Attitudes toward agricultural communications program development at the University of Guelph: A student and industry perspective

Thesis

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Abstract

Agricultural communications is a growing field in both industry and academic spheres. However, no such academic programs currently exist at any higher education institution in Canada. This single-case study explored the attitudes and opinions of current University of Guelph agriculture students and agricultural industry professionals regarding the potential development of an agricultural communications undergraduate program at the University of Guelph and what elements should be included in such a program.

Findings established a definite need for and interest in such a program and highlighted a distinct gap in this discipline, and related disciplines, at the University of Guelph. While no distinct format for the program was unanimously agreed upon, participants agreed it should be available in a way that benefits the greatest number of students and also reach those outside of traditional agriculture. Findings imply that the program should encompass a wide range of communication skills and topics and should be differentiated from general communications programs with agricultural influence. Outside of these technical skills, students should have co-op or internship opportunities and have practical experiences during their time in the program.

Dedication

This study is wholeheartedly dedicated to my mother, as it frankly would not exist without her ceaseless and limitless support and devotion to my success. As the most important person in my life, there is no way to thank her enough, but this serves as a small symbol of my love and appreciation. She is my absolute hero and I want to be her when I grow up.

To my sisters, everything I do is to set an example for you to see that you can accomplish anything. You both mean the world to me and I cannot wait to watch you continue to outwork and outdo me.

Finally, I dedicate this to every person involved in Canadian agriculture. I've never forgotten my roots and will continue to devote myself to supporting and lifting you up for the rest of my life. I'm coming home soon.

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input and making me feel like an important part of the team. I will miss you and our judging kids (and your sweets!) tremendously.

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Table of Contents

List of Tables

List of Figures

Chapter 1. Introduction

Agriculture in Canada

Although public awareness of the industry is decreasing, agriculture is still very much alive in Canada. The Canadian agricultural sector remains a top global exporter and one of the dominant industries in the nation. Canadian government statistics (2017) demonstrate that the sector employs 12.5% of the total population, translating to 2.3 million people. The gross domestic product (GDP) for the industry grew by 11% in 2018, the sector provided one in eight jobs in Canada and generated $143 billion for the GDP. Further, as of 2018, the average farm size in Canada has doubled over the past 50 years owing largely to technological advancements, showing the massive progressions of the sector (Agriculture and AgriFood Canada, 2020). This industry is no small player in Canada, with agriculture being established as a cornerstone of Canadian industry throughout history.

The distinct difference between Canada's agricultural challenges and those in America is that Canada does not have any agricultural communications programs at any higher education institution. The University of Guelph is the only institution with any form of such a program. It offers two agricultural communications courses, but it still lacks any major or minor in the field. This lack of representation is contrary to the need presented by industry and is stark.

To that effect, industry will be an imperative voice and influence in any future program development and should be included when considering a new agricultural communications program in Canada. In prior program development studies, industry opinions have been evaluated to determine employer perspectives on agricultural communications graduates' competencies and the programs' effectiveness (Bailey-Evans, 1994; Irlbeck & Akers, 2009; Morgan & Rucker, 2013; Kurtzo et. al., 2016). This is also substantiated in the curriculum development framework posed by Wolf (2007). This same approach can and should be taken when beginning a new agricultural communications program, as such a program will largely be tailored toward producing trained graduates that will fit industry wants and needs.

Another perspective to be considered, as suggested by Wolf (2007), is that of the students. Without student interest or endorsement, a new program cannot succeed. Therefore, gathering students' opinions on an agricultural communications program at the University of Guelph is imperative to determining if such a program would be successful and how a successful program would look. In a similar study of agricultural communications program development in the United Kingdom, Miller, Bell and Rucker (2020) noted the importance of the opinion of students when developing these new programs in order to create something that will appeal to this demographic and satisfy their needs.

Agriculture and Misinformed Consumers

Looking at high-profile agricultural topics, it is clear to see not only the shift in perceptions of industry, but also the misinformed nature of consumers. Considering the

livestock industry, animal welfare is one such topic; consumers are becoming increasingly concerned about the treatment of animals in livestock production and are paying closer attention to the sector as a result (Spooner et. al., 2014; George, Slagle, Wilson, Moeller & Bruskotter, 2016; Spain, Freund, Mohan-Gibbons, Meadow & Beacham, 2018). A study conducted by Spooner et. al. (2014) examined attitudes of Canadian citizens concerning the livestock industry. They discovered strong feelings toward animal agriculture, particularly outside of family farms, with participants sometimes using terms such as "enslaved," "oppression" or "concentration camps" when describing operations. Participants expressed a desire to have animals living in "natural" living conditions and having free range, without comprehending the numerous impracticalities preventing this. In fact, a frequent and notable theme in the study was participants admitting a lack of knowledge about contemporary production practices and the industry at large, particularly among the urban residents, and further expressing interest in obtaining additional knowledge on the subject (Spooner et. al., 2014).

Situations like this are not unique to this study or this topic; misinformation surrounding the agricultural industry is widespread and has led to public opinion becoming increasingly skeptical (Doerfert & Miller, 2006; Large, 2012; Kurtzo et. al., 2016). In a study ascertaining consumer knowledge and perceptions of agriculture for Agriculture and AgriFood Canada (2018), it was revealed that consumers have many concerns and a considerable lack of awareness concerning the Canadian agricultural sector, particularly in urban centers. This lack of awareness could slip into public distrust of the industry if allowed to develop further. Notably, participants in this study were open

to communications efforts from the agricultural sector and Canadian government to better inform the public about Canadian agriculture, highlighting the importance of agricultural communications attempts (Agriculture and AgriFood Canada, 2018). As the number of individuals disassociated with agriculture grows, more concerted efforts must be made to promote the agricultural industry.

Agricultural Literacy

The field of agricultural literacy has strong connections to the goals of agricultural communications academic programs. Research on agricultural literacy first began in 1988 through the National Research Council after concerns regarding decreasing popularity in agricultural education programs and the simultaneous decrease in profitability of American agriculture came to light (National Research Council, 1988; Kovar & Ball, 2013). Agricultural literacy has been deemed a vital component to keep the increasingly uninformed population aware of agricultural practices and what goes into sustaining these essential agricultural systems.

While the American population is continually moving away from rural lifestyles and agricultural production, the agricultural industry is simultaneously growing more complex and essential as it meets the challenge of feeding a rapidly growing population (Frick, 1990; Frick, Kahler & Miller, 1991; Kovar & Ball, 2013). As noted by Frick (1990), agricultural literacy keeps societal leaders informed on agrarian topics and issues so as to allow them to enact policies and decisions that will favor the industry. The industry itself is under unprecedented scrutiny, with consumers calling into question the morality of practices when they themselves lack an understanding of how and why

practices are used to produce their food (Powell, Angnew & Trexler, 2008; Kovar & Ball, 2013).

One of the challenges facing agricultural literacy is the widely acknowledged belief that it lacks a consensus definition. Despite this, the National Research Council (1988) defined agricultural literacy as an "understanding of the food and fiber system that includes its history and current economic, social and environmental significance to all Americans" (p. 1). To achieve this understanding, educational efforts and strategies can and should be employed to increase the base-level agricultural literacy of the American population. With that said, research surrounding agricultural literacy has largely been conducted in the broader sphere of agricultural education, rarely venturing outside of this field.

The target populations for increasing agricultural literacy has been, unsurprisingly, elementary school teachers and students with the intention of educating populations outside of those pursuing agricultural careers (Kovar & Ball, 2013). Frick et al. (1991) noted that agriculture is too important a topic to receive as little educational components in broader society as it has. The Committee of Agricultural Education in Secondary Schools echoed this opinion and recommended that the subject matter surrounding agriculture in education be broadened, and that all students from kindergarten through high school receive systematic agricultural education (Frick et. al., 1991). Although educating youth and having agriculture present in schooling is an important component of agricultural literacy, educating older individuals and individuals who hold power in society is also essential to ensure that they act in favor of the industry

(Kovar & Ball, 2013). In this way, comprehensive agricultural literacy can be achieved in ways that benefit the industry and the people it serves.

The repercussions of diminishing agricultural literacy are wide-reaching and expand beyond the idea of misinformed consumers. Governmental policies can also be impacted by a lack of agricultural understanding in ways that harm agriculturalists and their practices. Looking specifically at the Canadian dairy industry, the United States-Mexico-Canada Agreement (USMCA) sparked turmoil among Canadian dairy farmers (The Canadian Press, 2018). With this trade agreement moving to open the domestic dairy market, Dairy Farmers of Canada noted that the agreement will have "a dramatic impact not only for dairy farmers but for the whole sector" (The Canadian Press, 2018). The Canadian dairy sector operates through a supply management system that regulates the production, imports, and pricing of dairy products throughout the nation with the aims of supporting Canadian producers (Heminthavong, 2018). These governmental choices connect back to agricultural literacy; if government officials do not fully understand the workings of the agricultural industry and why certain elements, such as supply management, are important to farmers, they are unable to make decisions on the farmers' behalf and cannot fully comprehend the repercussions of their choices. Therefore, educating others on how agriculture works and why choices are made within the industry is paramount for the longevity and success of the industry and those who comprise it.

Even though agricultural practices are changing, people will always need to eat, which means that agriculture will only continue to maintain importance on a global scale. Maintaining a baseline understanding of agriculture and agricultural practices on a

societal level ensures longevity and support for the industry and could encourage more individuals to become involved in the efforts being made to feed the world.

History of and Demand for Agricultural Communications Programs

Agricultural communications programs in higher education have been a feature in numerous United States institutions since the early 1900s (Tedrick, 2009). Though they began as agricultural journalism programs, with the aim of dispersing farming techniques among farmers, these programs evolved over time to encompass modern characteristics and needs reflected by the industry (Tucker, Whaley & Cano, 2003; Cartmell & Evans, 2013). Presently, the discipline has broadened its focus to comprise distributing scientific information, agriculture and natural resource-related advocacy work and public opinion (Large, 2012; Irani & Doerfert, 2013; Kurtzo, Hanson, Rucker & Edgar, 2016).

The content development aside, agricultural communications programs have also evolved in popularity and scale. This discipline has been consistently growing in the United States since 2000, implying an increasing popularity and demand among students and industry (Miller, Large, Rucker, Shoulders & Buck, 2015). Moreover, the agricultural industry itself is in need of trained agricultural communicators now more than ever to share information of societal and industrial issues (Cannon, Specht, & Buck, 2016). In their 2016 study, Kurtzo et. al. (2016) noted the increased importance of agricultural communicators, with a section stating:

> It's the perfect storm where we [consumers] decreasingly have a knowledge about agriculture, and agriculture is increasingly complicated. It's the communications

person who steps into the gap to help bridge that gap but to do that they've got to have a strong foundation and have to know what they're talking about (p. 4).

The scrutiny facing the agricultural industry in the United States extends to Canadian agriculture as well, showing a palpable gap in communication between the industry and the general population (Hamel & Saindon, 2017). There is no denying that the population is continually moving away from agriculture, both in the United States and Canada (Doerfert & Miller, 2006; Large, 2012; Irani & Doerfert, 2013; Center for Food Integrity, 2014; Spooner, Schuppli & Fraser, 2014; Kurtzo et. al., 2016). This distancing has the potential to undermine and erode decades of trust cultivated between producers and consumers, setting the industry back considerably.

Foundations of Agricultural Communications Programs

The field of agricultural communications is dynamic and changing, requiring its students and educators to continually evolve to keep pace. There are roughly 35 agricultural communications programs in the United States, with these programs all offering a diversified curriculum in order to meet changing regional needs and technological advancements (Reisner, 1990; Weckman, Witham & Telg, 2000; Irani & Scherler, 2002; Morgan, 2010; Morgan & Rucker, 2013; Cannon et. al., 2016). These programs often provide a comprehensive communications education but the field of agricultural communications itself is niche and ever-changing; students are enrolled in a program with a specific focus that is founded within communications and journalism yet differentiated, giving them training in specified skillsets and imbued with unique

contextual knowledge through which to apply these skills (Tucker et. al., 2003; Morgan, 2010). Despite the variations in programs, the basic influences of communications, journalism and agriculture have remained consistent in the field since its inception.

Agricultural communications in the agriculture industry has been developing for almost two centuries and has its roots in agricultural journalism. This specified form of journalism has a deep history. Agricultural publications such as the *Farmer's Almanac* and the *American Farmer* began in 1972 and 1819, respectively, with some predating even the Morrill Act of 1862 that established the land-grant institutions (Irani & Doerfert, 2013). As the direct precursor to modern-day agricultural communications, ag journalism operated with the original purpose of disseminating news and information about the agriculture industry and new practices in the field to farmers themselves (Tucker, Whaley & Cano, 2003; Cartmell & Evans, 2013; Williford, Edgar, Rucker & Estes, 2016; Cannon et. al., 2016). Typically, audiences for these journalists were in information deserts where they were largely isolated from most forms of news, so ag journalism was of large benefit to them (Tucker et. al., 2003; Irani & Doerfert, 2013).

With the establishment of land-grant institutions in 1862, agricultural journalism evolved into what we now recognize as agricultural communications (National Research Council, 1995). The first agricultural journalism/communications programs served to distribute the research and information realized at the land-grant experiment stations, with some of the first agricultural communicators being land-grant agricultural scientists communicating about their research. In 1920, the first Bachelor of Science in Agricultural Journalism was created at Iowa State College with seven different colleges hosting

agricultural journalism courses by 1928 (Terry, Lockaby & Bailey-Evans, 1995; Irani & Doerfert, 2013).

Modern agricultural communications programs evolved from these initial ag journalism programs. The advent of computers, the internet, social media and other tools that specialized and diversified the way communication occurs heavily influenced the ways in which these programs evolved and continue to evolve over the years (Doerfert & Miller, 2006; Morgan, 2010; Irani & Doerfert, 2013).

Problem Statement

With the field of agricultural communications growing in the United States across industry and higher education, logic suggests that similar industrial growth is present in Canada with no educational program to meet those needs (Miller et. al., 2015; Cannon et. al., 2016). With only two agricultural communications courses offered at the University of Guelph Ontario Agricultural College (OAC), graduates are not being given comprehensive training in this expansive field. This also means that there are no options for students who hold an interest in agriculture but wish to contribute and work within the industry without pursuing a bench science major, such as animal sciences or crop sciences. The addition of agricultural communications majors in Canada can only serve to strengthen not only the educational field, but the Canadian ag industry as a whole. Agriculture remains one of the dominant industries in Canada, with statistics from the Canadian government (2017) showing that it employs 2.3 million people (12.5% total) with its gross domestic product (GDP) growing by 11% from 2012 to 2016 (Agriculture and Agri-Food Canada, 2017).

Purpose and Research Questions

With the purpose of agricultural communications higher education programs being to serve students and industry, these two perspectives should be considered heavily when designing new agricultural communications programs. This study is designed to explore and highlight the wants and needs of the Ontarian agricultural industry and agricultural students at the University of Guelph Ontario Agricultural College regarding a future Canadian agricultural communications program based in the University of Guelph, OAC and to illustrate these stakeholders' understanding of the field of agricultural communications.

The following research questions guide this study:

1. Do current/future Ontarian agriculture students desire an agricultural communications program?
2. Do Ontarian agricultural industry professionals desire an agricultural communications program?
    a. How important are skilled agricultural communications graduates in the eyes of industry professionals and how hirable would these graduates be?
3. What components or skills would students like to see implemented in a future Canadian agricultural communications program?
4. What components or skills would industry professionals like to see implemented in a future Canadian agricultural communications program?

Significance

As previously noted, the growing popularity of agricultural communications academic programs and industry need for trained graduates in this field in the United States gives every indication of a similar pattern in Canada (Miller et. al., 2015; Cannon

et. al., 2016). Combined with the timely need for the industry to have trained workers available to defend and promote the agricultural industry, ag comm is in a comfortable position that indicates a longevity and increased importance from both an industry and academic standpoint (Cannon et. al., 2016; Hamel & Saindon, 2017). In this respect, the Canadian agricultural industry is behind the curve; while ag comm is expanding in American academia, it is nonexistent in the highly synonymous country to the north. This is a blatant hole in the proverbial armor of the agricultural industry considering that trained agricultural communicators are a formidable defense for the industry.

While the literature is reasonably extensive concerning agricultural communications in American academia and industry, almost no literature illustrating Canadian agricultural communications in any form exists. This research aims to highlight the industry and student perspectives surrounding agricultural communications in a way that has never previously been done. It will begin to fill the literature gap surrounding ag comm in Canada and lay groundwork for future research to continually expand upon Canadian stakeholders' perspectives about agricultural communications across more populations and demographic groups.

Summary

The field of agricultural communications has been growing consistently in the United States, both in industry and academia. This is a timely trend, given the trend of increasingly misinformed consumers turning away from agriculture and meeting it with increased scrutiny. The agricultural industry in Canada, while broad and impactful, lacks any agricultural communications educational opportunities for students or workers.

Combined with a decrease in agricultural literacy, this can have broad impacts on the Canadian agricultural industry and those who comprise it. This study serves to lay the groundwork for future agricultural program development initiatives at the University of Guelph OAC and fill the specific literature gap surrounding agricultural communications in a Canadian context.

