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Agricultural Communications: A National Portrait of Undergraduate Courses

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Abstract

Considerable research has been conducted regarding competencies needed by agricultural communication program graduates during the past four decades. However, no studies have considered actual program offerings. This study used a qualitative approach to analyze courses offered in agricultural communication programs in the United States. Using content analysis methods, researchers analyzed published course descriptions and discovered 21 categories among 172 courses. Most popular were writing courses, followed by courses introducing students to the major, internship courses, and writing for publication and graphic design courses. Categories with the fewest offerings included research, study abroad, and international focused courses. Findings from this analysis are consistent with previous literature noting the variety existing in agricultural communication programs at the national level. With the current growth of agricultural communication as an academic discipline and the fundamental role agricultural communicators play in sharing information about key societal issues at a time when agriculture has never been under greater pressure, this study is a first step in creating a national portrait of curricular offerings in agricultural communication programs.

Key Words

Agricultural Communications, Curriculum, Content Analysis, Course Descriptions, Qualitative Methods

Literature Review

Agricultural communications is continually evolving as a discipline. The field began as agricultural journalism, focused on communicating about farming practices and techniques; today, agricultural communications encompasses the dissemination of credible, science-based information, agriculture- and natural resource-related advocacy work, and public opinion (Irani & Doerfert, 2013). In recent years, postsecondary agricultural communications curricula have adapted to better meet the professional needs of contemporary graduates. Despite growing interest in the field as an academic area of study no official consensus on the contents of or standards for a national agricultural communication curriculum has been reached. The purpose of the current study is to contribute to national level discussions about agricultural communication curricula.

Over the past 40 years, numerous studies have described agricultural communication curricula, from examinations of programs in their entirety (Bailey-Evans, 1994; Evans & Bolick, 1982; Doerfert & Cepica, 1991; Reisner, 1990; Terry et al., 1994; Sprecker & Rudd, 1997; Tucker, Whaley, Whiting, & Agunga, 2002; Weckman, Witham, & Telg, 2000), to analyses of competencies, skills, and experiences required to produce graduates who can successfully transition to agricultural communication careers (Hall, Rhoades, & Agunga, 2009; Morgan, 2010; Morgan,

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2012; Morgan & Rucker, 2013; Rhoades, Miller, & Edgar, 2012; Sitton, 2001; Sitton, Cartmell, & Sargent, 2005; Sprecker & Rudd, 1998). Doerfert and Miller (2006) noted, "it is the responsibility of higher education and agricultural communication programs to observe and keep pace with the ever-changing workplace to ensure that they can provide the preparation and kills that produce high quality graduates" (p. 21). In their article, the researchers presented the results of an industry needs assessment of employees and skills and a content analysis of interviews between industry experts and graduate students that discussed contemporary agricultural issues. These separate investigations revealed four general themes: rapidly changing needs, wants, and expectations of the agricultural communication industry; new agricultural communication stakeholder groups and an increasingly diverse set of related needs, wants, and preferences; a shortened response time for communication related activities; and the increasing importance of the agricultural industry's image in relation to the agricultural communication profession.

Academic research focused on curricular improvement is found in a variety of disciplines. Veltri, Webb, Matveev, and Zapaert (2011) used curriculum mapping techniques to evaluate and improve an Information Systems (IS) baccalaureate degree program, while Ahmed, Yaris, Frooqui, sand Saqib (2014) investigated key attributes and skills needed in undergraduate construction management curricula in order to better prepare graduates for a constantly evolving profession. In the field of public relations, Todd (2009) surveyed public relations faculty and professionals about their opinions regarding which concepts and skills should be emphasized and included in undergraduate public relations curricula. Results indicated that while faculty and professionals agreed on some aspects of what they saw as important such as internship experiences, professionals valued hands-on, practical skills more highly than faculty members and believed that public relations curricula were out of touch with industry practices. In contrast, a more recent study by Auger and Cho (2014) determined that public relations programs in the U.S. offer a healthy variety of coursework and generally provide students with strong foundations in writing and other areas, preparing them well for placement into entry-level public relations positions.

