EMPLOYER EXPECTATIONS OF 21ST CENTURY ENTRY-LEVEL AGRICULTURAL LEADERSHIP, EDUCATION, AND COMMUNICATIONS GRADUATES: A QUALITATIVE STUDY

A Dissertation

by

JENNIFER ANN SCASTA

Submitted to the Office of Graduate and Professional Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Chair of Committee,	Theresa Pesl Murphrey
Committee Members,	Kim E. Dooley
	Julie Harlin
	Chris Skaggs
Head of Department,	Clare Gill

May2018

Major Subject: Agricultural Leadership, Education, and Communications

ABSTRACT

Preparing students for the agricultural and natural resource workforce requires university agricultural programs that consider the needs of industry. This investigation sought to explore employer expectations of entry-level agricultural leadership, education, and communications graduates through a qualitative lens. The purpose was to determine the knowledge competencies desired and needed by employers and determine if graduates are meeting those needs. Twenty-three purposively selected employers participated based on their prior hiring history and involvement in the Agriculture and Life Sciences Career Fair at Texas A&M University from the years 2012 - 2017. Cross comparative analysis was used to analyze the data, revealing specific categories. Those categories were further sorted into themes. Themes for agricultural leadership were culture, criteria for hiring, high impact experiences, innate characteristics possessed by agricultural leadership students and evaluation of first-year hires. Themes for agricultural science teacher education and agricultural communications included characteristics desired by employers; ability to adapt to a changing environment; areas of improvement; perceptions of high impact experiences; youth; community; and experience, evaluating and following up with first year hires. Findings revealed that students majoring in agricultural leadership, education, and communications are meeting a portion of employer needs; however, there are employer needs that remain unmet. The importance and need for career and professional development in the university classroom was a critical finding. Additionally, findings support the need for future research related to high impact experiences for college students and further research to determine techniques to prepare students to gain workforce skills.

DEDICATION

This document is dedicated to my parents, Bob and Jeannie Smith, for their love, support, and guidance throughout my life.

ACKNOWLEDGEMENTS

"Do not go where the path may lead, go instead where there is no path and leave a trail." –Ralph Waldo Emerson

It is with great honor and privilege that I thank the people who have made it possible for me to go forth and leave a trail. First and foremost, a big thank you to my graduate committee. Your hard work and dedication to my success is appreciated.

Dr. Theresa Murphrey, thank you for directing and guiding me through this process. I always knew I could count on you to be supportive and push me to be my very best. You made time for me, answered any question I might have, and always ensured I felt supported.

Dr. Kim Dooley, thank you for giving me a love of qualitative research. Walking into your class the first time, I had no idea how much I would love this research paradigm. Your enthusiasm for the topic was contagious.

Dr. Julie Harlin, thank you for listening, giving feedback, and being a friend. Taking your Youth at Risk class proved to be the best unexpected addition to my degree plan. This class has helped shape the way I think and will continue to think. Your friendship is something I am so thankful for.

Dr. Chris Skaggs, where do I begin? It is hard to believe that this started 18 years ago when you found an Angus heifer and little blond haired girl at a show in Brenham and made them champion. Your kindness that day would turn into a life-long friendship and mentorship that has shaped and transformed my life. You have always believed in me, encouraged me, and

provided me with numerous opportunities to succeed. You always find a way to make sure I stay on track.

To my colleagues at both the TAMU Career Center and the College of Agriculture and Life Sciences, thank you for your support. You all did small things along the way to help me be successful. I appreciate your help, encouragement, and laughter along the way.

To my friends, thank you for going on this journey with me. Heather, your role in this experience was to be present and you did just that. Thank you for always listening and being there when I needed a break. Julie, thank you for being the best work sister a girl could ask for. Your support and ability to help me see the big picture is always appreciated. Angel, I am thankful God saw it fit to keep us in the same town for our adult life. You have been there since the beginning and you are a treasured friend.

To my husband, Andy Scasta, thank you for your love, patience, and hard work during the last three years. You have constantly ensured our life kept moving and took care of things so I could focus on school. Your sacrifice is appreciated more than you will ever know.

Looking back over my academic journey, there are two individuals who are constants at each and every achievement. I am thankful my parents instilled in me the desire to pursue higher education and gave me the support I needed to fulfill this dream. Mama and daddy, thank you for allowing me to pursue my dreams. I know you sacrificed much to make sure I had the ability to receive an education.

Finally, to my Heavenly Father, thank you for blessing me with far more than I deserve. Thank you for paying the ultimate price for my salvation. Without You, I would be nothing.

CONTRIBUTORS AND FUNDING SOURCES

This work was supported by a dissertation committee consisting of Dr. Theresa Pesl Murphrey, advisor, Dr. Kim E. Dooley, and Dr. Julie Harlin of the Department of Agricultural Leadership, Education, and Communications and Dr. Chris Skaggs of the Department of Animal Science.

All work for the dissertation was completed by the student, in collaboration with Dr. Theresa Pesl Murphrey of the Department of Agricultural Leadership, Education, and Communications.

There are no outside funding contributions to acknowledge related to the research and compilation of this document.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION AND LITERATURE REVIEW

Discussions related to workplace readiness and competencies needed for college graduates to meet industry needs is common; however, literature focused on agricultural leadership, education and communications graduates is somewhat limited and what is available is dated. Recent literature has focused on how to improve classroom teaching to better prepare students for the workplace (Rateau, Kaufman, & Cletzer, 2015), the importance of team-based projects for students (Lamm, Carter, & Melendez, 2014), and student perceptions of an agricultural leadership degree (Moore, Odom, & Moore, 2013).Rateau et al. (2015) expressed that "students must accept their responsibility in learning" (p. 61) while Lamm, et al. (2014) illustrated that team-based learning was an opportunity for students to gain "interpersonal and management skills" (p.110).And, while it is important to understand how students interpret their degree (Moore et al., 2013), these studies do not address the question related to industry needs.