Chapter 2. Literature Review

Theoretical and Conceptual Framework

This study examines curriculum development through the model posed by Wolf (2007) following the process-oriented curriculum theory provided by Glatthorn (2005). In Glatthorn's book *Curriculum Leadership: Development and Implementation* (2005), he defines process-oriented curriculum theories as being "concerned primarily with describing how curricula are developed or recommending how they should be developed" (p. 78). Process-oriented theories are a natural fit for this study given the preliminary stage of this study and the proclivity of these theories to guide how curricula should be developed. Many theorists in this area present models or conceptual systems to "classify curricular processes and products" (Glatthorn, 2005, p. 85). This study follows one such model that lends itself to informing the process of curriculum development when creating a new curriculum or evaluating and improving an existing one.

When considering the design and development of various curricula, there are numerous components to be contemplated. With this in mind, the curriculum development model posed by Peter Wolf (2007) acts as the guide for this study. As detailed in the article "A model for facilitating curriculum development in higher education: A faculty-driven, data-informed, and educational developer-supported approach," Wolf (2007) notes that the term *curriculum development* indicates a continual

process through which curricula are developed, opposed to the idea of *curriculum renewal*, which indicates more "episodic attempts to develop curriculum" (p. 16). Understanding this clarification, Wolf outlines the curriculum development model through three distinct phases and processes:

1. Curriculum Visioning
2. Curriculum Development
3. Alignment, Coordination, and Development

Curriculum Visioning

As the preliminary stage of the curriculum development model, *curriculum visioning* involves initial conversations with key program stakeholders to assess the current state of the program or discipline and what stakeholders desire the curriculum to become at the close of the development process (Wolf, 2007). Within this stage, stakeholders should conduct a curriculum assessment to identify any strengths or weaknesses the curriculum possesses and what areas can be improved. From there, stakeholders should also discuss the objectives of the program and its focus, such as defining ideal traits for graduates and what foundational and supplemental content should be included or emphasized in the curriculum, essentially envisioning the ideal program (Wolf, 2007).

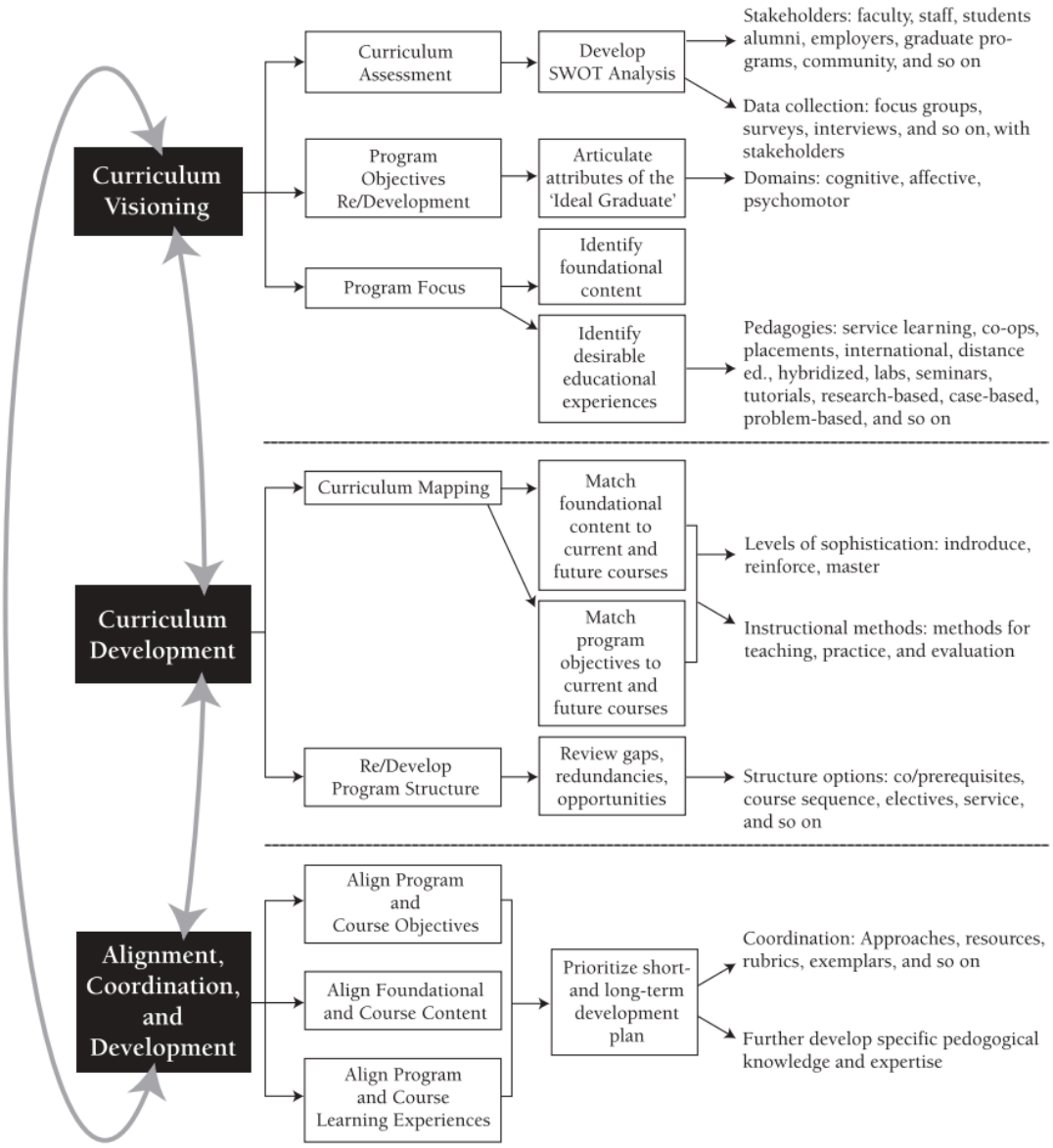

Figure 2.1. A visual representation of the curriculum development model process proposed by Wolf (2007).

Curriculum Development

This phase brings the existing curriculum or program under review, using faculty or instructors as evaluators of courses and content that are currently offered to students. With techniques of curriculum mapping, foundational content and program objectives determined in the curriculum visioning phase are matched to content currently being taught (Wolf, 2007). Concurrently, current curricula are examined for any gaps or opportunity areas that may be leveraged for improvement. This phase focuses on assessing the current curriculum in order to seamlessly move to the next stage of *Alignment, Coordination and Development* and aid in setting a new course of action for further progress (Wolf, 2007).

Alignment, Coordination and Development

The final phase of the process, *alignment, coordination and development* largely deals with connecting the existing program components with the desired outcomes and characteristics of the program identified by stakeholders. Faculty members and developers work together to devise and short and long-term development plan for the new curriculum, drawing from research on other successful programs, qualities discussed in former phases and literature reviews on program objectives (Wolf, 2007). The final plans are then presented to the desired department for adoption decisions. This entire process is meant to be continuously repeated over the years to ensure that the curriculum remains relevant and effective.

In relation to this study, the main guiding focus will be on the curriculum visioning phase of the model. Given that the proposed agricultural communication

program at the University of Guelph does not yet exist, this is the most relevant phase. The inclusion of industry professionals and students serves to provide perspectives of stakeholders in this program and allows them to provide their opinions and ideas surrounding a curriculum. Wolf (2007) recommended focus groups as a method of curriculum visioning and assessment, leading to the selection of this methodology for this study. Beyond providing their opinions on the potential for such a program, stakeholders will also be given the opportunity to discuss ideal characteristics of the program they would like to see implemented in the curricula and identify perceived strengths and weaknesses the curriculum may have. By identifying characteristics of the ideal graduate, industry professionals will indicate the skills they wish to see in future employees and students can pinpoint skills they wish to learn through the proposed curriculum.

Current State of Agricultural Communications Programs

Today, agricultural communications academic programs are a modern blend of evolving mass-communications, journalism and industry influences that reflect the changing nature of the industry it serves (Ahrens & Gibson, 2013). While the original purpose for these programs was largely to communicate research and information about agricultural practices to farmers and individuals within the industry, that began to change as well, effectively altering the nature of the modern ag comm program.

Today, with a large generational shift to urbanization, public opinion toward ag has shifted. With much of the population not having a personal connection to agriculture, agricultural communications began to shift their priority toward communicating to the uninformed consumer (Doerfert & Miller, 2006; Large, 2012; Irani & Doerfert, 2013;

Kurtzo et. al., 2016). Today, consumers are not only increasingly unacquainted with agriculture and agricultural practices, but also are increasingly apathetic and unsupportive toward farmers and agriculturalists and moving toward distrust of the food industry due to their lack of proximity and experience with these individuals (Irani & Doerfert, 2013; Center for Food Integrity, 2014; Kurtzo et. al., 2016). With anti-agricultural and animal rights activism, the ease of mass-circulating opinion-based "factual" information combined with a general population that lacks knowledge of agriculture, these consumers can be, and have increasingly been, swayed from supporting agricultural endeavors (Verbecke & Viaene, 2000; Wunderlich & Gatto, 2015). This shift has made paramount the need to connect with these consumers and emphasize factual properties of agriculture. With trained agricultural communicators as ideal candidates to bridge the gap between consumers and producers and dispel misinformation about the industry, the modern agricultural communications model emerged (Kurtzo et. al., 2016).

Today, these programs are consistently growing across the country and are increasing in popularity. According to a study by Miller et. al. detailing agricultural communications academic programs nationwide (2015), 73.1% of identified programs' student enrollment had increased over the past five years and 84.6% of the programs reported expected future growth in enrollment in the next five years. None of the programs involved in the study reported a decrease in students enrolled in the programs in the five-year trajectory (Miller et. al., 2015). This growth is corroborated thoroughly throughout the body of literature (Weckman et. al., 2000; Cannon et. al., 2016; Corder & Irlbeck, 2018; Tucker et. Al., 2018). The academic programs themselves are not the only

elements growing. Concurrently, the scholarly base for agricultural communications expanded along with the discipline itself, providing more research and information available to continue growing and improving the discipline both within academia and beyond (Corder & Irlbeck, 2018). These examples illustrate the viability and hopeful future for ag comm educational programs.

Demographic elements of agricultural communications programs in the United States have been collected sporadically over the years. Although the reported number of undergraduate academic programs varies, Miller et. al. (2015) identified roughly 40 undergraduate programs in agricultural communications throughout the United States, with program offerings ranging from a major or minor to a concentration. Ag comm programs are most often classified as a Bachelor of Science degree and are commonly housed with agricultural education and related programs. Most frequently, the institutions reporting having such undergraduate programs are land-grant institutions where agricultural colleges are firmly established.

Overview of Agricultural Communications Curricula

Numerous studies examined agricultural communications curricula, largely due to the widespread recommendation to continuously re-evaluate and review the programs (Akers, 2000; Doerfert & Miller, 2006; Miller, Stewart & West, 2006 Morgan, 2013; Miller et. al., 2015; Cannon et. al., 2016). Starting from the first comprehensive curricula study conducted by Bailey-Evans (1994), the discipline has evolved greatly over time to incorporate new foci, skills and competencies as required by changes in industry. Reisner's study on agricultural communications programs and curricula (1990) noted that

"the study found that the [agricultural communications] programs' most predominant characteristic is variety" (p. 1) and this sentiment was upheld by Miller et. al. (2015) in their comprehensive study. However, some elements do remain reliable, and these main thematic components will be highlighted.

Consistently across the years and various studies, strong writing skills have remained the core of every ag comm program and the most sought-after skills by industry, whether this be written communications, journalistic writing, editing or any variety of the craft (Bailey-Evans, 1994; Terry & Bailey-Evans, 1995; Sprecker & Rudd, 1998; Irlbeck & Ackers, 2009 Watson, 2009; Morgan & Rucker, 2013; Morgan, 2014; Cannon et. al., 2016). Other specialized communications skills are held in high regard. In one of the most recent curriculum studies conducted by Cannon et. al. (2016), skills such as graphic design, photography, web design, social media and oral communications rose to high frequency across programs.

Outside of communications skills, courses giving internship experience are commonplace in the discipline, although they are not always required despite the belief that internship experience is an essential component (Terry et. al., 1994; Cannon et. al., 2016). Internships allow students first-hand experience in the industry and help them to adjust when they enter the workforce upon graduation. They also give students opportunities to network, which is instrumental for securing jobs post-grad (Morgan, 2010; Morgan & Rucker, 2013; Cannon et. al., 2016; Corder & Irlbeck, 2018).

Courses educating about agriculture should not be forgotten. To distinguish the ag comm degree from a general communications degree program, researchers recommend

that general agriculture courses are an important element in an agricultural communications program. These courses not only give students a solid understanding of what they will be communicating about, but also help them learn about current issues that face the agricultural industry and how to best navigate these challenges moving forward (Doerfert & Miller, 2006; Morgan & Rucker, 2013; Cannon et. al., 2016; Kurtzo et. al., 2016; Corder & Irlbeck, 2018). The agricultural component of these programs is most frequently supplied by courses offered in the agricultural college at large rather than through ag comm programs specifically. Through this, agricultural communications programs become a distinct, stand-alone discipline that adequately prepares students to best serve the ag industry.

Agricultural Communications in Industry

Evolving from its initial standpoint of journalism for farmer and producers, modern agricultural communications in industry has been most heavily influenced by the rise of technology in the agricultural and communications fields and the onset of consumer influence on agriculture. These two components have largely converged, assisted by societal factors such as the distancing of the general population from agriculture, to shape the field into what it is today (Doerfert & Miller, 2006; Morgan, 2010; Large, 2012; Irani & Doerfert, 2013; Tucker et. al., 2018).

In the United States, agricultural communications has an established position within the agricultural industry. According to U.S. Department of Agriculture (USDA) statistics compiled by Fernandez, Goecker, Smith, Moran, and Wilson (2020), between the years 2020 and 2025 agricultural communications and related jobs will make up 14%

of agriculture jobs on an annual basis, totaling to roughly 8,400 jobs each year (Fernandez et. al., 2020). These statistics are illustrated in *Figure 1* and *Figure 2,* respectively.

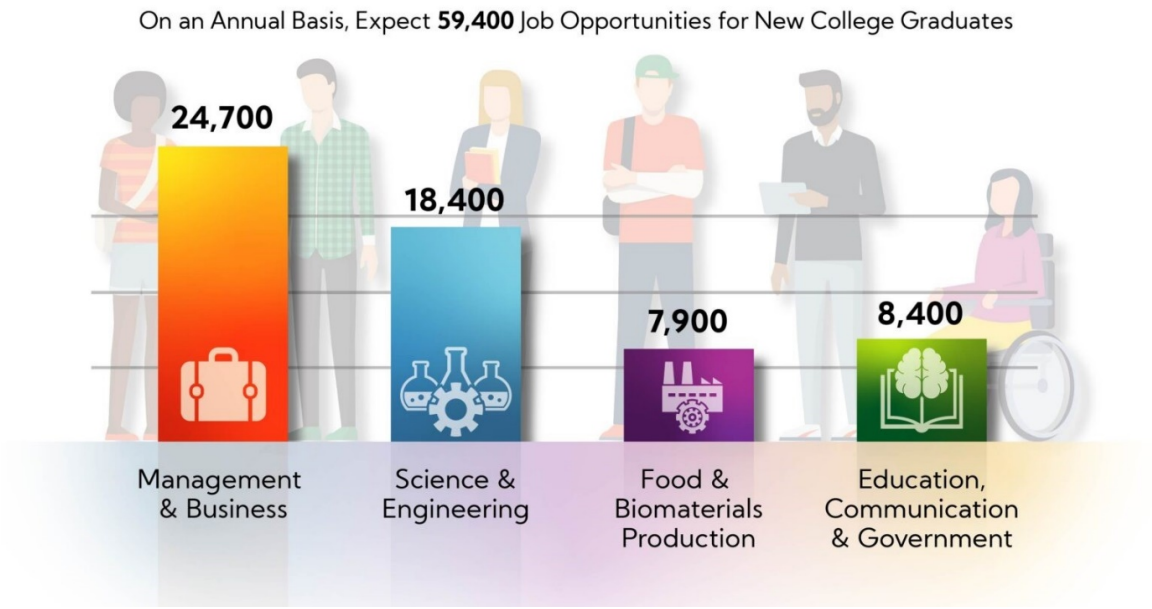

Figure 2.2. The projected annual number of jobs per employment area in agriculture, renewable natural resources, and the environment (Fernandez et. al., 2020).