National Level Program Research in Agricultural Communication

Two studies of note have been conducted regarding agricultural communication program curricula at the national level. Doerfert and Cepica (1991) examined 30 agricultural communication and journalism programs in the United States and documented program-related details such as name of the college and department in which degrees were offered, program enrollment, degree type awarded (bachelor of arts, bachelor of science), whether the program required an internship, presence of a related student organization, programs' use of an advisory committee, faculty demographics, facilities and equipment, and information about future plans for each program. They found programs were predominantly housed in agricultural colleges and departments, typically comprised fewer than 30 students, most often awarded bachelor of science degrees, and frequently used computer and photography equipment.

Three years later, Terry and colleagues (1994) conducted a study to develop a discipline-based curriculum for agricultural communication using input from selected agricultural communication professional organizations. The researchers proposed a model curriculum, identifying areas of competency. Specifically, they recommended developing flexible curricula, allowing students to specialize in a content area of interest, and emphasized internships as valuable opportunities that ought be part of agricultural communication students' educational experiences. The team recommended future studies develop competency lists for specializations in the field.

Research on Competencies

Several studies have examined specific coursework seen as vital for agricultural communication students. Hall, Rhoades, and Agunga (2009) explored curricula in student publication courses. They found programs varied in longevity and form of publication (magazine, newsletter, online newsletter, or newspaper) and such courses were most often offered as part of

an agricultural communication curriculum. Instructors and advisors for the publications reported covering several topics in their courses, including writing, editing, photography, publication design, and online publishing.

Rhoades, Miller, and Edgar (2012) investigated the magazine capstone course at the University of Arkansas using the Model for Integration of Experiential Learning into Capstone Courses (MIELCC). Students participating in the study saw the capstone experience as a valuable opportunity to prepare them for their careers in agricultural communication, fulfilling their experiential learning needs and helping transform them into society-ready graduates. While this study focused on a single course, it supported Sitton's (2001) findings that students enrolled in the magazine production capstone course at Oklahoma State University considered the course essential to rounding out their agricultural communication education.

A series of studies conducted by Morgan (2010, 2012) and Morgan and Rucker (2013) explored competencies needed by undergraduate students enrolled in agricultural communication programs as perceived by industry professionals, alumni and academics. In investigating industry perspectives of competencies using a Delphi approach, Morgan (2010) determined competencies fell into three core areas: agriculture, communication, and general education. In the core area of agriculture, competencies ranked highest were the ability to conduct activities in an ethical manner, ability to meet deadlines, and dependability, followed by having a strong work ethic and reliability. In the core area of communication, participants ranked highest the ability to effectively communicate verbally, an understanding of communication principles, the ability to identify barriers to communication, and communication skills beyond listening. In the general education core area, competencies ranking highest were correct use of grammar, effective communication using the written word, and spelling. Overall, industry participants seemed to believe a holistic approach to communications was essential for learning.

In investigating the competencies needed as perceived by alumni, Morgan (2012) described the alumni focus group participants as "emphatic" (p. 22) about the importance of writing in the agricultural communication curriculum, regardless of the type of writing or job position graduates intended to seek. Following closely were what group members deemed basic communication skills, including audience identification, desired outcome from the communication, developing a plan to achieve said outcome, editing, proper grammar, and the ability to organize one's thoughts and write in a strategic manner. Interestingly, agricultural knowledge surfaced lower on the list of important competencies, with participants calling it "icing on the cake" (p. 23), helpful when relating to agricultural audiences but not a top-level requirement. Participants noted what gets graduates jobs are communication skills and they identified public speaking skills, general employment skills, a strong familiarity with new media, and internship opportunities as critical for students.

Morgan and Rucker (2013) explored competencies needed for agricultural communication graduates as perceived by national agricultural communication faculty. Again employing the Delphi method, the researchers investigated competencies employing the three core areas of study. In the core area of agriculture, faculty members ranked highest the concept of professional competence, ability to practice effective communication, critical thinking, ethics, and organized thinking and problem solving skills. Faculty also emphasized the importance in an ability to understand the agricultural industry, a basic understanding of the food system and agricultural production, as well as economics. In the core area of communication, faculty emphasized editing, audience analysis, journalistic ethics, AP style, layout and design skills, as well as an ability to organize facts or information into a coherent message. In the core area of education, emphasis was on communication skills, the ability to communicate effectively in writing, and the ability to find and use information from the Internet and other sources. Overall, faculty emphasized the need to integrate curriculum and provide students opportunities to apply technical skills to specific projects and situations, as well as a need for a broad understanding of agriculture on the part of successful graduates.