In order to prepare students for the highly competitive global market, industry and higher education must form lasting and meaningful partnerships. These partnerships have huge implications for the future of agriculture graduates (Graham, 2001). Industry is constantly changing, and agricultural educational systems must stay current. Reviewing industry competency needs and requirements to make changes to curriculum is key. Furthermore, the 1997 study by Andelt, Barrett, and Bosshamer found that many jobs require competencies that are not routinely part of the curriculum. With the changes in college curricula, the need for

increased technical competencies, and a changing industry, there is a need to determine skills and competencies required and desired by entry-level agriculture employers (Graham, 2001).

There are multiple factors that contribute to a student's job readiness for a career in agriculture (Graham, 2001). The author continues explaining the impact that partnerships between higher education and industry can have on agriculture graduates. The background of students earning degrees in agriculture are ever-changing (Long, Straquadine, & Campbell, 1992). Even as far back as 1998, a report by the W.K. Kellogg Foundation supported the need to find out whether undergraduate teaching programs of land-grant institutions are still relevant to employers. The W.K. Kellogg Foundation study looked further into the balance of teaching and research, globalizing student learning, diversity, values, and traditional education, encouraging 13 project teams to rethink the relationship between higher education and society. "The workforce is continually reorganizing, and graduates should possess the knowledge and skills required by the industry today" (Graham, 2001, p. 22).

A study dating back to 1996 stated that agricultural curricula should be continuously reviewed and revised in order to remain up-to-date and relevant (Kunkel, Maw, & Skaggs). "As the agricultural industry changes over time, the educational systems pertaining to agriculture and related subjects must not fall behind" (Graham, 2001, p. 22). Furthermore, college curricula should be designed to graduate students who are at the cutting-edge of knowledge and technology (Coorts, 1987). Studies show a well-rounded curriculum is important to meet the needs of employers (Andelt, Barrett, & Bosshamer, 1997). Conflicting research by Coorts (1987) also suggests former modifications led to increased specialization in a time when employers wanted students to be more broadly educated and trained."The task of producing marketable

graduates requires on-going sensitivity to changing needs and perceptions of prospective employers" (Andelt et al., 1997, p. 47).

Universities are encouraged to increase awareness and knowledge of career opportunities through strengthening relationships between faculty and industry (Suvedi & Heyboer, 2004). This can be accomplished through a faculty member's participation in workshops, conferences, and career fairs. Moreover, interactions between industry and higher education has enormous implications for agricultural students (Graham, 2001). Looking to improve skills and competencies, industry and academic institutions have partnered in various ways to achieve common and separate goals (Graham, 2001). The author continues to explain that the input of industry has become increasingly more important to consider in the curricula decision making process due to advances within the workplace.

Research related to career opportunities and job placement for students enrolled in colleges of agriculture have included both a focus on career preparedness as well as studies focused on specific skill needs. Graham (2001) found that students are prepared for entry-level positions. Andelt et al. (1997) explains the commitment to education and industry preparedness by industry leaders. Managers rank interpersonal and communicative skills as an extremely high skill need (Coorts, 1987). Andelt et al. (1997) ranked computer, quantitative, and management of information skills high among employers. Litzenberg and Schneider (1989) found interpersonal skills to be increasingly important and encouraged classes to be taught on these topics at the undergraduate level.

Andelt et al. (1997) and Litzenberg and Schneider (1989) found consistent results, and reflected that similar results would be found at other colleges of agriculture. Leadership

preparation was also a skill found to be missing (Brown & Fritz, 1994). Suvedi and Heyboer (2004) suggested that graduates need more preparation related to résumés, cover letters, and interview skills. In the study by Litzenberg and Schneider (1989), six key categories were identified as important to success in agricultural firms—business and economics; computer, quantitative, and management information; technical skills; communication skills; interpersonal skills; and work experience. A study conducted to determine employers' perspective of skills ranked interpersonal and communications skills as the most important abilities needed for pursuing careers in agriculture (Wehner, 1995). Irlbeck and Akers (2009) suggested a stronger need for communication and creativity in the workplace. Moreover, Wehner (1995) articulated the real world need for agricultural students to be able to explain and defend production agriculture practices to a public that could be trying to derail or deter agriculture. Litzenberg and Schneider (1989) found a need for students to possess both science aptitude and a high level of interpersonal skills.

Character traits, career expectations, and level of knowledge, skills, and abilities related to agriculture are important to agricultural employers industry wide. Doerfert and Miller (2006) explained there is a gap in college graduate's communication abilities, specifically their writing skills and persuasive skills. Graduates also lack the ability to meet the challenges of a high-performance workplace (Graham, 2001). Andelt et al. (1997) found that there was a lack in leadership abilities, particularly in problem solving and team work, in agriculture students. In a study by Irlbeck and Akers (2009), researchers found "several participants commented that recent graduates have unrealistic expectations about pay and promotions" (p. 69). According to Graham (2001), some graduates exhibit "on-the-job awkwardness" and do not have the maturity

or business-savvy possessed by more experienced employees (p. 22). The author continues to explain all character traits were very important to employers. Recent studies have explained the market is saturated with positions for agriculture graduates and students are unprepared to fill these roles due to lack of knowledge, skills and abilities (Andelt et al., 1997). The basic competencies taught do not always meet the needs of employers. Thus, there is motivation for institutions of higher education to partner with industry to help prepare graduates to work in a highly competitive market (Graham, 2001).According to Doerfert and Miller (2006), there are differences between academia and industry perspectives as each entity has varying ideas related to skills and workplace habits.

As we graduate more agricultural graduates into the workforce, industry professionals' knowledge is imperative to measure how well academic institutions are meeting the needs of employers. Litzenberg and Schneider (1989) found that more information is needed related to demand levels for specific skills and competencies. Irlbeck and Akers (2009) posed the question, "Are we teaching what the industry needs us to teach?" (p. 65).The study by Andelt et al. (1997) asked, "Did your students learn what was taught and can today's students compete in the job market?" (p. 48). The author continued to explain, "The more that is known about competencies needed in these careers and taken into account in curriculum development, the more employable graduates will be in the marketplace" (p. 48).There have been multiple student follow-up studies to assess how well an academic institution has met its objectives, but no qualitative, open-ended questions have been asked (Suvedi & Heyboer, 2004)."Due to changes in college curricula, increased technical competencies, and a changing industry, there is a need to determine the entry-level knowledge, skills, and abilities required of college graduates" (Graham 2001, p. 4). In

order to look closer at this information, a cooperative effort between academic institutions and industry is imperative. After a review of literature, no relevant employer focused qualitative study was found.