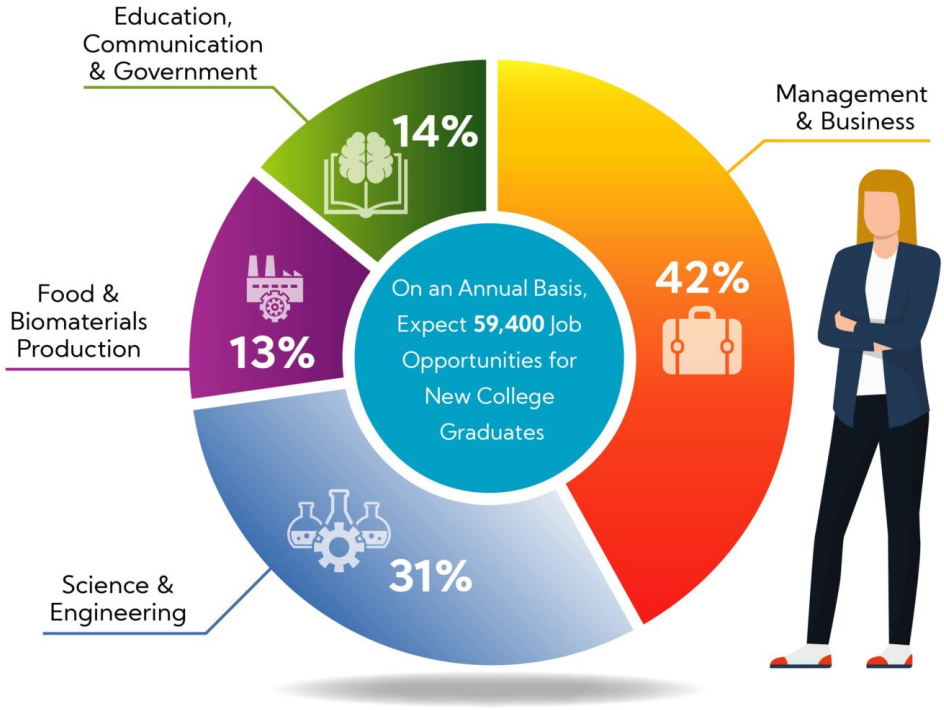

Figure 2.3. The projected percentage of jobs available for graduates per employment area in food, agriculture, renewable natural resources, and the environment

The same report also detailed the number of annual graduates from agricultural communications or related academic fields, as displayed in *Figure 3* and *Figure 4.* It projects that the discipline would make up 8,700 or 15% of the total graduates in all of agriculture (Fernandez et. al., 2020). This substantiates the findings of other studies that assert a growing popularity in both agricultural communications academic programs and industry professions nationwide. Although not the largest sector of agricultural career opportunities, agricultural communications has carved out a sturdy foothold in the agricultural industry at large. This position is only projected to grow in the coming years in all regards, both academic and industry (Weckman et. al., 2000; Miller et. al., 2015; Cannon et. al., 2016; Fernandez et. al., 2020).

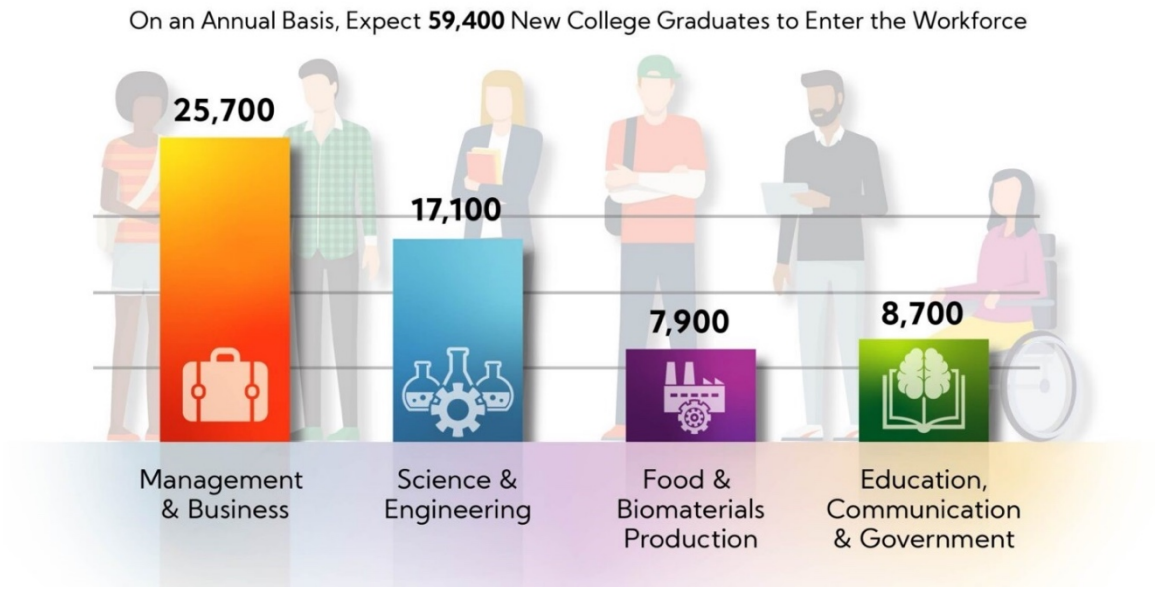

Figure 2.4. The projected annual number of graduates per employment area in food, agriculture, renewable natural resources, and the environment.

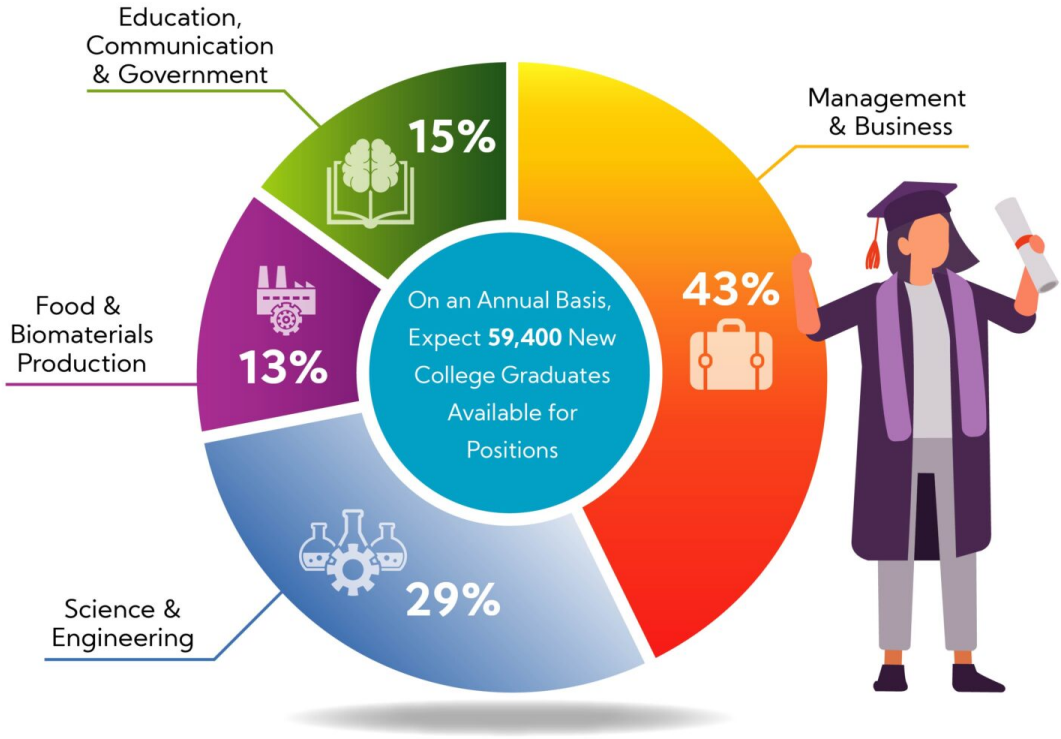

Figure 2.5. The projected percentage of graduates per employment area in food, agriculture, renewable natural resources, and the environment.

Outside of the United States, the literature concerning agricultural communications at an educational and industry level becomes scarce. While opportunities for careers in agricultural communications certainly exist in other countries, specifically in Canada, they are not explicitly documented and studied. This is likely connected to the absence of established educational opportunities for agricultural communications in academia; if it is not a designated educational field, it can be assumed that a lack of importance for distinction in the industry could be assigned. However, being so closely connected by geographic and cultural proximity, the United States has historically been the largest influence on Canada, making it a logical assumption that Canada's agricultural industry largely reflects trends shown in the United States (Gibson, 1956). This study is intended to fill the literature gap for ag comm through a Canadian lens.

Industry Influence on Agricultural Communication Academic Programs

The industry side of ag comm has had tremendous influence on ag comm in academia since the inception of the discipline. The industry side of agricultural communications, or agricultural journalism at the beginning, began before there was an academic component to support the industry, with ag journalism programs popping up across the country in response to the field's growing popularity and importance (Tucker et. al., 2003). As the industry evolved and expanded owing to societal shifts and technological advancements, so too did the academic counterparts. Eventually, agricultural communications was born from agricultural journalism, all due to industry

changes and influences (Weckman et. al., 2000; Tucker et. al., 2003; Large, 2012; Irani & Doerfert, 2013; Kurtzo et. al., 2016). The field has not only evolved in content and focus, but also in breadth and popularity; the number of academic programs in agricultural communications have, on average, increased since studies in 2000, suggesting an increase in popularity and student and industry demand (Miller et. al., 2015, Cannon et. al., 2016).

Growth in demand is not the only industry change within agricultural communications, as the needs of the industry for agricultural communications graduates continues to develop alongside the programs and technologies. To this day, industry needs have consistently determined the trajectory of the academic programs (Doerfert & Miller, 2006; Morgan, 2013). The main purpose for an academic program is to best serve its industry counterpart, and agricultural communications is no exception; the programs aspire to train graduates to fill positions in industry to the best of their ability and to wholly meet the needs described by industry that continually evolve (Doerfert & Miller, 2006; Weckman et. al., 2000).

Emphasizing the importance of industry needs and opinions concerning the academic programs, numerous studies have been conducted evaluating employers' perceptions of agricultural communications programs, program graduates, and their competence in the workplace (Bailey-Evans, 1994; Irlbeck & Akers, 2009; Morgan, 2013; Kurtzo, Hanson, Rucker & Edgar, 2016). These changes in needs will only continue, and studies have suggested continually evaluating the employers' perceptions of graduates and programs every few years (Doerfert & Miller, 2006; Miller, Stewart & West, 2006; Morgan, 2013; Miller et. al., 2015). Industry opinions have consistently been

touted as among the most important voices in shaping ag comm programs, with industry being named a demographic that should be included in reviewing ag comm academic programs (Doerfert & Miller, 2006; Morgan, 2010; Morgan & Rucker, 2013). This will remain true so long both industry and academic components of agricultural communications continue.

International Agricultural Communications Curriculum Development

The uniqueness of this study is amplified by its international nature. However, while no documented Canadian agricultural communications program development initiatives exist, similar efforts have been undertaken in other countries outside the United States. One such study was by Miller et al. (2020), focusing on introducing agricultural communications to the United Kingdom. The research by Miller et al. (2020) provides a basis for expectations surrounding this study, as it applies American elements of agricultural communications curricula to fit the needs of another nation.

Through the study's findings, Miller et al. (2020) recognized that while there is not an established home for agricultural communications in the U.K. educational system, it is well-established as a profession. The study also recognizes the importance of understanding the needs of stakeholders who would be impacted by these educational programs, namely agricultural students and agricultural communication professionals in the U.K. These stakeholders reflect those used in this study, with this study taking the Canadian perspective. Specifically looking at skills and competencies, industry and student participants recognized a range of general communication skills and writing skills as the most important for students in this field. Miller et al. (2020) recommend future

studies among other stakeholders, including faculty, students and employers in agricultural communications.

Summary

This study is guided both by Glatthorn's (2005) process-oriented curriculum theories and the curriculum development framework posed by Wolf (2007). It specifically uses the *Curriculum Visioning* phase to inform data collection methods, population, and interview questions. Agricultural communications academic programs have been consistently growing since the year 2000, both in the number of programs and enrollment rates. This is reflected in the agricultural industry, and trends in these areas are expected to continue. Established agricultural communications curricula in the United States explore a variety of communication topics and have a grounding in agriculture to differentiate them from general communication programs. The needs of the industry have largely impacted agricultural communications programs, with the programs evolving to train graduates to satisfy requirements of the industry that employs them.

Chapter 3. Methods

Previous Chapter Summary

In previous chapters, the growing nature of agricultural communications in American industry and academia was established. This is a timely matter, given the decrease of agricultural literacy and the broader impacts this has on informed consumers and governmental policy that adversely impact the agricultural industry. These U.S. programs incorporate a variety of general communication skills with a grounding in agriculture. The needs of the industry have largely impacted these academic programs, with the programs changing to best serve the agricultural industry. Given the lack of formal educational opportunities in Canada for agricultural communications, Canadian agriculture is missing these trained communicators to serve the industry in ways that could mitigate the spread of misinformation and fortify its position among consumers. This study lays the groundwork for future agricultural communications program development at the University of Guelph OAC, the flagship agricultural institution in Canada, and also serves to fill the literature gap surrounding agricultural communications through a Canadian lens. This study uses Glatthorn's (2005) process-oriented curriculum theories and the *Curriculum Visioning* phase of Wolf's (2007) curriculum development model as guides.

Research Design

To adequately address the research questions, this study employed a qualitative, intrinsic descriptive case-study design. According to Creswell (2007), the case-study approach allows the study to "explore a bounded system," and be able to provide more in-depth reports on the case's description and themes (p. 73). This research design serves to holistically understand the landscape of agricultural communications in Canada and the perspectives of the invested population in relation to agricultural communications. As described by Dulock (1993), descriptive research holds "Accurate and systematic description of 'something' or 'someone'," as the cornerstone of the research design, with the "something" possibly representing an event, phenomena or characteristics, and the "someone" being an individual, group or community (p. 154). The outcome of the descriptive case study investigation is of utmost importance and is intended to produce "rich description of a particular phenomenon, typically in narrative form," (Jones et. al., 2014, p. 95-96). Delving into further specification, an intrinsic case study is best employed when the particulars of a specific case are of interest "because in all its particularity *and* ordinariness, this case itself is of interest," (Stake, 2000, p. 437; Jones et. al., 2014). These are exemplary methods to answer questions pertaining to how or why with in-depth supporting information.

The specific case studied was the perceptions and needs of Ontarian agricultural employers and current agricultural undergraduate students at the University of Guelph on a potential agricultural communications academic program at the University of Guelph.

This study is susceptible to some bias given that the populations are all based within the agricultural industry. To address this, the researchers have designed questions to address negative and positive sentiments toward the agricultural communications program development to gain a full and honest scope of responses from participants. Participants will also be encouraged to give an honest recount of their perspectives and opinions, both positive and negative. All findings will be published to establish trustworthiness in the study.

Research Objectives

The following research questions guided the study:

1. How much/what do Ontarian agriculture students and industry professionals know about agricultural communications?
2. Do current/future Ontarian agriculture students desire an agricultural communications program?
3. Do Ontarian agricultural industry professionals desire an agricultural communications program?
    a. How important are skilled agricultural communications graduates in the eyes of industry professionals and how hirable would these graduates be?
4. What components or skills would students like to see implemented in a future Canadian agricultural communications program?
5. What components or skills would industry professionals like to see implemented in a future Canadian agricultural communications program?

Sample Selection

Participants were selected through a purposive sampling method. This study has specified objectives that require participants with particular characteristics, namely being involved in the Canadian agricultural industry either as an industry professional or a

student. Purposeful sampling is the most appropriate method to address this, given that it benefits studies with pre-determined criteria and allows researchers to select samples with characteristics that accordingly meet these criteria (Marshall, 1996; Koerber & McMichael, 2008). There are two overall populations: agricultural industry professionals in Ontario and current/future agricultural undergraduate students. For the industry population, there are specific sectors that are relatively prominent in Ontario and should be represented. These include beef, dairy, food, poultry and swine. Specific individuals were selected as representatives for their sector and asked to recommend other participants in other sectors, utilizing a snowball sampling method as well. Priority was given to individuals with hiring capabilities and involvement with communications roles. The intended sample size for this population was $n = 10$. Ten industry professionals were contacted through a recruitment email to participate in the study, eight responded, and six were able to participate.

For the second population, snowball sampling was used. Students from the University of Guelph Ontario Agricultural College (OAC) served as the basis for agricultural students, with freshman and sophomore students representing "future" agricultural students given their recent entry into the university, while juniors and seniors will represent current or established agricultural students. The president of the OAC Student Federation was contacted to undertake recruitment efforts for the study and a recruitment statement was written for the weekly OAC newsletter. This newsletter reaches each student enrolled in the University of Guelph OAC. The OAC Student Federation also asked students for their participation in the study. This was to ensure

there was a variety of majors and class ranks represented. For students, there are 19 undergraduate majors under the OAC that are categorized under eight classifications. These are as follows:

1. Bachelor of Arts
2. Bachelor of Bio-Resource Management
3. Bachelor of Commerce
4. Bachelor of Indigenous Environmental Science and Practice
5. Bachelor of Landscape Architecture
6. Bachelor of Science in Agriculture
7. Bachelor of Science in Environmental Sciences
8. Bachelor of Science

For each group, both first and second-year students and third and fourth-year students, sample size was intended to be $n = 10$. Total sample size for students was intended to be $n = 20$. Thirty-five students responded with interest to recruitment efforts. Eighteen participated in the study. Total sample size for the entire study was $n = 24$.

