*M* = 3.55, *SD* = .58), be trained (*M* = 3.52, *SD* = .56), be dependable (*M* = 3.51, *SD* = .56), engage in team work (*M* = 3.49, *SD* = .58), be trustworthy (*M* = 3.49, *SD* = .61), be reliable (*M* = 3.43, *SD* = .63), and the ability to be confident (*M* = 3.42, *SD* = .58).

Graduates' highest mean ability to perform social skills as perceived by agricultural communication graduates was the ability to have good work ethic (*M* = 4.00, *SD* = .00), be trustworthy (*M* = 3.98, *SD* = .12), behave ethically (*M* = 3.97, *SD* = .17), be dependable (*M* = 3.97,

SD = .17), be reliable (*M* = 3.97, *SD* = .17), use common sense (*M* = 3.97, *SD* = .17), be dedicated (*M* = 3.95, *SD* = .21), be professional (*M* = 3.95, *SD* = .27), be trained (*M* = 3.94, *SD* = .24), and encompass maturity (*M* = 3.94, *SD* = .24).

Agricultural communication faculty members/instructors placed graduates' highest mean ability to perform social skills on the ability to behave ethically (*M* = 3.58, *SD* = .55), be trustworthy (*M* = 3.56, *SD* = .50), be dedicated (*M* = 3.51, *SD* = .59), be professional (*M* = 3.51, *SD* = .59), have a positive attitude (*M* = 3.50, *SD* = .51), have good work ethic (*M* = 3.49, *SD* = .59), be trained (*M* = 3.49, *SD* = .59), communicate interpersonally (*M* = 3.47, *SD* = .55), be dependable (*M* = 3.46, *SD* = .56), and the ability to network with other professionals (*M* = 3.45, *SD* = .60).

Table 5. Agricultural communication graduates' ability to perform social skills

Skill	Industry (*n* = 70) *M(SD)*	Graduates (*n* = 66) *M(SD)*	Faculty (*n* = 39) *M(SD)*
Have a Positive Attitude	3.58(.55)	3.82(.39)	3.50(.51)
Ability to Behave Ethically	3.58(.60)	3.97(.17)	3.58(.55)
Ability to be Optimistic	3.55(.58)	3.76(.53)	3.29(.56)
Ability to be Trained	3.52(.56)	3.94(.24)	3.49(.59)
Ability to be Dependable	3.51(.56)	3.97(.17)	3.46(.56)
Ability to Engage in Team Work	3.49(.58)	3.80(.44)	3.44(.59)
Ability to be Trustworthy	3.49(.61)	3.98(.12)	3.56(.50)
Ability to be Confident	3.42(.58)	3.73(.51)	3.37(.66)
Ability to be Reliable	3.43(.63)	3.97(.17)	3.39(.59)
Professional Competence	3.32(.55)	3.89(.31)	3.14(.56)
Ability to be Self-Motivated	3.39(.62)	3.85(.40)	3.31(.61)
Ability to be Creative	3.38(.62)	3.55(.61)	3.19(.59)
Ability to be Professional	3.36(.63)	3.95(.27)	3.51(.59)
Respectful of Others' Opinions, Values, & Beliefs	3.39(.66)	3.89(.31)	3.29(.60)
Ability to be Organized	3.34(.61)	3.80(.47)	3.27(.50)
Ability to Multitask	3.36(.64)	3.77(.49)	3.20(.60)
Network with Other Professionals	3.35(.63)	3.61(.63)	3.45(.60)
Ability to be Dedicated	3.38(.68)	3.95(.21)	3.51(.59)
Ability to Communicate Interpersonally	3.32(.62)	3.86(.39)	3.47(.55)
Ability to Think Independently	3.32(.62)	3.92(.27)	3.14(.67)
Ability to Communicate Intrapersonally	3.29(.61)	3.83(.45)	3.30(.71)
Ability to Think Quickly	3.27(.59)	3.74(.54)	3.17(.54)
Ability to be Deadline-Oriented	3.33(.67)	3.89(.36)	3.37(.58)
Encompass Maturity	3.24(.62)	3.94(.24)	3.23(.58)
Ability to Have Good Work Ethic	3.32(.72)	4.00(.00)	3.49(.59)
Ability to be Adaptable	3.28(.68)	3.91(.29)	3.02(.71)
Ability to Listen	3.27(.69)	3.85(.36)	3.30(.64)
Ability to use Critical Thinking	3.25(.68)	3.83(.45)	3.21(.68)
Ability to be Detail Oriented	3.24(.67)	3.71(.55)	3.10(.54)
Ability to use Common Sense	3.29(.72)	3.97(.17)	3.21(.57)
Ability to use Professional/Business Etiquette	3.22(.68)	3.89(.36)	3.37(.58)
Ability to Problem Solve	3.21(.69)	3.88(.33)	3.23(.65)
Ability to be Self-Aware	3.21(.69)	3.85(.36)	3.10(.60)