Kuh (2008) defines and discusses the general importance of high impact learning activities (HILA) in his seminal work. He explains that HILA include first year seminars and experiences; common intellectual experiences (e.g., core curricula across disciplines); learning communities (e.g., the pairing of courses for a cross-disciplinary immersive student experience); writing intensive courses; collaborative assignments and projects (e.g., problem solving in groups); undergraduate research; diversity and global learning (e.g., study abroad opportunities and internationally themed coursework); service learning (e.g., the application of classroom knowledge to outside situations, such as competition teams); internships; and capstone experiences.

Studies identifying industry-ready skills and the level of preparation needed for recent graduates can offer insight into how employers assess their recent hires ability to perform on the job, particularly in agriculture (Graham, 2001). The skills noted as important emphasized well-developed interpersonal skills, leadership ability, problem solving, teamwork, communication skills, and computer skills (Williams, Robertson, Kieth, & Deal, 2014). In addition, other desirable traits emerged. Most noted were integrity, ethical judgment, global awareness, language skills, and the ability to adapt in changing environments (Kuh, 2008).

Studies discuss the direct benefits for college students through the development of job-readiness skills through high impact learning activities. Moreover, the authors explain how high impact learning activities provide students with opportunities to expand their critical/strategic

thinking and leadership experience (Kuh, 2008). There has been literature published assessing the role of high impact learning activities for student success in a general higher education environment, e.g., Kilgo, Sheets, and Pascarella (2015), and Seifert, Gillig, Hanson, Pascarella, and Blaich (2014). In agriculture, however, recent work by Leggette, Black, McKim, Prince, and Lawrence (2013), McKim, Latham, Treptow, and Rayfield (2013), and Odom, Shehane, Moore, and McKim (2014) highlights the impact high impact learning activities and field activities have on undergraduate students. There has not, however, been significant research done on the impact of high impact experience on job readiness and student success in their first full-time position. This study contributed to this gap.

Theoretical Framework

The theoretical framework that guided this study was founded upon human capital theory. This theory is used to explain the relationship between educational inputs and occupational success (Briggeman, Henneberry, & Norwood, 2007). Educational inputs can include courses taken and high impact experience participation. Becker (1964), Little (2003), Shultz (1971), Smith (2010), and Smylie (1996) (as cited by Robinson & Baker, 2012) described the basis for human capital as a person's knowledge, experiences, education, and skills. Human capital is based on how positive and unique an individual's skills are and how much an employer values these skills (Lepak & Snell, 1999).

A student's human capital increases as new skills are learned (Heckman, 2000). Becker (1964) stated potential employers assess a student's skill set and abilities to determine student's employability. Many activities increase human capital and make a student more valuable to the

employer (Robinson & Baker, 2012). Employability is based on human capital which means as individuals learn more skills and gain a broader range of skills, their human capital increases (Smith, 2010). Smith studied human capital and how it changes as employees become specifically skilled in a certain area. As employees become more skilled, their human capital increases; however, a greater downside lose occurs when specific opportunities are not available (Smith, 2010).

A framework based on human capital theory was created using the following components: resources, education and training, occupational success, high impact experiences, and courses. This framework is explained in Figure 1. Educational inputs can include courses taken and high impact experience participation. For this study, high impact experiences were limited to internships, study abroad, and undergraduate research. DiBenedetto and Myers (2016) explain that educational inputs can transfer into employability skills such as communication skills, decision making skills, self-management skills, teamwork skills, and leadership skills. Competencies learned or not learned can be impacted by these educational inputs. Employer perceived gaps in competencies needed that are impacted by courses taken and high impact experience participation were triangulated and evaluated within the study.

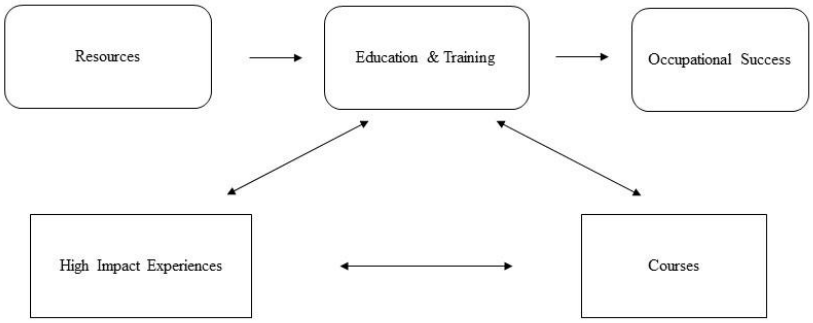

Figure 1: *Educational inputs identified in the literature that impact human capital: A framework to guide the study to determine employer expectations of college graduates, Texas A&M University, 2017*

Background of the Study

The success of students pursuing degrees in agricultural leadership, agricultural science teacher education, or agricultural communications and journalism is not collectively measured by the university or a national association. There is a need to measure the success of a students' performance in their first job post-graduation. Additionally, there is a need to understand desired competencies needed in order to properly develop and improve curriculum at the undergraduate level. Documenting the perception of high impact experiences from an employer's perspective can help educate university professionals to develop effective high impact learning activity programs. Results from this study provides information that can be used by employers, university administrators, and faculty.

Interviews with employers in the respective fields of agricultural leadership, agricultural science teacher education, and agricultural communications and journalism were conducted to determine desired competencies and the perception of high impact experiences. Recent research

that looks directly at desired competencies, high impact experiences, or the relationship between the two was not able to be identified; therefore, investigation of this topic was necessary.

Statement of the Problem

Based on the review of literature, lack of peer reviewed research on employer expectations of entry-level agricultural leadership, agricultural science teacher education, or agricultural communications and journalism graduates existed. Little is known about the competencies desired and needed, specifically related to High Impact Experiences, by employers of entry-level graduates with a focus on agricultural leadership, agricultural science teacher education, or agricultural communications and journalism. The current American Association for Agricultural Education National Research Agenda (2016) encourages studies related to competencies needed for an agricultural and natural resource workforce. This study specifically addressed the AAAE research priority question, "What competencies are needed to effectively educate, communicate, and lead?" (Roberts, Harder & Brashears, 2016, p. 31).