Once samples were determined, participants were contacted to join a focus group based on their population. Industry leaders and students were grouped separately. A total of five focus groups were conducted over Zoom to accommodate for location differences between researchers and participants. The questions posed gathered insight on individuals' general knowledge of agricultural communications, their perception of agricultural communications in the Canadian agricultural industry, their interest in a potential agricultural communications program at the University of Guelph and perspectives on whether a Canadian agricultural communications program would benefit

the industry and students. The focus group setting allowed for flowing discourse between the participants and for them to build off the ideas of others.

The focus group questions for each population are included in Appendix B. For students, questions asked whether a program like this would interest them, what skills or concepts they would like to see in such a program, if they would enroll in such a program if it were available and how they feel an agricultural communications program would fit in the culture at the University of Guelph. Industry participants were asked what skills they would desire graduates from such a program to have, what value they would place on an agricultural communications educational opportunity, how agricultural communications presents itself in their industry, and how beneficial they believe the educational field would be for the industry. Both groups were asked to disclose their general understanding of agricultural communications, their attitudes toward the proposed program, and how they feel the program should be presented. Questions were designed to determine whether there is a demand for agricultural communications programs in Canada, both among students and industry.

Focus groups were recorded with participants' consent. All recordings were stored in a passcode-locked computer to which only the researchers had access with all identifying information removed.

All data was be coded and themed with commonalities and frequently repeated responses noted. Data from students versus industry professionals were kept separate.

Instrumentation: Focus Groups

Focus groups were used to collect data from both industry and student groups. Interview questions for case studies are open-ended and designed to facilitate conversation between participants (Yin, 2009). In focus group interviews, participants are posed broad questions about which the group is encouraged to exchange ideas, perspectives and experiences (Jones et. al., 2014). Focus groups are particularly useful when exploring the knowledge and experiences of participants and understanding how or why they think certain ways. They encourage collaboration to explore issues of importance through their own vocabulary and take the research in new or unexpected directions (Kitzinger, 1995). For this case study, focus groups were viewed as the only appropriate data from the "field" (Yin, 2014, p. 150). Carrying out conventional field work in this project would have been difficult given the various location differences and likely would have yielded very little important information (Yin, 2014). Therefore, responses from the focus groups were used as the primary data for both cases.

Focus groups were set for no longer than one hour and were conducted online over Zoom. An unbiased researcher first read the participants the IRB approved statement to attain consent (Appendix A). A second researcher attended each session anonymously to observe and also take notes. This decision was made to increase reliability through triangulation of data collected in observational notes. Open-ended questions (Appendix B) were prepared prior to focus group facilitation. A short range of questions was designed, six for industry and eight for students, to accommodate for focus group design (Jones et. al., 2014). Questions reflected the study's research questions and served to

assess participants' knowledge of agricultural communications, the role(s) it plays in Canada, participant interest in an agricultural communications academic program at the University of Guelph, and specific features in such a program that participants would desire. Table 2 provides the questions for industry focus groups and Table 3 displays questions for student focus groups.

After dates were confirmed with the research team and participants, the researcher constructed a Zoom meeting and distributed the information over email to participants. Zoom was used to accommodate for Canadian participants who were unable to travel and to allow for focus groups to be recorded and transcribed for coding purposes.

Table 3.1 Industry Focus Group Questions

1. What do you think of when you hear the term "agricultural communications"?
2. What place do you feel agricultural communications has in the Canadian agricultural industry currently and in the future?
3. What emphasis, if any, do you feel should be placed on educating students in this field? Please elaborate.
4. What skills would you look for in an agricultural communications graduate when hiring?
5. What elements do you feel should be present in an agricultural communications program in Canada?
6. What form should this program be offered (undergraduate degree, minor, course-based master's)?

Table 3.2 Student Focus Group Questions

1. What do you think of when you hear the term "agricultural communications"?
2. How much do you know/what do you know about this field?
3. What job opportunities do you think there are in agricultural communications in Canada?
4. Is this a field you would study in? Please elaborate.
5. What would you expect to learn in a program like this?

6. What would need to be present in a program like this, if anything, to interest you in studying it?
7. Would you be interested in pursuing this more as an undergraduate degree, a minor, or master's program?
8. How do you feel this program would fit with the culture at the University of Guelph?

Instrumentation: Demographics Survey

Following the focus groups, the researcher distributed an online survey via Qualtrics to gather demographic information such as ages, ethnicities, schooling information, and more (Appendix C). Surveys differed slightly based on the population, with student surveys inquiring more about their academic specialty and experience and industry focusing on current career paths. The surveys were recorded and coded to provide scope for the study.

Data Analysis

All data collected were analyzed through an open coding process. Charmaz (2006) defines coding as "categorizing segments of data with a short name that simultaneously summarizes and accounts for each piece of data" (p.43). This initial level of coding varies in nature, but often stays close to the original data, at times even replicating exact wording (Saldaña, 2013; Yin, 2014). Open coding first disassembles the data to allow exploration of ideas within the data, and then reassembles common ideas to create concepts representative of the data (Jones et. al., 2014). The focus group data were transcribed and categorized to allow for the discovery of themes among the data. Industry data and student data were categorized and coded separately to preserve the individuality

of each case. Thematic identification allowed for researchers to easily analyze data across focus groups.

The transcript data were initially reviewed to identify common themes that occurred in the focus groups. Themes were categorized based on the interview question they fell under, then categorized based on the most applicable research question(s) and conceptual components of the framework guiding this study. Categories for themes in qualitative research should be comprehensive, with no less than seven categories being acceptable (Rist, 1982). The purpose of coding qualitative data is to move to higher conceptual levels to gain insight into possibly important developments and to examine similarities and dissimilarities in the data; the codes represent inferred meanings gathered from the original data (Yin, 2014).

Coding was the sole data analysis method for the focus group data. Demographic survey responses consisted of multiple-choice questions and short-answer responses. Short answer questions were coded, and frequencies were run for the quantitative demographic data.

Validity and Reliability

Validity and reliability are cornerstones of a credible case study. As defined by Yin (2014), “a credible study is one that provides assurance that you have properly collected and interpreted the data, so that the findings and conclusions accurately reflect and represent the world that was studied” (p. 85). As a qualitative case study, the following methods were used to support validity.

To minimize the biases from the principal researcher who has a personal connection to the research, different members of the research team were selected to lead focus groups to allow for the main researcher to anonymously observe focus group sessions. This helped to remove any bias from the sessions, and allowed the researcher to take extensive notes on the session to analyze and compare with transcripts if questions arose.

Data triangulation was also employed. This form of triangulation involves cross-comparing multiple sources of data (Yin, 2014). In the case of this study, the researcher compared responses from two different groups, Canadian agricultural students and industry professionals, to gain a more comprehensive understanding. Further, researcher notes taken during the focus groups were also compared to responses from these groups, allowing for a crossover between triangulation and crystallization.

Crystallization was used to increase the study's validity. Crystallization serves as an addition to triangulation for qualitative research, rejecting the positivist belief of a singular, objective truth (Lindlof & Taylor, 2011). This technique joins together multiple methods to enrich findings and "demonstrate the inherent limitations of all knowledge," to celebrate multiple points of view surrounding a phenomenon (Lindlof & Taylor, 2011, p. 277). As described by Lindlof & Taylor (2011), the sets of knowledge are formed by the researcher's experience with a group or culture. In this study, the researcher's experience growing up immersed in the Canadian agricultural industry is distinctly related to this. Her access to these communities and innate understanding of the culture surrounding the University of Guelph OAC contribute to crystallization to create a rich

perspective that complements the other accounts collected through this study (Lindlof & Taylor, 2011).

Limitations of the Study

The Canadian agricultural community is broad and diverse among its people and its sectors. This study contained seven industry participants and 18 student participants. Despite relatively diverse backgrounds of participants, this is a small sample size in compared to the breadth of the agricultural industry itself.

Another limitation of the study arose due to scheduling difficulties. In order to allow for the greatest number of participants, two focus group sessions were moderated by two other members of the research team which could introduce some variation in responses. To compensate, researchers created an introductory script for all moderators to follow and the original moderator's recorded focus group was observed to mimic their behavior and technique.

Given the location differences between those involved in the study, the need to conduct focus group sessions over Zoom is another limitation. Zoom denies the opportunity to see the body language of participants, and some participants did not turn their cameras on at all, further limiting this scope.

Another limitation was the lack of ability to fully realize triangulation as intended. Given the lack of existing literature in the specific area of agricultural communications program development in Canada, triangulating the date through other informative sources was difficult.

Reflexivity Statement

Madison Dyment is a master's student at The Ohio State University studying agricultural communication. She holds a position as a graduate research and teaching associate with the Agricultural Communication, Education and Leadership and Animal Sciences departments. Born and raised in rural southwestern Ontario, Canada, Dyment comes from an extensive dairy background and was very involved in 4-H throughout her youth. Aside from having family ties to the University of Guelph OAC through her mother and two cousins (all alumni), she grew up with the understanding that "all the agriculture kids go to Guelph." Watching the majority of her 4-H friends and peers attend the university, combined with her familial influence, Dyment had every intention to attend this institution herself and was acutely aware of the cultural importance of the institution throughout her life. Dyment chose the University of Kentucky for her undergraduate education after discovering that there were no existing agricultural communications programs of study at any university or college in Canada. This led her to dedicate her research and studies to the subject of curriculum development in agricultural communications in hopes of someday bringing the discipline to her home country.

Summary

The study focused on exploring perspectives and opinions of Canadian agricultural industry professionals and students surrounding a potential agricultural communications program at the University of Guelph Ontario Agricultural College (OAC) and their general knowledge and perspectives of the field of agricultural communications. This research aimed to understand if these stakeholders supported this

initiative and to determine if the culture of the OAC and Canadian agriculture would benefit from this implemented program.

The researcher used qualitative focus groups to determine industry and student perspectives and a quantitative survey to collect demographic information. Qualitative focus group data was coded to analyze findings. Crystallization was used to establish validity and reliability of data.

Chapter 4. Results

This single-case descriptive study explored the perceptions and opinions of Canadian agricultural industry professionals and University of Guelph Ontario Agricultural College (OAC) students related to the field agricultural communications and a possible agricultural communications academic program housed at the University of Guelph. The guiding conceptual framework for the study was posed by Wolf (2007), titled "A model for facilitating curriculum development in higher education: A faculty-driven, data-informed, and educational developer–supported approach." Focus groups were the instrument for data collection, with a survey distributed via Qualtrics to collect demographic information. Focus groups were separated by population, with industry professionals grouped together and students grouped separately.

Data analysis was guided by the research questions directing the study:

1. How much/what do Ontarian agriculture students and industry professionals know about agricultural communications?
2. Do current/future Canadian agriculture students desire an agricultural communications program?
3. Do Ontarian agricultural industry professionals desire an agricultural communications program?
    a. How important are skilled agricultural communications graduates in the eyes of industry professionals and how hirable would these graduates be?

4. What components or skills would students like to see implemented in a future Canadian agricultural communications program?
5. What components or skills would industry professionals like to see implemented in a future Canadian agricultural communications program?

Results will be described throughout this chapter according to the corresponding research question and the instrument of data collection. The researcher identified common themes for each research question among the focus group interviews.

Participant Demographics

Students were selected based on their standing in the University of Guelph OAC. Each year in school and a variety of majors were represented for a comprehensive sample. Eighteen students participated in the study, with five first-year students, three second-year students, six third-year students and four fourth-year students. The most common majors were Food & Agricultural Business and Crop Science. Table 2.1 outlines demographic information for student participants.

Table 4.1 Student Demographics

	Year in School	Academic Major	Sex/Gender	Agricultural Background
Student 1	1st Year	Agricultural Science	Female	Yes, Unspecified
Student 2	1st Year	Agricultural Science	Female	Yes, Unspecified
Student 3	1st Year	Environmental Science	Female	Yes, Poultry, Beef, Cash Crop
Student 4	1st Year	Food & Agricultural Business	Female	Yes, Dairy

	Year in School	Academic Major	Sex/Gender	Agricultural Background
Student 5	1st Year	Crop Science	Female	Yes, Cash Crop
Student 6	2nd Year	Crop Science	Female	Yes, Cash Crop
Student 7	2nd Year	Crop Science	Female	Yes, Cash Crop
Student 8	2nd Year	Animal Science	Female	Yes, Dairy
Student 9	3rd Year	Animal Science	Male	Yes, Unspecified
Student 10	3rd Year	Food, Agriculture & Resource Economics	Female	Yes, Unspecified
Student 11	3rd Year	Food, Agriculture & Resource Economics	Female	Yes, Unspecified
Student 12	3rd Year	Food & Agricultural Business	Female	Yes, Unspecified
Student 13	3rd Year	Honours Agriculture	Female	Yes, Unspecified
Student 14	3rd Year	Honours Agriculture	Female	Unknown
Student 15	4th Year	Food & Agricultural Business	Male	Yes, Dairy
Student 16	4th Year	Crop Science	Male	Yes, Cash Crop
Student 17	4th Year	Food & Agricultural Business	Female	Yes, Dairy
Student 18	4th Year	Food & Agricultural Business	Male	No, Restaurant Background

One industry professional was selected to represent each prominent Canadian agricultural sector, which include beef, dairy, food, poultry and swine. Six industry professionals agreed to participate in the study. There were a range of job positions and companies represented, with three professionals working in agricultural communications

roles, two participants self-employed in their own agricultural communications companies, and one participant in a hiring position at an agricultural company. Table 2.2 displays demographic information for the industry participants.

Table 4.2 Industry Demographics

	Company	Role	Sector
Professional 1	Dairy and Beef A.I. Company	General Manager	Dairy, Beef
Professional 2	Provincial Commodity Organization	Manager of Public Engagement & Digital Strategy	Beef
Professional 3	Provincial Commodity Organization	Communications & Consumer Marketing Manager	Swine
Professional 4	National Commodity Organization	Director of Brand and Communications	Poultry
Professional 5	Agricultural Communications Agency	Founder & CEO	Food
Professional 6	Agricultural Communications Agency	Founder & Digital Communications Strategist	Food, Dairy

Research Question 1: How much/what do Ontarian agriculture students and industry professionals know about agricultural communications?

To provide context for all following responses, participants were asked questions designed to illustrate their understanding of the field of agricultural communications at the beginning of the sessions. These questions assessed the general understanding of

participants, their perspectives on characteristics of agricultural communications and perceived career opportunities.

Student Responses

The themes that emerged among students were "*lack of understanding*", "*educating*", "*bridging gaps*", "*social media*", and "*broad and diverse job opportunities*".

While some student participants indicated knowing a fair amount about the agricultural communications discipline, most participants commonly admitted to having limited knowledge about agricultural communications, both in industry and academia, leading to a general *lack of understanding* of the field. Student 5 upheld this and used this lack of understanding to emphasize the value of bringing the program to the University of Guelph, saying:

> I would say I don't know a whole lot about agricultural communications in the field itself, which is why I think bringing the program to Guelph would be such a good idea. It would give the opportunity to enhance our learning about not only the job itself but to give everyone the opportunity to learn about how to communicate what they're doing to the general public and bridge that gap as much as possible.

Extending from this, students also noted that the broader Canadian agricultural industry likely lacks an understanding of agricultural communications. While many in the industry consume and are impacted by the work done by these individuals, students

identified a lapse in connecting their outputs to the people actually completing the work. Using the example of agricultural magazines, Student 13 commented that while she was exposed to these magazines, she rarely considered the people who wrote the articles and produced the content, indicating a lack of understanding in the discipline and field of agricultural communications. She said:

> I don't think we know enough about ag communications just as people in agriculture. Growing up, there were always like 15 ag magazines that would come in every month, but you never really think about who writes them or what goes into them.

The theme of *bridging gaps* emerged early among student participants, largely through the context of connecting producers with consumers. Students consistently leveraged bridging the gap between consumers and producers to characterize the role of agricultural communications in the industry and as a valuable skill to be learned through study in this discipline. Student 9 said:

> When I think about ag communications, I definitely think of the producer-consumer gap and trying to bridge that gap. I think a lot of time and investment has gone into making sure that consumers understand producers and how things work, and I think a lot of that has to do with ag communications through social media and other news outlets.

A gap between researchers and agricultural producers also surfaced among student responses. Student 18 said, “There are often best practices [researchers] want producers to implement but trying to get that knowledge to them can be really hard.” He noted that agricultural communicators can play a role in disseminating this research or best practices to producers through different communication mediums that are tailored to specific demographics in order to reach all producers.

When characterizing agricultural communications and identifying job opportunities, *social media* prominently emerged. To also signify agricultural involvement in social media, Student 3 noted that, “A lot of communications work is definitely over social media, and a lot of farmers are on Twitter largely to catch each other up on what’s going on.” Student participants particularly singled out younger generations as frequent users of the medium, with Student 15 noting that these individuals largely consume their news through social media platforms and that agricultural companies are shifting to these platforms to reach these generations. Students frequently identified social media as prominent career opportunities in the field of agricultural communications, both currently and in the future, with Student 7 saying:

> Social media has really blown up, especially with our generation, so I think coming into the new generation and in a few years, there will be even more jobs involved with social media. It’s just going to continue.

Looking more specifically at careers, student participants characterized a *broad range of job opportunities* in the field of agricultural communications. *Education* emerged as a common response among students for both characterizing the field of agricultural communications and as a career option for graduates of the program. Students identified agricultural communications skills as valuable for educators on behalf of the agricultural industry. When thinking of what agricultural communications means to her, Student 14 said:

> My first thought is 100% education. Communication is key if you're trying to educate someone on any topic, not just agriculture, so that's really the first thing that comes to mind and I feel they are really connected.