Conceptual Framework

Since Doerfert and Cepica (1991), no study has examined agricultural communication curricula on a national level. Numerous studies have been conducted at specific institutions, and as the review of literature above has documented, several researchers have identified competencies students should have upon graduation from agricultural communication programs. Though competencies necessary for agricultural communication students' success have been widely described in the literature, no recent research has investigated the actual content of program curricula. Using the Program Systems Model of curricular development (Finch & Crunkilton, 1999), the researchers in the present study sought to describe agricultural communication course content in agricultural communication programs nationwide.

The Program Systems Model (Figure 1) positions students as program inputs who are therein shaped by the academic program as well as environmental factors within the university, their communities, and industry. Faculty, resources, and the curriculum itself have a direct influence on program outputs—namely, program graduates—who then provide feedback to faculty regarding their experiences and preparation. Competencies of these graduates have been both self-assessed (Morgan, 2012) and evaluated by agricultural communication faculty (Morgan & Rucker, 2013). Even incoming students' expectations of curriculum content have been described (Watson & Robertson, 2011). With its focus on curriculum content, this study provides a missing piece to the conceptual puzzle of the agricultural communication program system.

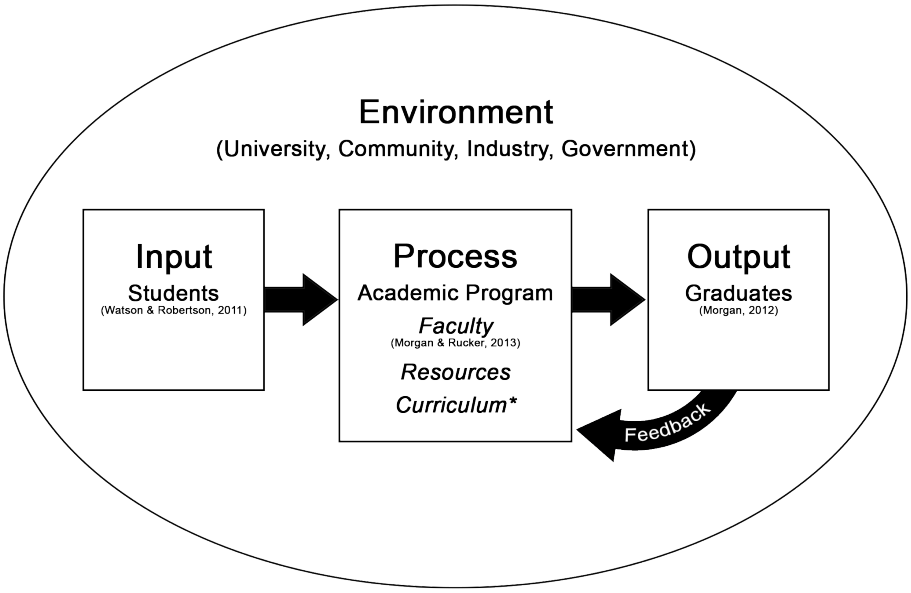

Figure 1. Program Systems Model with emphasis on curriculum content. Adapted from Finch & Crunkilton (1999).

Purpose and Objectives

The National Research Agenda (Doerfert, 2011) called on researchers to conduct studies in six identified priority areas. Priority 3 of the agenda focused on needed research to nurture a sufficient scientific and professional workforce that addresses the challenges of the 21st Century. Doerfert and Miller (2006) noted agricultural communication curricula should be reexamined regularly and that professionals in this field "will be among the leaders in creating knowledge management systems for the industry. As such, their knowledge, skills, and abilities must be at a level that ensures their continued success" (p. 28). Evaluating program curricula, specifically coursework focused in the discipline, is a first step in creating this national portrait and may provide groundwork for model curricula in future.