Guiding questions for this study: a) What are the desired competencies students need to be successful in their first job?, b) Which competencies are more desired than others?, c) What impact do high impact experiences have on student's performance during their first job?, d) Which high impact experiences do employers seek for students to have participated in?, and e) How well is the university preparing students for their entry-level positions?

Purpose

The purpose of this qualitative study was to determine the knowledge and competencies desired by employers of entry-level graduates with a focus on agricultural leadership, agricultural education, and agricultural communications and journalism and to determine if the graduates hired were perceived to meet the identified needs. The study also described the perceived value of three specific high impact experiences (i.e., internships, study abroad, and research mentorship) from an employer perspective. This research was completed following the three-article format for completion of a dissertation.

Objectives

Each article contained the same objectives for a separate population to determine employer expectations of entry-level agricultural leadership, education, and communication graduates. The purpose was supported by the following objectives:

1) Examine the desired competencies for entry-level positions for agricultural leadership, education, and communication graduates,
2) Examine the level of importance of desired competencies for entry-level positions for agricultural leadership, education, and communication graduates,
3) Examine the high impact experiences valued by entry-level employers of agricultural leadership, education, and communication graduates,

Methodology

Utilizing non-probability, purposeful sampling the researcher identified employers to interview. These employers were called upon to share meaningful information as they each possessed special experiences and competences (Merriam & Tisdell, 2016). They were considered an expert panel. Selected employers had either annually attended the career fair at the university to hire recent graduates or had consecutively worked with the Department of Agricultural Leadership, Education, and Communications to identify and hire recent graduates. Employers, each associated with the respective major of Agricultural Leadership, Agricultural Science Teacher Education, and Agricultural Communications and Journalism, were requested to participate by the researcher. Individuals were identified based upon varying levels of experience and company profile. The researcher was approved to conduct 60 interviews, but stopped conducting interviews at saturation (Merriam & Tisdell, 2016).

For all three articles, the same methods were used. Over 100 companies recruit and hire agricultural leadership graduates, agricultural education, and agricultural communications and journalism graduates from the university (Stoltzfus, personal communication, March 14, 2017). Twenty-three employers were identified and interviewed based on their participation in the career fair. These collective employers had attended the career fair consecutively from 2012 - 2017. Nine employers were identified who had hired at least five Agricultural Leadership and Development students annually for the last five years, 135 total students respectively. Eight employers were identified who had hired at least five Agricultural Communications and Journalism students annually for the last five years, 150 total students respectively. Six employers were identified based on their consecutive work in recruiting and hiring agricultural

education graduates annually over the last five years through the Department of Agricultural Leadership, Education, and Communications. These six employers have hired a combined total of 20 graduates who focused on agricultural education in the K-12 academic setting.

Each participant took part in a semi-structured interview via telephone (Kvale, 1996) and focused on preferred knowledge and skills needed as well as an understanding of the importance of high impact experiences related to entry-level undergraduate hires. Each semi-structured interview lasted approximately 45 minutes. An interview guide (Appendix A) was used during each interview to help facilitate the order of topics addressed during the interview (Kvale, 1996). Each participant was assigned a pseudonym to ensure confidentiality. Member checking was accomplished by requesting the participants to review interview transcripts and respond with any changes or additions. All interviewees participated in the transcript review process. The peer debriefings were held with the researcher and another colleague prior to data analysis (Erlandson, Harris, Skipper, & Allen, 1993).

The researcher used constant comparative analysis to analyze the data and thus, the data was organized into categories and themes. Merriam and Tisdell (2016) define category as "the same as a theme, a pattern, a finding, or an answer to a research question," (p. 204). Each set of data from an interview was analyzed immediately following member checking and was compiled with the previous interview data. This allowed analysis to be a consistent and progressive process which allowed the emergence of themes throughout data collection. Open coding was used as the research took into account the transcripts and observations made during the interviews (Merriam & Tisdell, 2016). Codes were assigned to pieces of data and categories were formed. The researcher repeated this step at the conclusion of each interview.

The categories were sorted into themes identified as being repeated frequently and accounting for the most data (Merriam & Tisdell, 2016). This was accomplished using note cards with each note card representing one unit of data. Trustworthiness was established through member checks, multiple peer debriefings, and triangulation to ensure rigor. Participants were provided copies of their interview transcripts to allow member checks. Interviews were peer debriefed with members of the faculty at Texas A&M University. Further, data was triangulated with archival data collected from the Texas A&M University Career Center and the Department of Agricultural Leadership, Education, and Communications.

Trustworthiness and Reflexivity

This study was framed by the differences in policies and standards that varied across companies represented by the 23 interview participants. This study included the specific needs and desires from the various companies and organizations represented in the participants. Trustworthiness was confirmed through archival data, member checking, and the author's lived experience.

The author worked for six years in the Texas A&M University Career Center as a career advisor for agriculture students. In this role, the author works with students to assist in career development. The author meets individually and in groups with students to help them plan their careers, make choices on which high impact experiences would serve them best, and identify appropriate companies to pursue for employment. The author works with employers to identify talent for their companies, provide advice on how to properly brand each company on campus, and provide opportunities for employers to interact with students on-campus. The author works with the employers during the bi-annual career fair each semester, as well. As a result of this

work, the author possesses firsthand knowledge of company's interests and needs, as well as respect and rapport with employers. This experience served as a foundation upon which the research was conducted. It is recognized that these experiences could impact the lens through which the author viewed the results of the study.