When considering career opportunities in agricultural communications, Student 11 noted that careers in educational fields would be applicable for agricultural communications graduates. She specifically noted the lack of a formal agricultural education system in Canada but pointed out that "[agricultural companies or commodity groups] have programs where some of their employees will go and teach kids about agriculture, so that's a possibility for agricultural communicators." Other students identified opportunities through farm safety events or other agricultural events as educational venues that agricultural communicators would benefit.

Agricultural boards and commodity groups were identified as prominent employment opportunities for agricultural communications graduates. Student 18 said:

> Agricultural commodity organizations employ a lot of communications people, so those would be really good opportunities for people to look into if they want to work in agricultural communications.

Other students reiterated this statement, naming specific organizations like Dairy Farmers of Ontario and Beef Farmers of Ontario as viable employment options for agricultural communications graduates. Student 12 said:

> There's also communication between boards and producers. [Dairy Farmers of Ontario], for example, have to communicate with their own producers but they also have opportunities in other areas. You see their commercials on TV, and that's someone in communications researching and making that for the public.

Student participants also emphasized *marketing* as a key component of agricultural communications. They discussed its particular relevance in private agricultural companies, specifically when marketing products to consumers and other stakeholders. Student 18 raised the idea of marketing opportunities outside of traditional agriculture, extending to the broader food system such as restaurants, food companies or stores.

Journalism arose as a common job opportunity among students, specifically in writing for agricultural magazines and general article writing. Students broadened this by

also acknowledging journalism in writing communication materials for producers. Student 11 identified journalism as a key characteristic of agricultural communications and noted that, when considering available jobs, "Journalism has a lot of opportunities, like working for a magazine or making publications."

The range of job opportunities identified by student participants also extends to *job availability* in the field. Students noted a disparity between full-time job positions in agricultural communications versus part-time positions or internship opportunities. Student 17 accentuated this, saying, "Especially in private industry, which is what I want to do, there's not a ton of jobs for post-grads and it's hard to find space for us outside of internships." However, other students, such as Student 11, disputed this, stating, "I think there are a lot of communication jobs out there and there will continue to be more, but I think they're not as well-known." This disparity should be examined further.

Industry Responses

For industry participants, the themes that emerged included "*transactional field*", "*storytelling*", "*translating*" and "*people sector*".

When asked what comes to mind when considering agricultural communications, an interesting response was the idea of a transactional field. Professional 5 illustrated that, in the past, communications work was transactional, involving professionals disseminating the bare facts about the industry as a "necessary evil." She said:

> It's been very transactional and just low-priority information sharing because we had to. I feel the concept of ag communications has evolved to include engagement, listening and getting to know our target audience. It's just a valuable tool that, regardless of where you are in the supply chain, it's needed.

Professional 5's response indicates that the industry is shifting and moving away from the past reality of being transactional and beginning to engage consumers.

Industry participants also characterized the field of agricultural communications through the lens of *storytelling*. This was presented as a way to describe the profession of agricultural communications. Professional 4 best characterized this theme by saying:

> One of the easiest ways to describe [agricultural communications] is that we are storytellers. We tell the story to a wide variety of different audiences and how you tell that story depends on who you're selling it to.

Other participants upheld this idea, and made connections to another theme, *audience analysis*, in knowing how to frame stories to effectively reach audiences.

Aside from storytellers, industry professionals noted that agricultural communicators often work as *translators* for the industry. Similar to knowing how to communicate to different audiences, industry participants indicated that agricultural communicators frequently digest information and relay it in comprehendible ways. Forms such as relaying government information to producers, agricultural procedures to

consumers, and others were mentioned. Professional 3 summarized this by saying, “I think the key role we play is translating a variety of information to different audiences effectively.”

Research Question 2: Do current/future Canadian agriculture students desire an agricultural communications program?

When directly asked if they would be interested in studying in the academic field of agricultural communications, the vast majority of students responded positively. Student responses for this question aligned with two distinct themes: a) *Preferred format* and b) *Degree of interest*. Notably, even though students were not explicitly asked what form they would study this program, they offered their personal program format preferences to justify their responses.

When looking at the theme of *preferred format*, the opportunity to study agricultural communications as a minor or certificate was most frequently mentioned by students. Participants noted that this discipline would be a valuable supplement to other existing agricultural programs at the University of Guelph and that the agricultural student population as a whole would benefit from some level of study in such a program. Students said that communication skills come into play in a variety of agricultural careers, establishing value for students in other program areas to receive this training. Student 11 notably mentioned that, “[Guelph] doesn’t currently have a lot of good programs with these types of courses, so it would be very beneficial for a lot of different people.” This input was echoed in other student responses for this area.

Other students did establish a distinct desire to study agricultural communications as an undergraduate major. Among the five students who expressed an interest in having

this as their primary academic discipline, a commonality of "settling" for another agricultural major to still be involved in agriculture opposed to pursuing a degree in a non-agricultural communications or marketing program emerged. This is summarized by the following statement by Student 17:

> I absolutely would study in this. I didn't have an interest in ag business, but I wanted to be an "aggie," so I settled. But everyone should have some knowledge in this area, especially with so much misinformation going around.

Looking at the theme of *level of interest*, some students reported that they initially would have considered enrolling in an agricultural communications program but have grown to appreciate the program they currently study, acknowledging value in their programs' subject areas. Two students expressed a lack of desire to study in the agricultural communications program in any capacity. While they explained that the subject matter does not interest them, these students both indicated that they still saw value in the program both in terms of student and industry benefit. The following quote by Student 9 exemplifies this:

> I'm not personally interested but I think it will become very prevalent in the future. Any job will require communication skills, especially in agriculture, so everyone should have knowledge in this.

Students unanimously indicated through their responses that they believed an agricultural communications program would be a valuable opportunity for a variety of students at the University of Guelph OAC. From these responses, they indicated that the discipline would be considered an esteemed supplement for any existing agricultural major at the University of Guelph and viewed as a way to increase job acquisition among agricultural graduates.

It was a goal to understand the culture of the institution in question and how the proposed program would fit. Students unanimously agreed that an agricultural communications program would be a good fit within the culture of the University of Guelph OAC. Through their responses, students upheld the idea that an agricultural communications program would not only coincide with but would also uplift the culture and experience of the OAC. Student 7 said:

> I think there's a lot of people that are either taking animal science, or FARE or ag business because they want to be in agriculture, but they don't really fit. So, this would be a great option that would benefit the school and a lot of students.

Other students agreed and added that the communication elements of the program would not be entirely new to the institution. Student 3 said:

> I think communications is already a big part of what we do at Guelph unknowingly, with lots of ag clubs that deal with communications through guest

speakers, so I think an actual dedicated program would have a really positive impact and go over well.

Similar to the previous question, student participants' responses also yielded the premise of a diverse range of students being interested in and benefitting from such a program. They also indicated that the program would likely be a popular option for students interested in studying agricultural communications as a major or minor. Student 15 specifically mentioned that the progressive nature of the institution and the city of Guelph would lend itself to a forward-thinking program such as this and it would allow the University of Guelph to stay at the forefront of agriculture. The perceived value of an agricultural communications program was also reiterated, and students assured that it would likely be seamlessly accepted in the OAC community.

Research Question 3: Do Canadian agricultural industry professionals desire an agricultural communications program?

Turning to the second group of stakeholders, Canadian agricultural industry professionals were posed alternative questions to assess attitudes towards the potential agricultural communications academic program. The themes that emerged were "*growth and transition of the profession", "need for skilled communication graduates"*, and *"crisis communications and activism"*.

When asked what place agricultural communications has in the Canadian agricultural industry, professionals noted that the industry is in a transitionary state, and agricultural communications specifically is an area of growth. Professional 5 highlighted that a large portion of the agricultural workforce will be retiring in the next 20 years,

meaning that changes will be needed. The transitionary element also applies to consumer interactions with agriculture and agricultural topics that engage the general public. Further, professionals said that the industry is realizing the importance of communications within the industry, leading to the idea of growth. Participants gave personal accounts informed by their experiences that indicated a surge in career opportunities and emphasis placed on agricultural communications skills in the industry. Participant 1 summarized this in the following response:

> Our company is pulling away from advertising and marketing budgets and investing in communications elements. These [communications] platforms are much more effective at driving out message forward to our customers and farm customers too, so it's a growth industry. It's going to steal some of the budget from some of the traditional platforms to how we try and influence the decision making of our customers.

Industry participants stated a need for *adaptable, poly-skilled agricultural communicators*. Some participants noted that the industry required new employees to have a variety of communication skills to satisfy the broad needs of the industry. Notably, industry professionals connected budgetary issues playing a role in this, with Professional 1 and Professional 3 noting that many agricultural companies not having the fiscal range to hire specialists in different areas of communications, despite needing a variety of

skillsets. This requires graduates to have a *comprehensive understanding of a wide range of communications areas* to be successful in the industry.

Crisis communications and *activism* were notable themes for job opportunities in the field. Participants emphasized the role crisis communications plays in agriculture, particularly during a time when the industry is under immense scrutiny and facing unprecedented challenges such as climate change. They identified this area of expertise as a long-term necessity for the industry and a career opportunity for agricultural communications graduates. Anti-agriculture activism was also noted to likely endure, with participants stating the need for trained agricultural communicators to counteract these attacks on the industry and defuse situations before they become out of control. Professional 4 specifically connected crisis communications and activism, saying:

> I don't think activism is going anywhere, and a key part of crisis communications is [understanding how to] keep your advocate, shift your 'ambivalents' and counteract your adversaries.

When asked directly about what emphasis should be placed on educating and training students in the field of agricultural communications, the participants unanimously responded that it is a priority. All participants emphatically highlighted the value in all agricultural students having some level of training in agricultural communications and that a notable gap exists at the University of Guelph OAC in adequately preparing students for these roles in industry. Participant 1 stated:

> It's extremely high priority. We hire a summer intern every year to help the marketing team and other than their own social media experience, we just haven't had any that have had that good formal grounding in their education to prepare them.

Professional 2 substantiated this, stating, "There's a huge gap. People either go to Guelph for animal science or ag business but they can't get an agriculture background in anything communications related."

Research Question 3a: How important are skilled agricultural communications graduates in the eyes of industry professionals and how hirable would these graduates be?

Given the direct relation to the broader Research Question 2, much of the same data is reported for this sub-question. The emergent themes were "*priority for all agricultural students", "growth industry",* and *"new job opportunities".*

The importance of skilled agricultural communications graduates is directly correlated to the industry's views on the emphasis that should be placed in educating in this discipline. Industry participants, as previously stated, all agreed that this should be a made an educational priority for *all agricultural students*. Participants specifically stated that the University of Guelph needs a program to train students in this discipline, with Professional 5 claiming:

> It needs to be built as a base for every ag and food student to have because I don't care what your job is, you need a base in communications, and I think we need a specialization for people who want to do it as a career.

This assertion indicates a definite importance placed on these specifically trained graduates within industry and reflect a need for these skillsets among hires.

When tracing how hireable these graduates would be, the industry responses around job opportunities were the most reflective, given that they directly discussed career openings for these graduates and how prevalent they would be. Professionals highlighted that agricultural communications is a *growth industry* in broader Canadian agriculture, with Professional 5 and 6 specifically stating that *job opportunities within the past 20 years have been created* that did not exist when they were graduates. New career options are opening frequently and agricultural companies, as noted by participants, are placing greater emphasis on communication jobs and skills within their organizations. Responses indicate that trained agricultural communicators would be in demand, especially if they possess the requisite skills.

Research Question 4: What components or skills would students like to see implemented in a future Canadian agricultural communications program?

The themes that emerged from this research question responses were *"grounding the program in agriculture"*, *"offering a wide range of communication skills"*, *"flexibility", "reaching and understanding various audiences"*, *"co-op's and practical experiences"*, *"skilled and experienced professors"* and *"benefitting the greatest number*

of students". Other themes for program format were "*undergraduate minor", "master's degree"* and "*undergraduate major*".

When asked about learning expectations in an agricultural communications program, a large number of student participants emphasized the importance of having the program *grounded in agriculture* opposed to a more general communications focus to differentiate between the two. This became one of the most predominant student responses across multiple questions, with students indicating it as an imperative factor in ensuring student interest in the program. Student 16 said:

> It would have to be specifically agriculture focused. I'd want to be communicating about things I'm learning in my other agriculture classes and I don't think it would appeal to me as much if I was just writing about vaguely agriculture targeting things just for the sake of it.

Students offered specific methods to accomplish this, including pulling agriculture courses from other programs or beginning with an introduction to agriculture course and then diving deeper into more specified areas of agriculture. This draws upon another student theme of *flexibility*, with students noting that a flexible program structure that allows them to take other agricultural courses or electives would attract students.

Students identified having a *range of technical communication skills* that should be available in the program. Effective writing skills across various mediums, social media training, graphic design, public speaking, and advertising and marketing were all

specifically mentioned. Student participants noted the importance of being able to adjust their writing styles to best serve the audience or medium they are writing for. Social media was identified as a prominent area in the industry and important to agricultural communications, particularly among younger generations. Student 15 said "A lot of [young] people consumer the news through social media, so companies have been shifting a big focus to it." For public speaking, students were enthusiastic about an opportunity for a debate class in the program to strengthen public speaking skills and to train students to deal with conflict management and how to communicate with individuals opposed to the agricultural industry.

Similar to writing across various mediums, student participants expressed a desire to learn how to *effectively communicate with various audiences* and gain *audience analysis skills*. Participants noted that agricultural communicators should make information accessible to all people in ways that are comprehensible and impactful in order to ensure success and longevity in the industry. Understanding the audience was an important element to achieve this goal. Reflecting on a past consumer behavior class, Student 17 said "[Audience analysis] would be really interesting because it's all about understanding your consumers and audience and their thought process which I think it really important." Participants viewed this skill as a tool to bridge the gap between producers and consumers and educate those who are uninformed about the agricultural community.

Outside of technical skills, *co-op and experiential learning opportunities* were heavily supported. Students felt there should be a practical aspect to the program where

students would be able to apply the skills they learn in a meaningful way and to be able to make industry connections to understand what opportunities exist for them outside of school. Student 9 suggested that a student-run newsletter would be a good option to apply skills learned in the program and would allow students to "display what we've learned and show it to the general public at the school as well." Considering co-op placements, whether holding a position for a summer or shadowing industry professionals in agricultural communications, participants emphasized that this option would allow for students to gain practical experience and network in industry.

The individuals teaching the program also came to mind for participants. Students were supportive of having *competent and experienced professors*, both in terms of understanding of agricultural communications and relevant job experience outside of academia, to teach courses. They emphasized that these professors' perspectives and skills would benefit the students and the university community. Student 11 stated:

> I'd like to see it taught by professors who worked in ag communications specifically or have that ag communications background. It would bring a fresh perspective and a new background.

Understanding the form through which students would most support the program was an important component to determine what students want from such a discipline. The *undergraduate minor* option gained the most wide-spread support. Participants believed that this option would produce the greatest number of enrolled students and would allow

for further specialization in other areas of agriculture while still obtaining knowledge in the field of agricultural communications. Student 1 summarized this with her response:

> I think it's important to be more thoroughly implemented across the board for anyone looking to get into [agriculture]. I definitely think it's important for everyone to have that general knowledge.

A *master's degree* option was also popular for many of the same reasons as the minor option. Students noted that while they could get an education in other areas of agriculture, a master's option would allow for communications specialization with more depth than a minor and would provide an advantage when looking for careers.

The *undergraduate major* option was commonly supported by participants. While some students in the sample personally wanted to study this program as an undergraduate major, others noted that there would be value in having this as an option for students even if they were not personally interested. Student 4 said:

> Personally, I don't think I would consider majoring in ag communications…I think there would definitely be a big group of people who would want to major in it as well just because it's definitely a big and very important field to learn to communicate with lots of different people.

Others also hypothesized that a minor option would see the most overall enrollment even though they personally wanted to take the major option.

Overall, student participants offered a range of skills and concepts they would want in an agricultural communications academic program with commonalities interspersed throughout. Students were in agreement that the program should be *grounded in agriculture* with a *diverse offering of communications skills* tailored to benefit the agricultural industry. Participants outlined various options for how the program should be offered to students, but almost all were adamant that students should have an education in broader agriculture to supplement their learning experience.

Research Question 5: What components or skills would industry professionals like to see implemented in a future Canadian agricultural communications program?

Emergent themes from these responses included "*social skills"*, "*wide variety of communication skills*", "*co-op's and practical experiences*", "*crisis communications*", *"networking"*, "*grounded in agriculture*", and "*benefitting the greatest number of students*". Themes regarding program format were "*undergraduate major*", "*undergraduate minor",* and *"master's degree"*.

Industry professionals mentioned a *variety of social skills* when considering attractive attributes for hiring. These skills included conflict management, critical thinking, initiative, leadership skills, strategic thinking, optimism or emotional intelligence and self-assessment. Professional 5 noted that, "when I'm hiring, I always start with their attitude and personal attributes, then I can help to hone the skills." The scope of these less technical skills indicate a noteworthy importance among industry.