The purpose of this study was to conduct a content analysis of course descriptions offered in agricultural communication programs across the United States to determine what content programs are teaching in their curricula. To fulfill the purpose of the study, a single research question was posed: What agricultural communication focused courses are offered in undergraduate programs in the United States?

Methods

To address the research question, we used a qualitative case study approach and employed a constructivist worldview. Case study research allows researchers to "explore a bounded system… and report a case description and case-based themes" (Creswell, 2007, p. 73). In this instance, the bounded system included courses in agricultural communication programs in the United States. Our research team was comprised of faculty members in agricultural communication programs located in the United States with varying years of experience in academics ranging from eight to less than one. All team members have been involved in developing coursework and curricula to some degree.

Programs for the present study were selected beginning with a general Google search using the terms agricultural communication and major, and agriculture communication and major. Results from this search were cross-listed with four-year universities listed as land-grant institutions by the Association of Public and Land Grant Universities (APLU) and missing institutions were included in the analysis. Separately, all institutions on the APLU list were searched individually to determine if agricultural communication programs existed that might have been missed by the general Internet search. No additional programs were discovered. These search procedures yielded 35 programs, all housed in colleges of agriculture or dual listed between colleges of agriculture and colleges of communication.

Search results were then filtered using qualifiers with information gathered from institution websites. Programs where agricultural communication was a major area of study (a major), a minor, or concentration within another area of study with dedicated instruction (operationalized as dedicated faculty or staff with an agricultural/science communication area of expertise) and courses containing 'communication' as part of either the course title or course description listed in the university catalog were included. These filters resulted in a list of 17 programs. Additionally, information was gathered from each institution related to program internships and whether they were required, recommended, optional or not included.

Methods for this study were inspired by Chung and Choi's (2012) evaluation of public relations curricula in the United States, the United Kingdom and South Korea. In that study, the researchers used the public relations profession's definition of professionalism and employed 10 standard course categories identified as essential to high quality public relations education programs by the Commission on Public Relations Education. As the agricultural communication discipline has no such standards to use for analysis, the research team did not employ a priori categories and instead allowed categories to emerge from the data.

As in Chung and Choi (2012), course titles and descriptions as published in each institution's online undergraduate bulletin were content analyzed. Independent study, special problems and research practice courses, which vary from semester to semester, were not included in the analysis. Using the constant comparative method described by Lincoln and Guba (1985) the researchers independently content analyzed course descriptions from the 17 identified programs. Initial analysis yielded 27 categories, and trustworthiness was established through the process of member checking, which resulted in a collapsing of categories to a final total of 21.

Results

Course descriptions from 17 universities were compared in this analysis, with 172 individual courses analyzed and categorized. An average of 10 courses per university were discovered with a range of 2 to 33 and a median of 9. Of the programs included, 14 institutions had majors in agricultural communication, and the remaining three programs use a specialization or concentration within the agricultural education major. Two programs straddled multiple colleges, one with dedicated program faculty in the major and one without. All other programs had dedicated faculty to teach agricultural communication courses. Fourteen of the 17 programs were dues-paying National ACT members.

Based on titles and course descriptions, 21 categories emerged (see Table 1). The most prominent category, writing (n =24), was defined by courses in which the main focus was on written communication. These included all basic and advanced writing courses, editing, and reporting. Introduction (n =15) and internship (n =14) courses were also seen in several programs. Course descriptions related to basic communication concepts and those providing introductions to the field were sorted into the introduction category. Fourteen internship courses were identified; seven programs required internships and associated course credit, while nine programs included internship courses as optional. Three programs listed internships as recommended but did not offer accompanying courses.

Several skills-based categories emerged. Eleven courses were categorized as writing for publication. These courses focused on producing a student publication/magazine. Courses covering graphic design principles, software, and visual communication topics accounted for 11 courses, while eight courses focused on broadcasting and seven, Web technologies. Courses addressing technology but not focused solely on Web production were categorized as technology (n =6). Courses employing multimedia methods and theory related to technology were also included in this category. Photography was also a popular offering with a total of six courses.