Terms

The following terms were used throughout the study and within the resulting manuscripts:

a) Competencies- Identifiable skills or abilities necessary for successful performance in an occupation a student might seek after completion of his or her coursework or academic experience (Akers, Vaughn, & Lockaby, 2001).

b) Department of Agricultural Leadership, Education, and Communications- college department housed in the College of Agriculture and Life Sciences at Texas A&M University. Home of the agricultural leadership, agricultural sciences, and agricultural communications and journalism majors.

c) High Impact Experiences/Learning Activities (HIE/HILA)- Various curricular and extracurricular opportunities offered to students to further their job readiness, cultural awareness, and reinforce the knowledge learned in the classroom (Kuh, 2008).

d) Texas A&M Career Center- Part of the Texas A&M University Division of Academic Affairs. Responsible for assisting students in their career development. This office records employment data at graduation and at 90 days after graduation (Stoltzfus, 2017, personal communication).

References

Akers, C., Vaughn, P. D., & Lockaby, J. D. (2001). High school agricultural communications competencies: A national Delphi study. *Journal of Southern Agricultural Education Research, 51*(1), 124-137. doi: 10.1.1.543.7933

Andelt, L. L., Barrett, L. A., & Bosshamer, B. K. (1997). Employer assessment of the skill preparation of students from the college of agricultural sciences and natural resources university of Nebraska-Lincoln: Implications for teaching and curriculum. *NACTA Journal, 41*(1), 47-53. Retrieved from https://www.nactateachers.org/attachments/article/673/Larry_Andelt_NACTA_Journal_Dec_1997-10.pdf

Becker, G. (1964). *Human capital: A theoretical and empirical analysis with special reference to education*. Chicago, IL: The University of Chicago Press.

Briggeman, B., Henneberry, S., & Norwood, F. (2007). How do employers assess job candidate attributes? *NACTA Journal, 51*(1),15-22. Retrieved from http://www.nactateachers.org/attachments/article/242/Briggeman_September_2007_NACTA_Journal-2.pdf

Brown, F. W., & Fritz, S. M. (1994). Determining the breadth of leadership and human resource management/development offerings in post-secondary departments of agricultural education. *Journal of Agricultural Education, 35*(3), 1-5. doi: 10.5032/jae.1994.03001

Coorts, G. D. (1987). Updating today's college curriculum for tomorrow's agriculture. *NACTA Journal, 31*(2), 20-21. Retrieved from https://www.nactateachers.org/attachments/article/1098/Coorts_NACTA_Journal_June_1987-5.pdf

DiBenedetto, C. & Myers, B. (2016). A conceptual model for the study of student readiness for the 21st century. *NACTA Journal, 60*(1), 28-35. Retrieved from https://www.nactateachers.org/attachments/article/2390/9%20DiBenedetto_NACTA%20Journal%20Special%20May%202016.pdf

Doerfert, D. L., & Miller, R. P. (2006). What are agriculture industry professionals trying to tell us? Implications for university-level agricultural communications curricula. *Journal of Applied Communications, 90*(3), 17-31. doi: 10.4148/1051-0834.1273

Erlandson, D. A., Harris, E. L., Skipper, B. L., & Allen, S. D. (1993). *Doing naturalistic inquiry: A guide to methods.* Newbury Park, California: Sage.

Graham, D. L. (2001). Employer perceptions of the preparation of agricultural and extension education graduates. *Journal of Southern Agricultural Education, 51*. Retrieved from https://files.eric.ed.gov/fulltext/ED462281.pdf

Heckman, J. L. (2000). *Invest in the very young*. Chicago, IL: Ounce of Prevention Fund. Retrieved from: http://www.ounceofprevention.org/downloads/publications/Heckman.pdf

Irlbeck, E. G., & Akers, C. W. (2009). Employers' perceptions of recent agricultural communications graduates' workplace habits and communication skills. *Journal of Agricultural Education, 50*(4), 63-71. doi: 10.5032/jae.2009.04063

Kilgo, C. A., Sheets Ezell, J. K., & Pascarella, E. T. (2015). The link between high-impact practices and student learning: Some longitudinal evidence. *Journal of Higher Education, 69*(4), 509-525. doi: 10.1007/s10734-014-9788-z

Kuh, G. D. (2008). *High-impact educational practices: What they are, who has access to them, and why they matter.* Washington, D.C.: Association of American Colleges and Universities.

Kunkel, H. O., Maw, I. L., & Skaggs, C. L. (1996). *Revolutionizing higher education in agriculture*. Ames, Iowa: Iowa State University Press.

Kvale, S. (1996). *InterViews.* Thousand Oaks, California: Sage.

Lamm, K. W., Carter, H. S., & Melendez, M. W. (2014). Investigating the linkage between intrinsic motivation and project team satisfaction in undergraduate agricultural leadership students. *Journal of Agricultural Education, 55*(3), 103-115. doi: 10.5032/jae.2014.03103

Leggette, H. R., Black, C., McKim, B. R., Prince, D., & Lawrence, S. (2013). An intrinsic case study of a post-secondary high-impact field experience. *NACTA Journal, 57*(3A), 129-138. Retrieved from https://www.nactateachers.org/attachments/article/2106/26.%20Leggette%20NACTA%20Special%20Issue%20Sept%202013.pdf

Lepak, D. P., & Snell, S. A. (1999). The human resource architecture: Toward a theory of human capital allocation and development. *The Academy of Management Review, 24*(1), 31–48. Retrieved from https://s3.amazonaws.com/academia.edu.documents/7908776/hc_architecture_web.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1514405851&Signature=fmUOO9QUeqrHPgM%2FSLBk1nFHG%2Bg%3D&response-content-disposition=inline%3B%20filename%3DTh

Little, A. W. (2003, December). Motivating learning and the development of human capital. *British Association for International and Comparative Education, 33*(4), 437–452. doi: 10.1080/0305792032000127748

Litzenberg, K. K., & Schneider, V. E. (1989). A profile of tomorrow's agribusiness leaders: The US perspective. *Agribusiness, 5*(3), 249-258. doi: 10.1002/1520-6297

Long, G. A., Straquadine, G., & Campbell, W. F. (1992). Plant science alumni rate their education based upon entry-level professional experience. *Journal of Natural Resources and Life Sciences Education, 21*(1), 34-36. Retrieved from https://www.agronomy.org/files//publications/nse/pdfs/jnr021/021-01-0034.pdf

McKim, B. R., Latham, L., Treptow, E., & Rayfield, J. (2013). A repeated measures study of the short-term influences of high impact practices of college students' learning styles. *NACTA Journal, 57*(3A), 122-128. Retrieved from https://www.nactateachers.org/attachments/article/2107/25.%20McKim%20NACTA%20Special%20Issue%20Sept%202013.pdf

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation.* San Francisco, California: Jossey-Bass A Wiley Brand.