Technical skills also received frequent mention, with industry participants noting that graduates should be poly-skilled and adaptable across the communications industry. Such skills include social media, written communications, public speaking, audience analysis, media training and market research. Social media was the most frequent response among participants for technical skills. Industry professionals felt it was an important ability in order to keep pace with the industry moving more digital in the future. Professional 3 stated:

> They need a strong grounding in digital and social media because, increasingly that's where our world is going and whether it's advertising or just managing social media accounts, they need to understand how to do that effectively.

Participants also noted that the instinct to be defensive when discussing controversial agricultural topics needed to be curbed and that writing is a key element to be a successful communicator.

Similar to students, a *co-op option* emerged as one of the most common themes for educational experiences among professionals. Participants identified this as an opportunity to gain practical experience in the field and to have the ability to gain perspective, particularly outside of agriculture. Professional 2 noted:

> A co-op or mandatory placement, for me, was incredibly helpful because you not only learn the theory, but you can also be placed with different organizations

where you actually have to put those skills intro practice. I think it would be hugely beneficial.

Networking was another notable response. Particularly when looking at relationships with government officials, being able to build connections among individuals within and outside of the agricultural industry is of benefit to both the graduates and the industry.

Crisis communications and *education* were highlighted by participants as important skills or experiences. Being able to understand the various audiences and communicate effectively in crisis situations were notable responses given the important role of crisis communicators in agriculture. Giving agricultural communications students opportunities to educating others across age ranges is related to advocating for agriculture and encouraging consumers to become involved and engaged with the industry. Professionals felt that students educating about the industry in classrooms provides a unique, beneficial experience to train future agricultural communicators to talk to future consumers and advocate for the industry.

Finally, *grounding the program in agriculture* was a debated theme among professionals. While some participants upheld this belief, others advised against a full-scale agricultural program, noting that it should be more general and less agriculture-specific to attract those outside the industry. However, other participants emphasized the importance of an agricultural version of general communications. Professional 1 specifically noted that while the program should broadly focus on communication skills, it should have its roots in agriculture for the benefit of the industry.

Looking at the potential program formats, professionals broadly supported agricultural communications as a *major*. Industry participants noted that although starting as a major would be a lofty goal, it is a valuable one that they would like to see. A *minor* was another popular response among participants. Industry professionals emphasized this form of the program as a way to raise the number of enrolled students and to increase the popularity of the program. Professional 2 noted that "the largest number of people in the sector would benefit from the minor. Every undergrad should have communications training and it should be open across colleges, not just the college of ag." The *master's option* was mentioned as a way to provide further specialization for students looking for career benefits. The discussion focused mainly on the practical aspect of an agricultural communications education rather than a more theoretical focus.

Notably, Professional 1 indicated being indifferent to the form of the program. Their greatest concern was making sure the largest number of students were educated in this field. They emphasized the importance of agricultural communications as an educational program and industry sector, stating the following:

> It should be available in the way is best to produce the most amount of skilled people who are inspired to become part of the program and the industry. We just need more people trained in this area and agriculture.

Overall, participants concurred that it was important to have agricultural communications as a presence in the university. Most professional participants supported

having as many students enrolled in the program in some form to maximize the impact of the program for industry benefit.

Summary

Through their responses, students and industry professionals agreed that an agricultural communications program at the University of Guelph OAC should have its footing in agriculture and be beneficial to the largest number of students. All participants agreed that the program would be highly valuable to all agricultural students regardless of the format through which they study.

Participants emphasized having practical components to the program, such as co-op's or experiential learning opportunities to expand beyond theory-based learning. Along with this, they concurred that the program should encompass a broad range of technical communication skills, while also, for industry benefit, incorporating opportunities for social skill development.

Responses indicated that agricultural communications is a gap at the University of Guelph, with very few student opportunities to engage in this discipline. This is manifested in industry by companies noticing that student employees are lacking the needed communication skills to adequately perform the needed tasks.

Overall, the idea of an agricultural communications program at the University of Guelph was well-received and viewed as a positive potential addition to the institution. It received wide support from both student and industry participants.

Chapter 5. Discussion

The purpose of this research was to explore and highlight the wants and needs of the Canadian agricultural industry and agricultural students at the University of Guelph Ontario Agricultural College regarding a future Canadian agricultural communications program based in the University of Guelph, OAC and to illustrate these stakeholders' understanding of the field of agricultural communications.

The following research questions guide this study:

1. How much/what do Ontarian agriculture students and industry professionals know about agricultural communications?
2. Do current/future Canadian agriculture students desire an agricultural communications program?
3. Do Ontarian agricultural industry professionals desire an agricultural communications program?
    a. How important are skilled agricultural communications graduates in the eyes of industry professionals and how hirable would these graduates be?
4. What components or skills would students like to see implemented in a future Canadian agricultural communications program?
5. What components or skills would industry professionals like to see implemented in a future Canadian agricultural communications program?

This chapter outlines the study results in relation to the research questions and the conceptual framework. Student and industry responses will be discussed separately and together when applicable. Implications and recommendations are also included.

Knowledge of Agricultural Communications

Student Responses

The most common response among students when asked how much they knew about agricultural communications was "not very much." Given this, many responses had to be observed with the possibility in mind that students were operating with stereotypical or uninformed assumptions about the field. With some participants indicating that they knew a fair amount about agricultural communications, the student sample included a good range of backgrounds and understandings, allowing for a broad range of knowledge and opinions for the study.

Interestingly, while students noted that consumers are uninformed about the agricultural industry, some also mentioned that agriculturalists are similarly uninformed about agricultural communications. While many in the industry consume and are impacted by the work done by these individuals, students identified a lapse in connecting their outputs to the people actually completing the work. This is illustrated by Student 13 noting that the people behind agricultural magazines typically go unnoticed. This implies a lack of education about the field. With the absence of an agricultural communications academic program in Canada, it is reasonable to believe that this field may not be looked at as viable career opportunities compared to other careers with direct academic counterparts in Canada.

From student responses, tasks commonly associated with agricultural communications include education and bridging the gap between producers and consumers. The latter theme can logically connect to the former, as bridging this gap involves communicating with and educating both parties. As stated by Sharifirad et. al. (2012), communication skills, specifically the transfer or exchange of information and thoughts, are the most important aspect of the educational process and should be apparent in educators. Students making this connection emphasizes the crossover between communication and education. When combined with the theme of audience analysis in later responses as a desired skill, education becomes more symbiotic, with agriculturalists learning about and from their audiences in order to better educate them in return.

The theme of bridging the gap between producers and consumers emerged early and consistently came up in other responses connected to the work agricultural communicators engage in. This is unsurprising; the growing divide between these groups and the increasing distaste for the agricultural industry is a prominent topic in the industry. Agriculture is under more scrutiny than ever before, and the consumer base is, largely, what keeps the industry alive (Powell, Angnew & Trexler, 2008; Kovar & Ball, 2013; Hamel & Saindon, 2017). This links to the idea of urbanization decreasing the public's understanding of agriculture, a point mentioned by students in these focus groups and supported in literature (Doerfert & Miller, 2006; Large, 2012; Irani & Doerfert, 2013; Center for Food Integrity, 2014; Spooner, Schuppli & Fraser, 2014; Kurtzo et. al., 2016). Many responses regarding skills learned in the program or job

opportunities available connect back to this idea of preserving the consumer-producer relationship and upholding the integrity of the industry.

While this producer-consumer gap was consistently recognized, a gap between researchers and agricultural producers was also mentioned. Student 18 stated that there are many research studies directed toward improving agriculture through best practices, but these results often do not reach farmers or resonate with them. This opens up another avenue for agricultural communicators in the workforce that is not necessarily at the forefront of peoples' minds when they consider the field. On many levels, agricultural communications is linked with science communication, and being able to both understand the science behind the industry and communicate it effectively to those who do not is a valued skill in the discipline (Morgan & Rucker, 2013).

Social media played an important part in many student responses, including their associations with the field of agricultural communications. Three important demographics were noted for their use of the medium: *farmers*, *youth*, and *agricultural companies*. With younger generations coming to inherit the industry, the role of social media in agriculture will only continue to expand. This aligns with many studies that place social media in an important, growing role in the industry, giving an amplified voice to various people in various positions in agriculture (Lathiya et. al., 2015; Morris & James, 2017; Bhalchandra & Anand, 2019). Social media was also frequently named when students identified job opportunities in the field of agricultural communications, including the shift by agricultural boards and companies to use this medium to relay their company goals, further emphasizing its immediate importance in their minds.

When discussing these job opportunities, students offered a rage of career options that, at times, connected directly to previous responses in other areas. For instance, education was raised again as a theme. Noting the lack of an agricultural education system in Canadian elementary and high schools, participants recalled that agricultural organizations and companies employ individuals to teach youth about agriculture in traditional educational spaces and beyond. Students connected agricultural communicators to these roles given the communicative nature of educating. This idea of education being the transfer of ideas and information and inherently aided by communication skills once again emerges (Sharifirad et. al., 2012). This can also extend to the mentioned ideas of agricultural events and advocacy. The farm safety and other agricultural events that students mentioned as job opportunities can fall under educating various audiences about the industry, products, or a range of other purposes. Further, agricultural advocacy is largely achieved through educational efforts of the industry, informing the public about the realities of the industry. This theme can connect back to social media, as this is a prime medium through which to share and advocate.

The most commonly identified area for employment was through *agricultural boards* and *commodity groups*. Students recognized the variety of communications tasks these organizations and other agricultural companies require, such as outreach to the public, communicating to their agricultural producers and educating both the general public and targeted youth. This response's popularity is unsurprising given the importance placed on commodity groups in Canadian agriculture. Commodity groups are numerous, given the diverse range of agricultural sectors. As reported by the Canadian

Federation of Agriculture (n.d.) there are thirteen national agricultural commodity groups ranging across sectors. Further, there are thirteen general farm organizations for each province and territory that include more commodity groups under them for provincial support and representation (Canadian Federation of Agriculture, n.d.).

This idea also extends to the student-identified theme of *marketing*. Focusing more on private agricultural companies, participants mentioned the importance of companies ensuring effective marketing of their products to producers, manufacturers and consumers and being able to rationalize their marketing or advertising initiatives. Notably, Student 18 raised the idea of marketing opportunities outside of traditional agriculture, extending to the broader food system such as restaurants, food companies or stores. This further substantiates the breadth of applicability of agricultural communication skills.

Unsurprisingly, *journalism* was a common job area identified by students. Specifically, agricultural magazines and article writing emerged as specific areas for agricultural communicators as well as writing communication materials for producers. With the previous student response of receiving agricultural magazines in mind, it is safe to assume that many students with agricultural backgrounds also had exposure to these types of materials over their lives. There are numerous Canadian agricultural magazines available, including Progressive Dairy, Better Farming, Canadian Cattleman, and more. Adding the perceived importance of writing in this field, it is understandable that journalism would emerge as a prominent career area for the respondents.

Government employment was also mentioned. Government policy has an immense impact on agriculture and is largely shaped by economic interests, international relationships, environmental conditions and other similar factors (Lencucha et. al., 2020). Naturally, having those who are versed in the agricultural industry and able to communicate the needs and perspectives of agriculturalists in positions to inform government policy would be of immense benefit to the industry. Students named agricultural communicators as key individuals for this task to direct how government agricultural initiatives play out. Public relations work came into play, noting that PR professionals can facilitate important conversations including why government bills are passed. Respondents also noted that agricultural communicators could play key roles in comprehending government data and communicating this comprehensively to the public.

Interestingly, students identified a range in job availability in the field. While some students indicated that there are many communication jobs in agriculture and projected growth in the field, others noted that many of the jobs available to post-grads are internship-based and lack long-term career viability. This is an area that should be explored in future research to understand in greater depth what specific career opportunities exist for agricultural communications graduates in agriculture.

Overall, many students recognized agricultural communications as a field of growing importance, noting their belief that there is room for expansion in the future and further integration in the industry.

Industry Responses

With the industry sample, all participants had some connection or experience in agricultural communications, whether it be through their position or interacting with marketing and communication teams at their companies. This provides a differential and more informed lens through which responses must be viewed when compared to students.

The idea of agricultural communications being a *transactional* field was touted by participants, particularly Professional 5. Despite this, she elaborated that the field is changing to become more engaging with an emphasis on listening to the audiences and learning about them to better communicate with them and evolving the way through which information is communicated.

This directly lends itself to another theme, the idea of agricultural communicators being *storytellers*. Revisiting the connection to science communication in this field, Joubert et. al. (2019) emphasize that in order to ensure the public is making informed decisions about issues rooted in science, science communicators have to make people care through creating emotional connections between scientists and publics. They offer that stories are facts wrapped in emotions and assert storytelling as a powerful way to nurture engagement (Joubert et. al., 2019). Professional 4 claimed that "storytellers" was the easiest way to describe the variety of work done by agricultural communicators. She went on to explain that these professionals tell the story of agriculture to a wide variety of audiences and adjust the way the story is told based on their audience. This connects to later themes of audience analysis skills in agricultural communication graduates.

Not only storytellers, the concept of agricultural communicators as *translators* also emerged. Professional 3 explained that these agricultural communications professionals consistently translate government expectations to producers, or farm operations to the general public, all in ways so their audiences understand. This connects back to storytelling. Looking at another science-heavy industry, health research has notably made connections between storytelling as a method of knowledge translation; storytelling allows a complex topic such as healthcare experiences to be digested by broader audiences (Park et. al., 2021). The same logic can be applied to the highly specified and often scientific nature of agriculture.

Interest and Cultural Fit

As one of the core objectives of the study, it was important to assess the desire across both stakeholder groups to have an agricultural communications program at the University of Guelph OAC. Since the interests of both groups were inherently different, with students being in a position to engage with this program in their education and industry benefitting from the outputs of the program, student and industry groups were posed different questions to gauge their perceptions of the program and their levels of appeal.

Student Responses

The majority of students responded positively to the opportunity to study agricultural communications at the University of Guelph. Only two participants of the eighteen overall mentioned having no personal interest in the program in any capacity. Notably, despite their lack of interest, both indicated their belief that the program was

still valuable and would benefit the student community and industry. Student 9 specifically mentioned:

> I'm not personally interested but I think it will become very prevalent in the future. Any job will require communication skills, especially in agriculture, so everyone should have knowledge in this.

Student 16 substantiated this claim, emphasizing that he feels it will be a very important field for agriculture in the future and that anyone involved in the industry will need to consistently communicate accurate information. These students provided an important perspective for the study. Not every student enrolling at the University of Guelph will be interested in agricultural communications. However, as demonstrated by these participants, this does not diminish the inherent value of the discipline.

Also noteworthy, two other participants indicated that they would have been interested in studying agricultural communications when initially enrolling at Guelph but would hesitate to switch out of their current program now that they have experienced it. The importance of this is twofold. First, it emphasizes the inherent value of existing programs in the University of Guelph OAC. An agricultural communications program at this institution would not seek to undermine other disciplines, but rather provide other opportunities and supplement existing programs. Second, this allows for the possibility that these participants, and other students, would have reacted similarly if they were posed with the opposite scenario. They were not given the opportunity to study

agricultural communications, and therefore have no way to assess if it was a good fit for them. Having the opportunity to engage with this type of program allows for students to determine the personal benefits of studying in the discipline and gives students in other programs the chance to do the same through exposure to agricultural communications classes as electives or through a minor.

Overall, students unanimously agreed that an agricultural communications program would be a positive addition to the culture of the University of Guelph OAC and would provide valuable opportunities for most of its students. Student 15 specifically mentioned that the progressive nature of the university and its standing as the flagship Canadian agricultural institution makes it a natural fit for the program, with the program allowing the OAC to stay at the forefront of agriculture. Student 18 provided a similar viewpoint, adding that he believed the program would be very popular as a minor and major and would fit very well with other existing OAC programs. The skills that students expected to learn in an agricultural communications program were also mentioned as being valuable and desirable. Student 1 said, “I think [the program] would fit in and potentially draw even more students who don’t fit into those kinds of programs we already have and to grow the knowledge.” This connects back to the response from Student 17, recognizing the prospective students who have an interest in agriculture but do not connect with the available agricultural programs. This is a demographic that should be considered moving forward.

Industry Responses

Given the nature of the questions asked, industry responses yielded more variety and complexity than student responses. These questions were designed to both illustrate the landscape of agricultural communications in Canadian agriculture and to highlight the need for agricultural communications graduates.

The idea of the *agriculture industry shifting* presented itself in different forms. Initially, Professional 5 commented on the changing nature of agriculture and that 37% of the agricultural workforce will turn over in 20 years, indicating big changes needed in the industry. Professional 7 added that the agricultural industry is also changing in the sense that agriculturalists are realizing the need for communication skills to be collaborative and engage in conversations about prominent agricultural issues like climate change or animal agriculture. Both of these responses indicate an opening of opportunities for agricultural communications professionals. In times of industry shift and change, possibilities for new jobs emerge. With the indicated shift toward prioritizing communication work, more possibilities could be available in the future.