Ability to Dress Professionally	3.25(.73)	3.88(.41)	3.34(.58)
Ability to be a Leader	3.06(.55)	3.80(.53)	3.29(.60)
Communicate with Individuals of all Educational Levels	3.19(.71)	3.80(.44)	2.93(.85)
Appreciation of Language	3.16(.69)	3.68(.53)	2.95(.72)
Ability to Have Good Time Management	3.15(.72)	3.74(.51)	3.14(.60)
Ability to use Persuasive Communication	3.07(.64)	3.62(.63)	3.12(.63)
Ability to be Intuitive	3.06(.65)	3.68(.56)	3.00(.66)
Communication Instinct	3.14(.74)	3.73(.48)	2.95(.62)
Ability to use Critical Analysis	3.04(.68)	3.65(.54)	3.05(.71)
Appreciate Precision with Words	3.10(.75)	3.73(.54)	2.98(.66)
Ability to be Analytical	2.95(.66)	3.65(.57)	2.84(.75)
Ability to Strategize	2.92(.69)	3.68(.50)	2.90(.62)

Note. 1.00 – 1.49 = *no ability*, 1.50 – 2.49 = *low ability*, 2.50 – 3.49 = *moderate ability*, 3.50 – 4.00 = *high ability*. Skills are ordered from highest ability to lowest ability per communication industry professionals.

Importance Comparison

The grand mean for the importance of social skills per each evaluation group was 3.79 (*SD* = .19) for communication industry professionals, 3.90 (*SD* = .15) for agricultural communication graduates, and 3.74 (*SD* = .23) for agricultural communication faculty members/instructors. A one-way, between groups ANOVA showed there was a significant mean difference in the perceived importance of social skills between each evaluation group, $F(2, 190) = 11.03$, $p < .001$ (Table 6). A post hoc analysis using the Gabriel's test was conducted and showed a significant mean difference between industry professionals and graduates ($p = .002$). The results showed industry professionals' perceived importance of social skills was .12 lower than graduates. A significant mean difference was also found between faculty members/instructors and graduates ($p < .001$) that showed faculty members/instructors' perceived importance of social skills was .16 lower than graduates.

Table 6. Comparison of social skills' importance

	SS	df	MS	*F*	*p*
Between Groups	.78	2	.390	11.03	.000
Within Groups	6.72	190	.035		
Total	7.50	192			

Ability Comparison

The grand mean for ability to perform social skills per each evaluation group was 3.29 (*SD* = .44) for communication industry professionals, 3.82 (*SD* = .21) for agricultural communication graduates, and 3.24 (*SD* = .41) for agricultural communication faculty members/instructors. A one-way, between groups ANOVA showed there was a significant mean difference in graduates' ability to perform the social skills between each evaluation group, $F(2, 180) = 47.80$, $p < .001$ (Table 7). A post hoc analysis using the Gabriel's test was conducted and a significant mean difference was found between industry professionals and graduates ($p < .001$). The results showed graduates' ability to perform social skills as perceived by industry professionals was .53 lower than graduates. A significant mean difference was also found between faculty members/instructors

and graduates ($p < .001$), which showed graduates' ability to perform social skills as perceived by faculty members/instructors was .58 lower than graduates.