Moore, L. L., Odom, S. F., & Moore, K. T. (2013). What a degree in agricultural leadership really means: exploring student conceptualizations. *Journal of Agricultural Education, 54*(4), 1-12, doi: 10.5032/jae.2013.04001

Odom, S. F., Shehane, M., Moore, L. L., & McKim, B. R. (2014). An analysis of high-impact field experience in agriculture: Documenting critical thinking skills through reflection. *NACTA Journal, 58*(3), 214-220. Retrieved from https://www.nactateachers.org/attachments/article/2227/9.Odom_NACTA%20Journal.pdf

Rateau, J. R., Kaufman, E. K., & Cletzer, D. A. (2015). Innovative classroom strategies that prepare college graduates for workplace success. *Journal of Agricultural Education, 56*(3), 52-68. doi: 10.5032/jae.2015.03052

Roberts, T. G., Harder, A., & Brashears, M. T. (Eds). (2016). American Association for Agricultural Education national research agenda: 2016-2020. Gainesville, FL: Department of Agricultural Education and Communication.

Robinson, S. & Baker, M. (2012). *The decisions principals make when interviewing candidates: implications for improving the human capital of pre-service teachers in agricultural education.* Paper presented at the Southern Association of Agricultural Scientists Conference, Birmingham, Alabama.

Seifert, T. A., Gillig, B., Hanson, J. M., Pascarella, E. T., & Blaich, C. F. (2014). The conditional nature of high impact/good practices on student learning outcomes. *Journal of Higher Education, 85*(4), 531-564. doi: 10.1080/00221546.2014.11777339

Shultz, T. W. (1971). *Investment in human capital: The role of education and of research*. New York, NY: The Free Press.

Smylie, M. A. (1996). From bureaucratic control to building human capital: The importance of teaching learning in education reform. *Educational Researcher, 25*(9), 9–11. doi: 10.3102/0013189X025009009

Stoltzfus, M. (2017). *An oral demographic description of companies who hire ALEC students*. Texas A&M University, College Station.

Suvedi, M., & Heyboer, G. (2004). Perceptions of recent graduates and employers about undergraduate programs in the college of agriculture and natural resources at Michigan State University: A follow-up study. *NACTA Journal*, *48*(1), 22-27. Retrieved from http://www.nactateachers.org/attachments/article/457/Suvedi_March04NACTA_JOURNAL-4.pdf

W. K. Kellogg Foundation (1998). *Visions of change in higher education*. East Battle Creek, Michigan: Author.

Wehner, D. J. (1995). Issues facing professionals in agriculture: A communications-intensive course. *NACTA Journal*, *39*(1), 10-13. Retrieved from http://www.nactateachers.org/attachments/article/738/Wehner_NACTA_Journal_March_1995-2.pdf

Williams, K., Robertson, T., Kieth, L., & Deal, A. (2014) Skills, knowledge, and abilities employers seek in new professionals entering careers in the fed beef industry. *NACTA Journal*, *58*(4), 349-355. Retrieved from https://www.nactateachers.org/attachments/article/2242/14%20Williams_NACTA%20Journal.pdf

CHAPTER II

EMPLOYER EXPECTATIONS OF 21ST CENTURY ENTRY-LEVEL AGRICULTURAL LEADERSHIP GRADUATES: A QUALITATIVE STUDY

Introduction & Literature Review

Literature focused on agricultural leadership graduates' workplace readiness is somewhat limited and what is available is dated. However, conversations related to workplace readiness and competencies needed for college graduates to meet industry needs is common. Recent literature has addressed issues closely related to workplace readiness such as how to improve classroom teaching to better prepare students for the workplace (Rateau, Kaufman, & Cletzer, 2015), the importance of team-based projects for students (Lamm, Carter, & Melendez, 2014), and student perceptions of an agricultural leadership degree (Moore, Odom, & Moore, 2013).Moore, et al. (2013) explained the importance of students being able to understand their degree, but did not address the question related to industry needs. Rateau et al. (2015) expressed that "students must accept their responsibility in learning" (p. 61) while Lamm, et al. (2014) illustrated that team-based learning was an opportunity for students to gain "interpersonal and management skills" (p.110).

Partnerships between industry professionals and higher education is key to help prepare graduates for the highly competitive global market. With an ever-changing industry, it is imperative for institutions of higher education to stay current. These partnerships help the industry and higher education understand each other and complement each other (Graham, 2001). Irlbeck and Akers (2009) explain the importance of reviewing industry competency needs

and requirements to effectively make changes within curriculum. Other authors, Andelt, Barrett, and Bosshamer (1997), found multiple jobs are requiring competencies not taught within curriculum. As industry needs are identified, industry and higher education must partner to determine skills and competencies required by employers (Graham, 2001).

Graham (2001) explains the multiple factors contributing to a student's job readiness. The author credits partnerships between higher education and academia as a primary factor. Other studies (Long, Staquadine, & Campbell, 1992) address the ever-changing background of students earning degrees in agriculture. Dating back to 1998, the report by the W. K. Kellogg Foundation posed a question relating to the relevance of agriculture programs at land-grant institutions. Furthermore, the W.K. Kellogg Foundation study looked further into the balance of teaching and research, globalizing student learning, diversity, values, and traditional education, encouraging 13 project teams to rethink the relationship between higher education and society. "The workforce is continually reorganizing, and graduates should possess the knowledge and skills required by the industry today" (Graham, 2001, p. 22).