Leading from this, participants also identified agricultural communications as an *area of growth* in Canadian agriculture. Professional 1 shared a personal experience with his company, noting that they are pulling away from advertising and marketing budgets and allocating those funds to communications platforms. He explains that the communications efforts have proven more effective to reach audiences and he anticipates it being a growth industry across the board. Professional 5 supported this idea, noting that communication job postings are frequently advertised that did not exist before and that as

companies continually identify it as a priority area, these new jobs will continue to be created. This area of growth is substantiated by counterparts in the United States, projected agricultural communications as a growth area in industry and academia (Weckman et. al., 2000; Miller et. al., 2015; Cannon et. al., 2016; Fernandez et. al., 2020). This also upholds the idea of the industry shifting to create new emphasis on communication jobs.

Looking at specific areas of opportunity, industry professionals emphasized the need for *"poly-skilled" communicators* that can address a variety of needs for agricultural companies and organizations. The needs of the industry and its stakeholders are broad and diverse, and agricultural communicators must follow suit (Doerfert & Miller, 2006). Particularly, Professional 2 noted that many agricultural companies lack the budget to support multiple specialized communication professionals. Therefore, the need rests on individuals with a variety of communication skills to cover these areas. Professional 3 concurred with this statement, emphasizing budgetary reasons. We can understand that agricultural communications graduates should be equipped with a range of communication skills in order to adequately prepare them for industry jobs and to best serve industry needs. This connects back to previous themes of diversity in the field in the prior section. Agricultural communicators are evidently expected to cover a variety of tasks and their undergraduate training should equip them for this.

Delving further into opportunities, *crisis communications* emerged as a prominent response. This connects to prior concepts including bridging the gap between agriculture and consumers, education, and public relations. As previously noted, the agricultural

industry is under an unprecedented amount of pressure from those outside the industry (Powell, Angnew & Trexler, 2008; Kovar & Ball, 2013; Hamel & Saindon, 2017). Crisis communication is an important component of agriculture's success, as these communication specialists are key in managing people involved in these crises and reducing the negative outcomes as much as possible (Rutherford et. al., 2012). Given the necessity of agriculture to feed the world's population, preserving the industry is a top priority (Rutherford et. al., 2012). Professional 3 particularly emphasized its importance, claiming that crisis communications job opportunities will be a constant in agriculture and an area of growth. Anti-agriculture activism was included in a similar fashion, with Professional 4 adding that activism was "not going anywhere soon." She continued that communications professionals are needed to get ahead of activism issues and communicate in advance to decrease the negative impact. She specified using farmers' stories to reach out to consumers in a positive way, connecting back to ideas of storytelling (Joubert et. al., 2019).

When asked directly about what emphasis should be placed on training students in agricultural communications, industry participants unanimously identified training students in this discipline as a high priority. Participant 6 offered a report by the Royal Bank of Canada, noting that it states the next generation of the agriculture and food sector needs to be "good communicators, collaborators and problem solvers" to ensure their success and the success of the industry. Professional 5 accentuated the importance, suggesting that agricultural communications should be built as a base for every agriculture and food student to have, and offered as a broader specialization for those

who want to pursue it as a career. These and other similar responses symbolize industry support for the program.

Branching off of general support, participants also identified a specific gap at the University of Guelph. Professional 1 stated that educating students in this field is "extremely high priority," as his company has failed to find interns for their summer marketing position that have formal education to prepare them for the role. Professional 2 corroborated this gap, noting that people go to the University of Guelph for animal science or business, but they are unable to acquire any communications training with an agriculture background. Professional 5, who also hires University of Guelph OAC students at her communications company, stated:

> Every single person that I hired for 15 years out of the University of Guelph said the same thing: 'My education did not prepare me for this job.'

These are vital statements as they not only illustrate an industry desire for trained agricultural communicators, but directly highlight a weakness in this area in the University of Guelph OAC. With agricultural communications programs in the United States projecting growth and indications of Canadian agricultural industry support for the program area at the University of Guelph, these are key considerations for future decisions made at the institution (Miller, Large, Rucker, Shoulders & Buck, 2015).

Program Format

Student Responses

Although they were not directly asked what format of study they would prefer to take, students offered specifications of how they would like to engage with this program (i.e. undergraduate major, minor, certificate, etc.). The most common format mentioned was an undergraduate minor or certificate. Students *frequently identified agricultural communications as an excellent supplementary skillset for other agricultural programs at the University of Guelph* and emphasized that the vast majority of agricultural students at the institution would benefit from having education in this field. Student 11 mentioned that the University of Guelph at large lacks opportunities for students interested in taking communication courses, so the benefit of this program could extend to colleges outside of OAC as well. This opens up a new avenue of study to assess the benefits of the general communications skills offered through an agricultural communications program for the broader student population.

Personal student interest in a major was also frequently mentioned, with certain participants expressing extreme enthusiasm for this option. Student 17 shared a particularly noteworthy perspective, noting that she "settled," for another agricultural program in order to be involved in the OAC. While other responses indicated a similar sentiment, the verbiage used in this response makes it especially significant, particularly the idea of "settling." For context, the students enrolled in the University of Guelph OAC are referred to as "aggies," and this community commonly engages in social activities and is provided opportunities that are exclusive to them. In the case of Student 17, she

was faced with the choice of being part of this community or studying in an area that had interest for her, ultimately choosing the former. It is safe to assume that other students have had this same experience, amplifying the importance of bringing such a program to the University of Guelph OAC.

Industry Responses

Industry participants indicated a strong desire for the program to be offered as an undergraduate major. However, many identified this as a lofty goal, and emphasized a minor as an excellent option to not only introduce the program to the university, but to benefit the greatest number of students. This *maximization of benefit became a strong point*, with Professional 1 stating, "We just need more people trained in this area and agriculture." The idea of drawing more students from outside of agriculture into the college through a minor was also addressed and identified as a strong desire among industry participants.

Program Content and Skills

Outlining the desired skills and educational experiences offered in an agricultural communications program is a necessary component to informing future program development. This objective relates directly to the *Curriculum Visioning* phase outlined by Wolf (2007). Under the "Program Objectives Development" and "Program Focus" sections, Wolf recommends articulating attributes of the 'ideal graduate' and also identifying foundational content and desirable educational experiences.

Notably, there were fewer responses commonly mentioned or repeated within each individual group, but when stakeholder groups were compared, numerous commonalities emerged.

Student Responses

The overwhelming theme that emerged when asking about desired experiences and attributes of the potential program was that students wanted it *grounded in agriculture*. This was the predominant response to learning expectations and elements that would attract students to study in the discipline. Given other responses in the focus groups, it was clear that the majority of student participants were extremely passionate about Canadian agriculture, which they implied was a trend among other students at the OAC. This offers some rationale for why this theme was so dominant. Students specifically recommended pulling agriculture courses from other existing programs in the OAC to give agricultural communications students a firm background in the industry, or beginning with introductory agricultural courses and then delving into more specified topics in agriculture. Notably, literature supports this idea of agricultural communications programs allowing students to specialize in agriculture while teaching the communications skills to provide the contextual grounding in the industry (Terry et. al., 1994; Large, 2014).

Students also indicated a desire for more specified *communication skills*, including writing across various mediums, social media skills, graphic design, public speaking and advertising and marketing. Notably, these are *technical skills* that frequently appear among past studies recommending agricultural communication

undergraduate skills and existing courses in agricultural communication programs in the United States (Cannon et. al., 2016; Leal et. al., 2020). The variety of communication classes represented in these studies also support students' desire for a wide range of communications topics to study in the program and the industry's desire for "utility players" with the ability to address many communication tasks and issues.

Students named *experiential and practical learning opportunities* as elements that would attract them to the program. Student 9 suggested a specific way to actualize this through a student-run newsletter created by agricultural communication students to show others what they learned in a practical manner. Connecting back to public speaking, many students were enthusiastic about a debate class where students would not only improve oral communication skills, but also their ability to understand different perspectives and advocate a stance through factual persuasion. This links to another student desire for education in communications with various audiences and audience analysis.

Students' interest was also influenced by the professors in this program. Student 17 mentioned that having professors who had agricultural communications experience or a background in the field would be a large draw and bring new perspectives. Having professors with industry experience is a unique and influential element, with a study by Lin & Bozeman (2006) showing that there were differences between industry-experienced professors and those with minimal experience. The former particularly showed greater support to their students (Lin & Bozeman, 2006).

When asked the best form for this program, the majority of students responded that they believed a minor would be the most successful. Students emphasized that this format would see the most enrollment and benefit the greatest number of students. The master's option followed for many of the same reasons, with the added benefit of opening a specialization for career-oriented individuals to gain further training. While the certificate option was the least commonly mentioned, it encompassed many of the same rationales.

Numerous students voiced encouragement for a major option, noting that many of their peers would be interested in pursuing this field as their degree, and the major option provides more comprehensive coverage of communication skills.

Notably, the two most common reasons for students advocating for a minor versus a major were a) the belief that this program would not encompass other areas of agriculture and would take away from an education in the agricultural industry, and b) the belief that there would not be enough courses or topics to justify a full undergraduate major. Almost all students who supported the minor voiced one or both of these opinions to justify their stance. This can be traced back to the participants' low levels of understanding of the agricultural communications field indicated by the preliminary questions, the source of which can logically be pinpointed as the lack of agricultural communications educational experiences in Canada. These students lack exposure to these programs and therefore have minimal concrete understanding of what they encompass. When examining existing American curricula, the courses are not only broad and numerous, but the programs uphold an agricultural educational experience with

students often required to take courses in other agricultural disciplines to encourage comprehensive understanding of the industry to address its challenges (Doerfert & Miller, 2006; Morgan & Rucker, 2013; Cannon et. al., 2016; Kurtzo et. al., 2016; Corder et. al., 2018). The best practices for agricultural communications curriculum development would inherently render these student hesitations irrelevant.

Industry Responses

To articulate the attributes of the ideal graduate as proposed by the curriculum development framework by Wolf (2007), industry participants were asked to identify characteristics they would look for when hiring agricultural communications graduates.

Strikingly, professionals' responses aligned closer with "soft" *social skills* rather than the more technical skills proposed by students. These social skills aligned with other sections of literature that explored industry needs for graduates in this field and the majority of the specific skills mentioned were directly paralleled (Leal et. al., 2019). Participants mentioned skills such as conflict management, critical thinking, leadership ability, strategic thinking, initiative, optimism, emotional intelligence, self-evaluation and ability to spot trends. In their study, Leal et. al. (2019) noted that social skills are imperative in the workplace and that employers place value on these skills, no longer viewing them as optional. Professionals' responses upheld this concept.

When articulating specific skills they would want in an agricultural communications program, industry professionals upheld their belief that graduates should be well-versed in a variety of communication skills and specialties as required by the changing industry (Doerfert & Miller, 2006). Unsurprisingly, social media skills were a

common response, justified by the increasingly digital trends the industry is following. Crisis communications also emerged as a need given the challenges facing the agricultural industry (Powell, Angnew & Trexler, 2008; Kovar & Ball, 2013; Hamel & Saindon, 2017).

Notably, new themes emerged through this line of questioning. Industry participants asserted that the program should include *networking training* and opportunities for students to form good connections with the industry and government officials to leverage later in their careers. Having an understanding of the science behind communication work was also mentioned, with Professional 6 noting that there are important *biological or sociological reasons why methods like storytelling are used*, and students should be able to understand and use this for strategic communications work. Market research was identified as a way to encourage sound and effective research skills and being able to communicate findings effectually. Media relations and media training were offered as desired educational experiences in order to give students an understanding of the complex workings of mass media and help them develop relationships with media outlets to ensure successful collaboration.

Implications

With the rapid changes in the industry, agriculture is encountering new challenges and scrutiny. Additionally, agricultural literacy is decreasing among the general population, adding to these challenges. Trained agricultural communicators are identified as key players in addressing these issues and ensuring the continued successful longevity of the industry. Despite these problems being present in Canadian agriculture, the educational system does not provide any opportunities to adequately train students in this discipline, leaving a poignant gap in the industry.

Agricultural communications is a growing field, both in the academic and industry sectors, on an international level. The benefits of this growing field are missed in Canada, establishing it as a prime opportunity for program development to bring these valuable outputs to the Canadian agricultural industry. An agricultural communications program could open numerous opportunities for students interested in the field, for companies and organizations who need trained agricultural communicators, and to amplify the work being done at Canadian agricultural institutions through a new academic discipline's reach in research, conferences, and networking.

Commonalities in Stakeholder Responses

Across groups, there was agreement that the field of agricultural communications is *broad and diverse*, both in opportunities and necessary skills. The majority of industry participants, when asked what they think of when thinking of agricultural communications, commented on the difficulty of summarizing due to the breadth of the field. Professional 2 noted that the field is a large umbrella with many different facets and

emphasized the difficulty of being able to master the numerous aspects encompassed by the field. Students shared a similar perspective, noting that this diversity is not necessarily perceived by the industry at large.

There was further crossover through the idea of communicating to a variety of audiences and to agricultural consumers specifically. Professional 1, who was notably the only representative from a private agricultural company, highlighted the importance of making sure messages were comprehensible and actionable for farmer consumers and the general public. Student responses about marketing careers upheld this answer, with Student 18 specifically emphasizing the importance of effectively marketing products to producers and others for agricultural companies. Student 17 also substantiated this, stating that the private sector of agriculture is more involved with marketing to producers and consumers. These commonalities raise the important idea that *farmers and agriculturalists should not be forgotten* when thinking of agricultural communications. The concept of bridging the gap between producers and consumers and targeting this non-agricultural audience was frequently mentioned across responses but is not the only area in which agricultural communicators can operate and add value.

Both student and professional participants indicated that agricultural communications is a high priority. The majority of students indicated an interest in getting an educational experience in agricultural communications, and all students asserted the field's importance and value. Similarly, industry participants unanimously emphasized that the educational opportunity in the discipline was of high priority to benefit the broader agricultural industry.

Both students and industry professionals identified agricultural communications as an area of growth within agriculture and projected the continued growth in the future. This is reflected in both the industry and academic fields in the United States, with an increasing enrollment in and number agricultural communications academic programs and a paralleled growth of demand in industry (Weckman et. al., 2000; Miller et. al., 2015; Cannon et. al., 2016; Fernandez et. al., 2020). Similar assumptions can be extended to the Canadian agricultural industry and academic spheres and are further upheld given these responses.

Numerous educational skills and experiences were recommended by both stakeholder groups. Written communication skills, and specifically writing across various mediums, were prioritized highly by both groups. As written communication is a core skill of agricultural communications programs by faculty, industry and students across the board, this is a notable finding (Irani & Doerfert, 2013; Cannon et. al., 2016; Kurtzo et. al., 2016; Dyment et. al., 2020; Leal et. al., 2020).

The majority of recommended skills by both students and industry were technical in nature. Others include social media skills, public speaking and oral communication, and consumer and audience analysis. These are notable skills in the agricultural communications educational field that are frequently seen and encouraged in American programs (Cannon et. al., 2016; Leal et. al., 2020).

These groups also strongly endorsed a *co-op or internship experience* in the program. Students emphasized that these requirements would draw students in and give them an opportunity to get practical experience and make connections in the field.

Industry participants reiterated this, criticizing academia's tendency to lean toward theory but not encourage practical experience or skills. Professional 5 suggested a required internship outside of agriculture for students to gain new perspectives. Internships are frequently endorsed in American agricultural communications programs to give students practical experience, networking opportunities and an easier adjustment to real-world work after graduation (Terry et. al., 1994; Morgan, 2010; Morgan & Rucker, 2013; Cannon et. al., 2016; Corder & Irlbeck, 2018; Dyment et. al., 2020).

Experiences *educating across age groups* were also recommended. Industry professionals suggested training students for conversations with future consumers by speaking with school children or other youth to educate them about agriculture. Students reiterated this idea, marking the importance of being able to educate not just adults, but also children, who are future consumers.

Interestingly, not all industry participants shared the enthusiasm of students for the program to be rooted in agriculture. While almost all student participants vehemently voiced their desire for a truly *agricultural* communications program at some point, numerous industry professionals expressed a desire to broaden outside of agriculture and focus on general communications more prominently. Some industry participants, like Professional 1, noted that having this understanding of the agricultural industry would be beneficial as many graduates will be directing their skills to focus on farmers and producers. Professional 2 echoed this sentiment, noting that when she was a student, she wished there was an agricultural version of a communications or public relations educational program, as she attended a different university than the University of Guelph

to get communication experience despite having a background and interest in agriculture. Despite this, other industry participants felt that calling the program "agricultural" communications was less relevant and narrowed the scope of potential students. Professionals 5 and 6 suggested that the program should be called "food communications," as food is a connecting point for all people and would draw in others from outside traditional agriculture. Participant 3 offered similar insights, suggesting that agriculture simply be a "layer" for the communications program and defining it more as "general communications with an ag specialization." This disconnect between student and industry desires presents a new challenge when considering the design and marketing of this program. Both stakeholder groups' opinions are important, so finding a way to satisfy both is the best course of action and should be further explored.

While there were participants in both groups who supported a major, both student and industry groups emphasized the importance of this program reaching and benefitting the greatest number of students, citing a minor option as the most practical starting point to accomplish this. The minor was also noted by both groups as a way to bring in more students from outside the OAC and expose them to agriculture. Bringing more people to the industry was a key need identified by industry participants, so this should be considered.