Advertising, public relations, & Integrated Marketing Communication (IMC) were the focus of seven courses, which included practice and theory in marketing and public relations. Risk and crisis communication courses were categorized separately due to a difference in course focus, which yielded four courses. Similarly, four courses were categorized as campaigns courses as they were solely focused on developing public relations campaigns. Issues courses also emerged as a separate category (n = 8) with a focus on specific or current issues such as the environment and debates about science.

Table 1

Course Categories and Frequencies

Category	*n*
Writing	24
Introduction	15
Internship	14
Writing for publication (magazine development)	11
Graphic design	10
Professionalism	9
Broadcast	8
Issues	8
Advertising, public relations, IMC	7
Web	7
Capstone	6
Presentations	6
Photography	6
Technology	6
Campaigns	4
Oral & written communication	4
Risk/crisis communication	4
Field experience	3
Research	3
Study abroad	3
International	2
Total courses analyzed	172

References to preparing for future careers as professionals were found in several categories, however courses sorted into the professionalism category (*n* =8) covered topics including ethics, networking, and interviewing for career positions. Several programs offered courses focusing on presentations (*n* =6), while four courses covered both oral and written communication. Field experience (*n* =3) courses were found in a few programs and varied from the internship courses being offered based on description and requirements outlined.

Of the courses, two emerged as having a dominant focus on international experiences, and three were specifically described as study abroad courses. Research was the focus of three courses analyzed. Lastly, four courses were found to be outliers in relation to the other courses as they covered topics such as mass media and youth and health communication.

Implications and Recommendations

This study illustrates the variety of coursework available for students enrolled in agricultural communication programs across the nation, with 21 discrete categories discovered across 17 degree-offering institutions. The researchers noted several challenges related to categorizing the courses, not the least of which was some of the categories are not mutually exclusive. Some courses might fit into the writing course category, but may also be a writing for publication course or incorporate elements of multimedia communication.

Confirming previous literature stating the importance of written communication skills for students (Sprecker & Rudd, 1998; Terry et al., 1994; Morgan, 2010; Morgan, 2012; Morgan & Rucker, 2013), writing-focused classes are most common. The 24 courses in this category indicate several programs have more than one writing-focused course. The multitude of writing courses and the six presentation courses reflect that some agricultural communication programs house their college's writing and presentations course as a service.

Almost all programs appear to have a dedicated course introducing students to the field of agricultural communication. These courses address numerous topics including an overview of possible careers, job shadowing experiences, and basic communication skills. With respect to experiential learning opportunities, not all programs required internships, despite Terry et al.'s (1994) belief that these hands-on experiences are important for agricultural communication students. Nonetheless, most programs included coursework for internships, so students are exposed to internship opportunities, whether they were required or not.

Graphic design (n=10) and photography (n=6) courses are popular in agricultural communication programs across the nation. The emphasis on visual communication reflects the increasingly multimedia nature of the modern agricultural communication field. Per Morgan and Rucker (2013), graduates are expected to possess rudimentary design, layout, and photography skills upon entering the workforce. The discovery of 7 courses in the researcher-defined advertising-public relations-integrated marketing communication category indicates less of a focus on strategic communication. However, strategic communication courses often emphasize written and oral communication; therefore, despite the dearth of exclusive courses in advertising and related fields, these skills are likely still being taught to agricultural communication students.

Of the 172 courses categorized, only six were identified as capstone courses, despite previous research placing importance on capstone experiences (Rhoades, Miller, & Edgar, 2012; Sitton, 2001). This finding may be complicated by the possibility that not all capstone courses are specifically designated as such in their course descriptions. Consequently, it is possible that the operational definition created by the researchers impacted the number of courses in this category. For example, the researchers identified several courses emphasizing professionalism. These courses address topics such as résumé development, interviewing, interpersonal communication and relationships, and business etiquette. Some of the courses sorted into this category may serve as proxies for capstone experiences. Further research about courses incorporating or emphasizing professionalism and whether or not those constitute program capstones could prove helpful.