Agricultural curricula should be continuously reviewed and revised in order to remain up-to-date and relevant (Kunkel, Maw, & Skaggs, 1996). Coorts (1987) explains the importance of college curricula graduating students who are highly skilled and well-versed in technology. "As the agricultural industry changes over time, the educational systems pertaining to agriculture and related subjects must not fall behind" (Graham, 2001, p. 22). Another study by Andelt, et al. (1997) discussed the importance of well-rounded curriculum while conflicting research by Coorts (1987) suggests curriculum is too specialized during a time when employers want broadly educated and trained students. "The task of producing marketable graduates requires on-going

sensitivity to changing needs and perceptions of prospective employers" (Andelt et al., 1997, p. 47).

Faculty members and industry partners often have strong relationships which are encouraged to increase awareness and knowledge of career opportunities (Suvedi & Heyboer, 2004). Faculty participation in workshops, career fairs, and conferences often helps in strengthening these partnerships. These partnerships can help all parties achieve goals while improving the skills and competencies needed by students (Graham, 2001). The author continues to explain that as the industry advances, the input of industry perspective becomes more and more important.

Andelt et al. (1997) discusses the commitment industry leaders have as it relates to education and career preparedness. Employers rank communication and interpersonal skills as an extremely high skill need according to Coorts (1987). Andelt et al. (1987) found computer skills, quantitative skills, and management information skills ranked high among employers while Litzenberg and Schneider (1983) encouraged instructors to teach interpersonal skills within undergraduate classes. These authors continued to find consistent results and projected that similar results would be found in other agricultural colleges. In the 2001 study by Graham the author found that students are prepared for their entry-level positions while Suvedi and Heyboer (2004) suggested graduates needed more instruction related to resumes, cover letters, and interview skills. Leadership development is also a missing skill (Brown & Fritz, 1994). Furthermore, Andelt et al. (1997) found there was a lack of problem solving skills in agriculture students. In the study by Litzenberg and Schneider (1989), six key categories were identified as important to success in agricultural firms—business and economics; computer, quantitative, and

management information; technical skills; communication skills; interpersonal skills; and work experience. Communication and creativity skills are missing in many entry-level graduates (Irlbeck & Akers, 2009). Debate skills that enable students to explain and defend production agriculture practices to a public audience are important (Wehner, 1995). Finally, Litzenberg and Schneider (1989) found a need for students to possess a combination of science aptitude and a high level of interpersonal skills.

Meeting the demands of a high-performance workplace is important and many graduates are unable to achieve this (Graham, 2001). Students' expectations are unrealistic about pay and promotions (Irlbeck & Akers, 2009). Moreover, Doerfert and Miller (2006) found a gap in graduate's ability to communicate, specifically their written and persuasive skills.

Character traits, career expectations, and level of knowledge, skills, and abilities related to agriculture are important to agricultural employers industry wide. According to Graham (2001), some graduates do not have the maturity or business-savvy possessed by more experienced employees. Due to a saturated market, there are more positions than qualified applicants (Andelt et al., 1997). Because the basic skills taught do not always meet the needs of industry, there is motivation for institutions of higher education to partner with industry (Graham, 2001).Lastly, according to Doerfert and Miller (2006), there are differences between academia and industry as each entity has varying ideas related to skills and workplace habits.

Irlbeck and Akers (2009) ask the question, "Are we teaching what the industry needs us to teach?" (p. 65). Looking to the future, as we graduate more graduates into the workforce, it is imperative to understand industry professionals' perspective to ensure their needs are met.

Litzenberg and Schneider (1989) found that more information is needed related to demand levels for specific skills and competencies. The study by Andelt et al. (1997) asked, “Did your students learn what was taught and can today’s students compete in the job market?” (p. 48). The author continued to explain, “The more that is known about competencies needed in these careers and taken into account in curriculum development, the more employable graduates will be in the marketplace” (p. 48).There have been multiple student follow-up studies to assess how well an academic institution has met its objectives, but no qualitative, open-ended questions have been asked (Suvedi & Heyboer, 2004).“Due to changes in college curricula, increased technical competencies, and changing industry, there is a need to determine the entry-level knowledge, skills, and abilities required of college graduates” (Graham 2001, p. 4). In order to look closer at this information, a cooperative effort between academic institutions and industry is imperative. After a review of literature, no relevant employer focused qualitative study was found.

Understanding how high impact learning activities impact career readiness is important. Kuh (2008) defines and discusses the general importance of high impact learning activities in his seminal work. HILAs include first year seminars and experiences; common intellectual experiences (e.g., core curricula across disciplines); learning communities (e.g., the pairing of courses for a cross-disciplinary immersive student experience); writing intensive courses; collaborative assignments and projects (e.g., problem solving in groups); undergraduate research; diversity and global learning (e.g., study abroad opportunities and internationally themed coursework); service learning (e.g., the application of classroom knowledge to outside situations, such as competition teams); internships; and capstone experiences.

Identifying industry-ready skills and how they are attained can assist employers in assessing their recent hires ability on the job (Graham, 2001). Specific skills noted as important by Williams, Robertson, Kieth, and Deal (2014) are interpersonal skills, leadership ability, problem solving, teamwork, communication skills, and computer skills. In addition, other desirable traits emerged. Most noted were integrity, ethical judgment, global awareness, language skills, and the ability to adapt in changing environments (Kuh, 2008).

There are many studies that address the job readiness benefits for students to experience high impact learning activities. Kuh (2008) explains high impact learning activities provide students with opportunities to expand their critical/strategic thinking and leadership experience. There is recent literature that assesses the role of high impact learning activities for student success, e.g., Kilgo, Sheets, and Pascarella (2015), and Seifert, Gillig, Hanson, Pascarella, and Blaich (2014). In agriculture, however, recent work by Leggette, Black, McKim, Prince, and Lawrence (2013), McKim, Latham, Treptow, and Rayfield (2013), and Odom, Shehane, Moore, and McKim (2014) highlights the influence high impact learning activities and field activities have on undergraduate students. There has not, however, been significant research done on the influence of high impact experience on job readiness and student success in their first full-time position. This article addressed this topic.

Theoretical Framework: Human Capital Theory

This study was guided by a theoretical framework based upon human capital theory. This theory explained the relationship between educational inputs and occupational success (Briggeman, Henneberry, & Norwood, 2007). According to Lepak and Snell (1999), human capital is based

on how positive and unique an individual's skills are and how much an employer values these skills. Educational inputs can include courses taken and high impact experience participation. Becker (1964), Little (2003), Shultz (1971), Smith (2010), and Smylie (1996) (as cited by Robinson & Baker, 2012) described the basis for human capital as a person's knowledge, experiences, education, and skills.