Connections to Conceptual Framework

Looking at the curriculum development framework provided by Wolf (2007), this study followed the *Curriculum Visioning* phase. Beginning with the "Curriculum Assessment" section within this phase, Wolf (2007) recommends conversations with

stakeholders, specifically recommending focus groups among the preferred data collection formats. This data collection method and the stakeholders selected for this study (students and industry professionals), were directly informed by the framework.

Questions designed to articulate specific skills that students would expect to see in an agricultural communications program and that industry would desire from agricultural communications graduates directly related to Wolf's "Program Objectives/Development" section. This section is designed to articulate the attributes of the "ideal" graduate, which is exactly what these responses produced. Social skills such as critical thinking, leadership, or initiative, and technical skills including writing across various mediums, social media, public speaking, or audience analysis, all lent insight into what an ideal graduate looks like in the eyes of student and industry participants.

Other questions and responses from participants informed the final sections, "Identify Foundational Content" and "Identify Desirable Educational Experiences". Stakeholders' responses around expected or desired program content, format, and additional experiences that should be available to students directly related to these sections. Interestingly, participants consistently recommended co-op placements and experiential service-learning opportunities, both of which are specifically recommended by Wolf (2007).

The "Ideal" Program for the University of Guelph, OAC

Based on the study's findings, the "ideal" agricultural communications program at the University of Guelph OAC would be rooted in agriculture to differentiate from general communications programs, and be flexible, allowing students to pursue studying

other more specified fields of agriculture. An agricultural communications program should supplement other existing agricultural programs at the institution, allowing for the greatest number of students to benefit from it. Further, it should not exclude prospective students outside of traditional agriculture, but rather encourage them to enroll and thereby engage with the agricultural industry.

The program should emphasize technical communication skills, particularly writing across various mediums, social media, public speaking, crisis communications and audience analysis. Students should also be trained in social skills, such as leadership, critical thinking and conflict management for future career success. The program should offer practical experiences, such as co-op placements or experiential learning opportunities, to allow students to network and apply their learning in real-world settings. Overall, it should uphold the culture of the OAC and best serve the agricultural industry by training students to become the next generation of agricultural advocates and communicators.

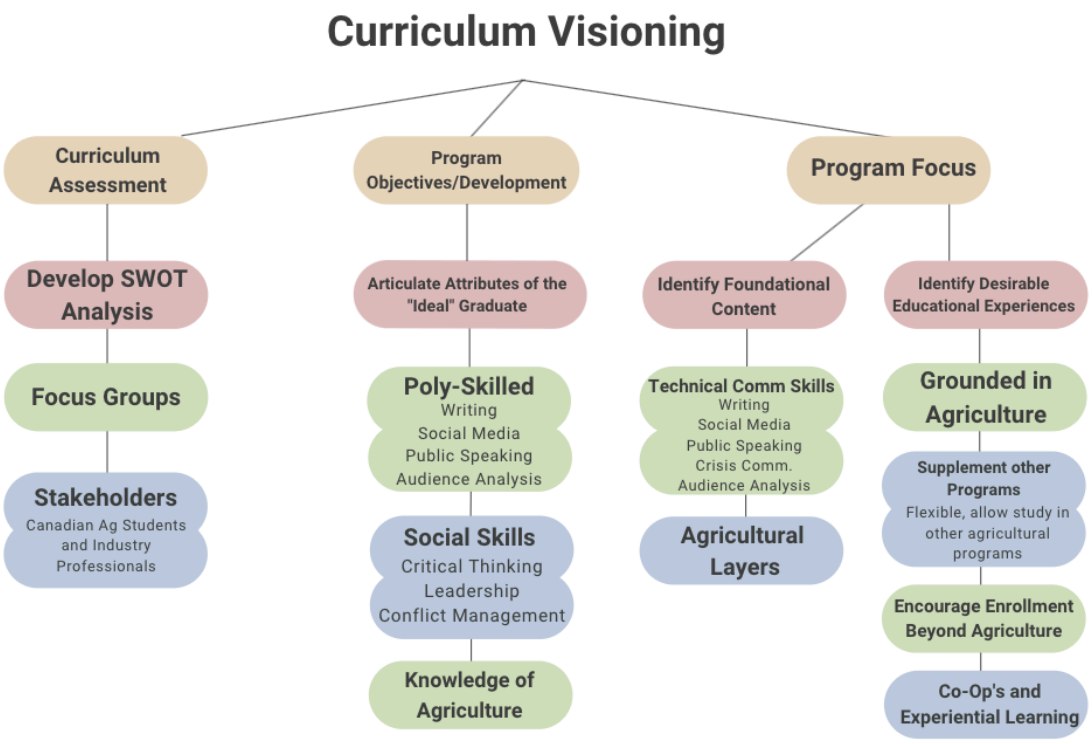

Figure 5. The *Curriculum Visioning* phase of Wolf's (2007) curriculum development model with corresponding findings from the study that illustrate the "ideal" agricultural communications academic program at the University of Guelph, OAC, according to Canadian agricultural student and industry stakeholders.

Recommendations for Practice

Findings from this study have identified agricultural communications as a relevant topic to be considered by Canadian agricultural academic institutions. The University of Guelph OAC should continue to explore an academic program in this discipline. Specifically, the OAC should begin looking at where an agricultural communications program would fit within the institution and its existing courses or programs. The institution should examine these existing courses and programs to explore if there are possible opportunities for collaboration between these existing elements and a potential agricultural communications program. An example of this would be the current agricultural communication course that is taught at the university; elements from this course could be absorbed into the future program and the faculty teaching the course could continue this role under a more structured format.

The Canadian agricultural industry has a role to play in this as well. As a need has been clearly established through this study's findings, industry should become active in supporting a future program developed at the University of Guelph OAC, either by vocalizing their support or offering their time to collaborate with the institution to design the program. Monetary support is also an effective means through which to support a new program in the early phases particularly.

Recommendations for Research

Referring to Wolf's (2007) curriculum development framework, a similar study should be conducted with agricultural faculty and staff and alumni from the University of Guelph. While two of the recommended stakeholders were addressed in this study, these

groups were identified as other important stakeholders for curriculum development initiatives and should be given the same opportunity to share their perspectives and suggestions. Focus groups should be the data collection method to closely match the framework of this study and encourage consistent results.

After the completion of this recommended study, future research should be conducted aligned with Wolf's (2007) next phase, *Curriculum Development*. This would encompass matching findings from the *Curriculum Visioning* phase, such as identified foundational content, desirable educational experiences, and attributes of the 'ideal graduate', with further action such as matching foundational content and program objectives to future courses and developing the program structure. This would provide a basis to move to the final *Alignment, Coordination and Development* phase.

Further, given the breadth of the national agricultural industry and the students who attend the University of Guelph OAC, similar studies should be conducted to include stakeholders outside of Ontario. Other provincial stakeholders could have valuable insights that would contribute to this knowledge and assist in informing future curriculum development efforts.

Finally, due to the relative disconnect between students and industry professionals on whether the program should be predominantly agricultural-focused, further exploration should continue to determine how best to satisfy both of these expressed needs. This line of research should also examine how to give a base agricultural education in the program while attracting other students from outside the agricultural industry to enroll in some capacity.

Future of Agricultural Communications in Canada

The purpose of this study was to explore and highlight the wants and needs of the Canadian agricultural industry and agricultural students at the University of Guelph Ontario Agricultural College regarding a future Canadian agricultural communications program based in the University of Guelph, OAC to inform future curriculum development initiatives. This study sought to bring key stakeholders' interest in and suggestions for such a program to light to provide groundwork for establishing a need for this program.

Future research could extend from this study to assess perspectives from other stakeholders and, depending on results, continue the curriculum development process proposed by Wolf (2017) that informed this research. By including the perspectives of University of Guelph faculty, staff and alumni, future research could contribute to a more comprehensive understanding of perceptions and needs for this program that further substantiate its relevance and importance in Canadian agriculture and academia.

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Appendix A. IRB-Approved Documents

Recruitment Statement for University of Guelph OAC Newsletter

An exciting opportunity is available for OAC students to play a role in developing future agricultural communications programs at Canadian universities. A research study hosted by the Department of Agricultural Communication, Education and Leadership (ACEL) at The Ohio State University is looking for 20 undergraduate OAC students to provide their opinions about agricultural communications as an industry field and a potential academic program at the University of Guelph. If agricultural communication is a field you are interested in, or you have opinions you would like to contribute, this study provides the opportunity to have your voice be heard.

The study is run by one Canadian ACEL Master's student and two departmental faculty members. Student participants would be required to participate in a one-hour focus group hosted by a member of the research team over Zoom. Focus groups will be posed questions surrounding knowledge of agricultural communications, opinions about the field, and interest in potential ag comm academic programs. All opinions and responses will be treated equally and will inform future program development efforts in agricultural communications at OAC.

If you are interested in being part of this study or would like more information, please contact either Madison Dyment or Kyle Farquharson at the following:

Dyment.5@osu.edu

kfarquha@uoguelph.ca

Thank you for your interest in advancing the agricultural industry and educational experience!

Email to Focus Group Recruits

Subject Line: Agricultural Communications Program Development Study- Please Respond

Hello,

I am reaching out to you on behalf of myself, Madison Dyment, Dr. Annie Specht and Dr. Emily Buck of the Ohio State University in hopes of your participation in our study concerning program development in agricultural communications. We are seeking opinions and perspectives from Canadian agricultural industry professionals and agricultural students at the University of Guelph and have identified you as an individual with important perspectives.

The study will require your participation in a short focus group conducted over Zoom. The researcher will ask questions about your perspectives about agricultural communications in the industry and higher education. Your responses will be recorded to be used in the study and the focus groups should take approximately one hour.

Please let us know if you are willing to participate in this study and we will reach out to you with more information and to arrange a time for your focus group. We appreciate your willingness to participate in this study and your thoughtful input. Your feedback is incredibly important.

Your participation is entirely voluntary; you may choose to stop at any time during the process. In the final reports and publications, your name will not be attached to any of your data either directly or indirectly unless you otherwise specify. Please contact Madison Dyment (dyment.5@osu.edu, 289-921-6429), Dr. Emily Buck (buck.210@osu.edu) or Dr. Annie Specht (specht.21@osu.edu) if you have any questions, concerns, or complaints about the study.

Thank you,

Madison Dyment

For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact the Office of Responsible Research Practices at 1-800-678-6251.

Consent Statement

This project serves to gain insight of opinions and perspectives of Canadian agricultural industry professionals and agricultural students from the University of Guelph regarding agricultural communications educational programs and a potential program at the University of Guelph. The data gathered will further future research into

creating a potential agricultural communications program at the University of Guelph in Ontario, Canada.

The project will be taking place remotely through a fully online setting, with the base location being the Agricultural Administration building at The Ohio State University. The investigators for the project will conduct focus groups over Zoom with participants and ask questions regarding their opinions of agricultural communications in an educational and industry capacity. All discourse in the focus groups will be recorded through the Zoom platform with the transcript then saved to a passcode-protected computer. The length of the study is estimated to range from February 10, 2022-March 10, 2022. Participants will only be required for brief increments, roughly for 1.5 hours in order to complete the focus groups.

This study does not present any potential risks to the participants. The questions posed will not require personal information that could cause harm and any identifiable information will be stored on the protected computer where only the investigators may access it. Data will be kept for up to five years after publication in the secure location. Participants may decline to answer any questions they do not wish to discuss, and they also have the option to remain anonymous if desired. Efforts will be made to keep your study-related information confidential. However, there may be circumstances where this information must be released. For example, personal information regarding your participation in this study may be disclosed if required by state law. Also, your records may be reviewed by the following groups: Office for Human Research Protections or other federal, state, or international regulatory agencies; the Ohio State University

Institutional Review Board or Office of Responsible Research Practices. Authorized Ohio State University staff not involved in the study may be aware that you are participating in a research study and have access to your information.

For focus group participants: While we ask other group participants to keep the discussion in the group confidential, we cannot guarantee this. Please keep this in mind when choosing what to share in the group setting. For Zoom participants: We will work to make sure that no intercepts your interview responses without approval. But, because we are using the Internet, there is a chance that someone could access your online responses without permission. In some cases, this information could be used to identify you. Your de-identified information may be used or shared with other researchers without your additional informed consent.

This research will potentially have a great deal of influence on the future of agricultural communications education in Canada. Currently, there are no agricultural communications programs in any Canadian university or college, meaning there are no options for Canadian students who wish to study in the field in their home country. This research will lay the groundwork for future program development in agricultural communications for the University of Guelph, giving countless Canadian students the opportunity to study in this growing field.

Participation in the study is completely voluntary and refusal to participate will not result in any penalty. Participants may also choose to withdraw from the study at any time without any penalty.

Below, you may choose to consent to this study or deny consent. By consenting, you are permitting your interview transcript and any non-personal data obtained through the interview to be used in the study findings and published. This does not provide consent for identifiable information to be used. If you do consent, you are still able to withdraw consent from the study at any time.

I, _____, hereby consent to have my interview results published in the study findings. I recognize that I can withdraw consent at any time during this study.

Signature: _____

Date:_____

For more information, participants may contact the investigators through the following means:

Dr. Annie Specht, The Ohio State University
Associate Professor and Agricultural Communication Program Coordinator
Email: specht.21@osu.edu
Phone: 614-292-1626

Madison Dyment, The Ohio State University
Graduate Associate, Masters Student in Agricultural Communications, Education and Leadership
Email: dyment.5@osu.edu
Phone: 289-921-6429

For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact The Office of Responsible Research Practices at 1-614-688-4792 or hsconcerns@osu.edu.

Industry Focus Group Introduction and Verbal Consent Statement

Hello and welcome to our focus group session. Thank you for taking time to join our discussion today. We are hoping to better understand the wants, needs and opinions of Ontario agricultural students and industry regarding a potential agricultural communications program based in the University of Guelph.

My name is (researcher name) and as an investigator of the study I will be moderating this session. My role here is to ask questions and listen. I won't be participating in the conversation. As current Ontario agricultural industry professionals, you have a unique and important perspective on the culture of the industry and the attitudes of its workers and stakeholders, so we invite you to be as open and honest in your responses as you are comfortable with. Please feel free to share your point of view even if it differs from what others have said. Please speak up and only one person should talk at a time. I'll be asking around 6 questions, and I'll be moving the discussion from one question to the next. Sometimes there is a tendency in these discussions for some people to talk a lot and some people not to say much. So, if one of you is sharing a lot, I

may ask you to let others respond. And if you aren't saying much, I may ask for your opinion.

There is no particular order for the responses, and there are no correct/incorrect answers to any of the questions. This session will be recorded so that we are able to consider your views later, but your name will be removed and your responses anonymous. Be aware there are no risks with your participation, and you are welcome to stop at any time. At this time, are you willing to participate? Let's begin by having you introduce yourselves with your name and your job position.

Student Focus Group Introduction and Verbal Consent Statement

Hello and welcome to our focus group session Thank you for taking time to join our discussion today. We are hoping to better understand the wants, needs and opinions of Ontario agricultural students and industry regarding a potential agricultural communications program based in the University of Guelph.

My name is (researcher name) and as an investigator of the study I will be moderating this session. My role here is to ask questions and listen. I won't be participating in the conversation. As current students at the University of Guelph, you have a unique and important perspective on the culture of the school and the attitudes of its students, so we invite you to be as open and honest in your responses as you are comfortable with. Please feel free to share your point of view even if it differs from what others have said. Please speak up and only one person should talk at a time. I'll be asking around 8 questions, and I'll be moving the discussion from one question to the next.

Sometimes there is a tendency in these discussions for some people to talk a lot and some people not to say much. So, if one of you is sharing a lot, I may ask you to let others respond. And if you aren't saying much, I may ask for your opinion.

There is no particular order for the responses, and there are no correct/incorrect answers to any of the questions. This session will be recorded so that we are able to consider your views later, but your name will be removed and your responses anonymous. Be aware there are no risks with your participation, and you are welcome to stop at any time. At this time, are you willing to participate? Let's begin by introducing ourselves and sharing your majors and year in school.

Appendix B. Focus Group Interview Questions

Student Focus Group Questions

1. What do you think of when you hear agricultural communications?
2. How much do you know/what do you know about this field?
3. What job opportunities do you think there are in agricultural communications in Canada?
4. Is this a field you would study in? Please elaborate.
5. What would you expect to learn in a program like this?
6. What would need to be present in a program like this, if anything, to interest you in studying it?
7. Would you be interested in pursuing this more as an undergraduate degree, a minor, or master's program?
8. Do you feel this program would fit well with the culture at the University of Guelph?

Industry Focus Group Questions

1. What do you think of when you hear agricultural communications?
2. What place do you feel agricultural communications has in the Canadian agricultural industry currently and in the future?
3. What emphasis, if any, do you feel should be placed on educating students in this field? Please elaborate.

4. What skills would you look for in a student having studied agricultural communications when hiring?
5. What elements do you feel should be present in such a program in Canada?
6. What form should this be presented (undergraduate degree, undergraduate minor, course-based master's, etc.)?