Table 7. Comparison of graduates' ability to perform social skills

	SS	df	MS	*F*	*p*
Between Groups	12.74	2	6.37	47.80	.000
Within Groups	23.98	180	.13		
Total	36.72	182			

Conclusions/Implications

Importance

Social skills are necessary skills in the workplace, and several studies have shown that employers believe social skills are important (Morgan & Rucker, 2013; Irlbeck & Akers, 2009; Robinson, 2006). Research objectives one and three for this study were focused on assessing the importance of selected social skills for agricultural communication graduates as perceived by all three evaluation groups and then comparing the groups' perceived importance. Overall, all social skills were identified as having moderate importance or high importance. Results in this study showed that the most important social skills were those associated with having positive work values and transitioning into an organization to be a productive member in the workplace. This finding was observed across all three evaluation groups and received mean values of 3.91 and higher. Several studies have found that employers believe professionalism, work ethic, and decision making/problem solving skills as the most important or highest ranked skills needed for graduates (Casner-Lotto & Barrington, 2006; Morgan & Rucker, 2013; Morgan, 2010; Robinson 2006).

The results in this study are representative of the findings from several studies within and outside of the agriculture field (Irlbeck & Akers, 2009; Morgan & Rucker, 2013; Morgan, 2010; Robinson 2006). It appears some of the most important social skills needed by agricultural communication graduates partially mirror what researchers have found that employers are looking for in all college graduates. This finding implies that social skills required of agricultural communication graduates may be similar to those expected of all college graduates.

Current curricula show that professionalism/professional development and leadership courses include content that incorporates social skills, which typically cover topics such as ethics, networking, and interviewing for jobs (Cannon et al., 2016). Current courses show a presence of social skills content included in the curricula but may not be covering all needed social skills. Other courses may be including some social skills as part of their content, but the difficulties with observing and quantifying some of these skills can make it difficult to evaluate social skill presence (Coates, 2006). Cannon et al. (2016) was not able to evaluate and survey all agricultural communication programs and faculty members/instructors, so there may be a higher presence of courses including social skills than current research indicates. Social skills will have to be incorporated into the curricula or be identified as being present to ensure graduates are prepared for the workforce. The presence of social skills in course content does not necessarily guarantee that students will learn the content, but it does show that agricultural communication programs are striving to prepare graduates.

The researchers also explored and found a significant difference between the level of importance graduates placed on social skills versus industry professionals and faculty members/instructors. Even though there was approximately a 20-year gap in the mean age between agricultural communication graduates and the other two evaluation groups, graduates appear to be

cognizant of social skills' importance and place a higher mean importance on social skills than communication industry professionals and agricultural communication faculty members. This importance placed on social skills has been supported by previous national studies with employers (Bentley University, 2014; Northeastern University, 2013).

Several studies have characterized Millennials as valuing social skills, noting their ability to be more confident, adaptable, optimistic, expressive, and respectful (Oblinger, 2003; Taylor & Ketter, 2010). Millennials' value system may be reflective of the importance graduates placed on social skills. With the impact and influence that the environment (i.e., society) and economy have on the development of a generation's behaviors, attitudes, beliefs, and sensitivities (Deal et al., 2010; Oblinger, 2003), society's increased focus on graduates developing social skills to enter the workforce over the last decades may have impacted the importance graduates placed on social skills as well (Schulz, 2008).

Identifying the importance of social skills serves to better inform the discipline, but the extent to which agricultural communication graduates are performing these skills by graduation and at the time of employment in the workforce is equally important, if not more important, to determine.

Ability

For objectives two and four, researchers in this study examined agricultural communication graduates' ability to perform the selected social skills as perceived by all three evaluation groups and then compared the groups' perceived ability for graduates. All three evaluation groups showed some agreement on graduates' highest ability to perform several social skills. The ability to be trustworthy, trained, reliable, professional, dedicated, and behave ethically were assigned the highest mean ability. Graduates rated their ability of having common sense, being professional, and encompassing maturity higher than both faculty members/instructors and industry professionals.