Risk and crisis communication was a category of interest to the researchers. This area has become a focus of agricultural communication researchers and professionals in recent years (Chambers, 2013; Irlbeck, Jennings, Meyers, Gibson, Palmer, Sellnow & Sellnow, 2014) due to increased incidence of food- and agriculture-related health, environmental, and social crises. Despite the agricultural industry's track record with news-making crises, the number of courses in this group is low in comparison to other categories. Programs may not be able to offer risk- and crisis-focused courses due to faculty capacity or student interest, or the topic may be integrated with public relations and marketing courses.

Eight issues-based courses were discovered. This finding suggests that program leaders may be following Irani and Doerfert's (2013) recommended issues-focused programming model rather than the prevailing competencies-based framework. Indeed, support exists for the idea that agricultural and natural resources issues can be successfully addressed through public engagement and issue management (Gorham, Lamm, & Rumble, 2014; Lindsey, 2011; Meyers, Hall, & Allen, 2011; Peppers & Sigurdson, 2011; Ponce de Leon & Tucker, 2011;). Involving agricultural communication students in problem-solving and issues management to prepare them to enter the workforce would therefore be beneficial.

The international category yielded the smallest number of courses. While Terry and colleagues (1994) identified international relations (understanding of foreign cultures, trade relations, and barriers to international communication) as an area of competence needed for students in agricultural communication, smaller programs may not have the capacity to offer and sustain such specific and potentially costly experiences as international or study abroad courses. Despite the small number of offerings of courses in this category, evidence is found in the literature to support the assertion that such experiences are available to students in programs and departments with agricultural communication foci (Coers, Rodriguez, Roberts, Emerson, & Barrick, 2012; Lamm, et al., 2011; Northfell and Edgar, 2014). Additionally, courses with an international focus may be offered at the college or even university level addressing varying topics in agriculture and/or communication. Indeed, study abroad experiences offered through other departments or colleges may present excellent opportunities for students to internationalize their education in lieu of study abroad programs or courses focused in the agricultural communication discipline.

Following the model employed by Chung and Choi (2012), this research explored only course descriptions. These descriptions are typically written and not edited over time, despite the fact that faculty often make necessary adjustments to courses to keep them up to date. Such descriptions and course titles do not provide a complete account of course content or program requirements. Rather, they serve to elucidate general concepts and skills taught in courses. More finite course descriptions would not only be helpful to future researchers, but also would benefit students interested in agricultural communication programs as they investigate program offerings.

Colleges and universities, under increasing pressure for accountability to students and other stakeholders, have begun to require academic degree programs to state learning outcomes (Hebel, 2010). A comparison of such outcomes would contribute to this national portrait of agricultural communication programs. In this vein, academic professionals in the field should discuss and establish standards or benchmark experiences and skills essential for a well-rounded education in agricultural communication. Programs should be distinctive based upon their geographic locations and institutional characteristics, but common expectations could be identified that would level the playing field for students seeking employment or higher-education opportunities in agricultural communication.

Suggestions for further research are wide-ranging. As mentioned, course descriptions do not provide indications whether courses included in the analysis are required or electives. This analysis did not include any non-major required courses students take or those taken as electives. Thus, it is important to continue—and to expand—research in this vein with a view to aiding faculty and departments developing or improving their agricultural communication curricula. Faculty may find it useful to compare results in this study with an analysis of program learning outcomes and syllabi from courses in the 17 included programs. Researchers should consider obtaining major check sheets or advising sheets with program requirements to more completely understand curricula at each institution. Research should also be conducted to determine if programs employ guiding documents, philosophies, missions, visions, or values to direct their curriculum development and maintenance and support a focus on learning outcomes.

Further research about national agricultural communication curricula must involve program faculty and advisors to assess perspectives on creating, upgrading, and sustaining high-quality programs. A mixed methods approach beginning with qualitative methods to gather base-line data, followed by quantitative methods to build consensus toward national level agreement about curricular guidelines, if not standards, would make an important contribution to the discipline.

The present study is not an evaluation or assessment of agricultural communication programs. Rather, it is an initial step to describe current programs and course offerings to better realize the program systems model for the field of agricultural communication. Findings,

conclusions, and recommendations from this study may be employed to help guide quality curricula for current and emerging programs alike. As researchers and faculty work toward model curricula, future research is vital to advance our understanding of courses, concepts, and competencies indicated as important by previous research.

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