Graduates' highest mean social-skill abilities in this study align with a few of the highest mean important social skills that were found in Irlbeck and Akers' (2009) study with employers: being trustworthy, being reliable, being trained, and behaving ethically. This finding implies that graduates are performing well some of the highest mean important social skills. However, social skills ranked with the highest mean importance by graduates – having common sense and being professional – were also afforded the highest mean ability by graduates. This was not a similar ranking of ability with industry professionals and faculty members/instructors. Industry professionals and faculty members/instructors afforded graduates with a moderate ability to be professional and have common sense.

From a holistic viewpoint, it is important to remember that all social skills were characterized as either moderate or highly important. However, with rank of ability aside, only five skills from industry professionals and six from faculty members/instructors were characterized above high ability. No skill was assigned a mean value of less than 3.55 (high ability) by graduates. The difference in opinion was found to be significant.

Professionalism/professional development and leadership courses that include some social-skill content may be offered by several agricultural communication programs, but the results in this study show that graduates' ability to perform those social skills does not appear to be high. The difference in opinion suggests that graduates believe they are more capable of performing social skills than faculty members and communication professional perceive their abilities. Technology presence in Millennials' lives may be changing their ability perform some social skills. With the environment (i.e., society) and life experiences playing a role in generational

behavior (Deal et al., 2010; Oblinger, 2003), Millennials may be interpreting their ability to perform social skills as acceptable, while older generations disagree. It is possible that some of the current courses delivering social-skill content are not addressing the needed social skills and that students are not receiving the social skills they need in other classes as well. It is also possible that there are external factors, such as personality and family history, affecting graduates' ability to perform social skills.

Social skills are no longer viewed as optional and have become increasingly important employability skills needed by graduates (Schulz, 2008). Providing students with these types of skills by graduation could give them a competitive edge in the job market and in their careers. Though they are more difficult to observe or quantify, social skills are often the first skills graduates use and employers see during an interview (Schulz, 2008). Table 8 identifies a few example courses that could be implemented when developing curriculum for an agricultural communication program that encompass some of the most important social skills needed for agricultural communication students.

Table 8. Courses that encompass social skills

Course	General Description	Possible Skills to be Covered	
Agricultural Leadership Principles	A course focused on understanding the dynamic interactions of personal characteristics and influence for effective organizational leader and follower behaviors. This course also provides an introduction to leadership styles, types of management, group dynamics, and managing changes in agriculture.	• Intrapersonal communication • Interpersonal communication • Listening • Ethical behavior • Professionalism • Problem Solving • Trainable • Maturity • Respectful of Others' Opinions, Values, and Beliefs	• Common Sense • Team Work • Self-Awareness • Critical Analysis • Critical Thinking • Leadership • Professional Competence • Independent Thinking
Professional Development	A course focused on career, interviewing, print, and electronic preparation for careers	• Professionalism • Professionalism and Business Etiquette • Professional Dress • Active Listening • Interpersonal Communication	• Professionalism and Business Etiquette • Respectful of Others' Opinions, Values, and Beliefs
Oral Communication	A course focused on effective formal and	• Professionalism • Professional Dress	• Professionalism and business etiquette

	informal oral communication	• Respectful of others' opinions, values, and beliefs	• Intrapersonal communication • Interpersonal communication

Contributions

Researchers in this study focused on expanding and adding to existing research to benefit developing and existing agricultural communication programs. Morgan (2010) and Morgan and Rucker (2013) identified the most important skills needed for agricultural communication graduates, and this study built on that previous research by having the importance assessed for each of the most important social skills needed for agricultural communication graduates. Irlbeck and Akers (2009) had industry professionals assess agricultural communication graduates' workplace habits and communication skills, but this study added to that research by having graduates' ability assessed for each of the most important social skills needed for agricultural communication graduates. Cannon et al. (2016) evaluated agricultural communication programs' undergraduate course offerings. The findings in this study can provide more information to examine what is currently being offered in agricultural communication programs in relation to the most important social skills and graduates' ability to perform those social skills.

Recommendations

Assessing the importance of the selected social skills and graduates' ability to perform those skills was informative and served as a positive reinforcement for faculty members efforts in preparing graduates, but improvements can help with graduates' competitiveness when seeking employment (Casner-Lott & Barrington, 2006; Hart Research Associates, 2015).

Agricultural communication programs need to focus on social skills in the curricula and find a way to engage students in activities that require social skills to be used. Professionalism and leadership courses are important vehicles for providing students the opportunity to learn social skills, but these skills will need to be focused on in all classes. Several courses in the curricula may have social skills embedded in them, which may be the reason students are not recognizing their presence. Social skills need to be identified and worked into instruction. Altering students' social-skill behaviors requires changing old behaviors, which requires repetition (Schulz, 2008). Implications in this study reiterate the importance of ensuring faculty members/instructors are intentionally incorporating social skills in their courses to prepare graduates while balancing the curricula with the most important technical skills as well.

Efforts may serve students well if faculty members/instructors specifically identify the social skills that are intended to be covered in the course. Implementing group work, presentations, and assignments with minimal direction to promote creative and independent thinking are a few ideas to incorporate social skills into the curricula. Efforts may also benefit students if each assignment that was intended to promote social skills was discussed beforehand or after the fact. Although it is important for learning objectives to guide all assignments, it should be made clear to students what the learning objectives are for social skills-based assignments, ensuring they are not missing the desired goal of the assignment.

Social skills are difficult to observe and quantify, but an attempt by faculty members/instructors to include social skills on rubrics could further emphasize the expected social skills to be learned from assignments. Internships, apprenticeships, and student organizations could also serve as additional opportunities for students to apply the knowledge and skills they

have learned in the classroom, allowing them to develop social skills, which can solidify their learning. Practical application opportunities like these can become available through relationships built between faculty members/instructors and industry professionals (Accenture, 2013; Morgan, 2012; Robinson, 2006; Sprecker & Rudd, 1997).

To aid newly established and developing programs, using the findings in this study, it is recommended that courses with oral communication, professional development, and agricultural leadership principles be included in the initial curricula additions for agricultural communication programs. These courses encompass some of the most important social skills needed for agricultural communication students (Cannon et al., 2016.

Differences between social and technical skill areas in agricultural communication programs could be further explored through future research as well. This research could provide further clarification and direction as faculty members develop curricula with social skills in mind. Researchers should continue studying methods to more effectively measure/evaluate social skill attainment to aid faculty members in curricula decisions. Additional research should evaluate the content being offered in agricultural communications programs further to determine if the most important social skills are being included in the current curricula, adding a more in-depth evaluation to the Agricultural Communication Program System Model.

Future research should explore the differences in opinion found in graduates' ability to perform social skills among graduates, professionals, and instructors. Researchers should also determine what other factors (personality, demographics, family history) affect graduates' ability to perform social skills. Since perceived ability can be viewed as a subjective evaluation, the development and use of an instrument that could more precisely measure graduates' ability could also provide a more conclusive measurement of skills attainment.

Future research might also look into grouping these skills into smaller categories through the use of a principle component analysis or factor analysis so targeted professional development and/or curriculum development could pursue subsections of social skills. Additional research should include a similar evaluation of technical skills to contribute to the Agricultural Communication Program System Model, which could provide a more complete picture of agricultural communication graduates' career readiness. Several institutions did not have permission to share their alumni database, which prevented several graduates from participating in this study and served as a limitation, so future research should determine how a larger, more reflective sample of graduates can be obtained.

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The co-authors of this manuscript would like to honor the legacy of Dr. Arthur Leal who unexpectedly passed away during the final preparations of this manuscript. We know we speak for all who knew Arthur that he will be profoundly missed. He was creating a stellar agricultural communication program at the University of Tennessee. He was engaged regionally and nationally in research, teaching, and service. His contributions will benefit the discipline today and for years to come, with his recommendations for improved and enhanced agricultural communication curriculum.

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