As new skills are learned, a student's human capital increases (Heckman, 2000). Employers assess skill sets, abilities, and human capital to determine their employability (Becker, 1964). There are some activities that can increase human capital and make students more employable (Robinson & Baker, 2012). According to Smith (2010), employability is based on human capital which means as individuals learn more skills and a broader range of skills, their human capital increases. Human capital can change as employees become specifically skilled in certain areas (Smith, 2010). Furthermore, as employees become more skilled, their human capital increases; however, a greater downside lose occurs when specific opportunities are not available (Smith, 2010).

The author created a framework based around human capital theory. Educational inputs include courses taken and high impact experience participation. For this study, high impact experiences are limited to internships, study abroad, and undergraduate research. Educational inputs can transfer into employability skills such as communication skills, decision making skills, self-management skills, teamwork skills, and leadership skills (DiBenedetto & Myers, 2016). Competencies learned or not learned can be impacted by these educational inputs. Employer perceived gaps in competencies needed that are impacted by courses taken and high impact experience participation were triangulated and evaluated within this study.

Background of Study

Success in the first job post-graduation is not being measured by a university or national association from students pursuing a degree in agricultural communications and journalism. To understand desired competencies, there is a need to measure the success of students' performance in their first job post-graduation. Programs can be improved and properly developed based on understanding the industry's needs and wishes. University professionals need to understand the perception of high impact learning practices from an employer standpoint to continue improvement of these programs. The results from this study provide information that can be used by employers, university professionals, and faculty.

Employers who have hired agricultural leadership graduates from 2012 – 2017 last five years were interviewed to determine desired competencies and the perception of high impact experiences. There was no recent research that looked directly at desired competencies, high impact experiences, or the relationship between the two, therefore investigation of this topic was beneficial.

Statement of the Problem

Little is known about the competencies desired and needed, specifically related to high impact learning activities, by employers of entry-level graduates with a focus on agricultural leadership. The current American Association for Agricultural Education National Research Agenda (2016) invites studies related to competencies needed for an agricultural and natural resource workforce. This study specifically addressed the AAAE research priority question, "What competencies are

needed to effectively educate, communicate, and lead?" (Roberts, Harder & Brashears, 2016, p. 31).

Guiding questions for this study: a) What are the desired competencies students need to be successful in their first job?, b) Which competencies more desired than others?, c) What influence do high impact experiences have on student's performance during their first job?, d) Which high impact experiences do employers seek for students to have participated in?, and e) How well is the university preparing students for their entry-level positions?

Purpose

The purpose of this qualitative study was to determine the knowledge and competencies desired and needed by employers of entry-level graduates with a focus on agricultural leadership and to determine if the graduates hired are meeting the identified needs.

Objectives

The purpose was supported by the following objectives:

1) Examine the desired competencies for entry-level positions for agricultural leadership graduates,
2) Examine the level of importance of desired competencies for entry-level positions for agricultural leadership graduates,
3) Examine the high impact experiences valued by entry-level employers of agricultural leadership graduates,

Methodology

Currently, over 50 companies recruit and hire agricultural leadership graduates from Texas A&M University (Stoltzfus, personal communication, March 14, 2017). Utilizing non-probability, purposeful sampling the researcher identified nine employers to interview. These nine employers were interviewed to gain meaningful information as they each possessed special experiences and competences (Merriam & Tisdell, 2016). The employers selected each had participated in the university career fair consecutively for the last five years and had hired at least five students who had majored in agricultural leadership annually. Thus, these nine employers had hired a combined total of 135 graduates who had focused on agricultural leadership. Each purposively-selected employer was requested for participation by the researcher based on varying levels of experience and company profile. Specifically, five men and four women were selected for participation. One participant had been with their respective company less than a year, three participants had been with their company from 10 – 14 years, and five participants had been with their companies for 35 – 39 years. Additionally, one participant was from south Texas, six were from central Texas, and two were from out of state. Each participant was assigned a pseudonym to ensure confidentiality. See Table 1 for each participant's demographic information.

Table 1 *Agricultural leadership participants' demographic information, Texas A&M University, 2016 - 2017*

Name	Position	Years of Experience
Carlie	Hiring Resources Representative	12 Years
David	Manager	38 Years
Hillary	Recruiter	1 Year
Joe	Sales Manager	39 Years
Karen	Recruiter	36 Years
Natalie	Recruiter	12 Years
Ray	Human Resources Manager	35 Years
Rob	Sales Manager	13 Years
Sam	Sales Manager	37 Years

Each participant took part in a semi-structured interview via telephone (Kvale, 1996) and focused on preferred knowledge and skills needed as well as an understanding of the importance of high impact experiences related to entry-level undergraduate hires. Each semi-structured interview lasted approximately 45 minutes. An interview guide (Appendix A) was used during each interview to help facilitate the order of topics addressed during the interview (Kvale, 1996). Member checking was accomplished by requesting the participants to review interview transcripts and respond with any changes or additions. All interviewees participated in the transcript review process. A peer debriefing was held with the researcher and another colleague prior to data analysis (Erlandson, Harris, Skipper, & Allen, 1993).

The researcher used constant comparative analysis to analyze the data and thus, the data was organized into categories and themes. Merriam and Tisdell (2016) define category as "the same as a theme, a pattern, a finding, or an answer to a research question," (p. 204). Each set of data resulting from an interview was analyzed immediately following member checking and

compiled with the previous interview data. This allowed analysis to be a constant and progressive process which allowed the emergence of these throughout data collection. Open coding was used as the researcher took into account the transcripts and observations made during the interviews (Merriam & Tisdell, 2016). Codes were assigned to pieces of data and categories were formed. The researcher repeated this step at the conclusion of each interview. Once data saturation was met, interviews were concluded (Merriam & Tisdell, 2016). The original categories were sorted into themes identified as being repeated frequently and accounting for the most data (Merriam & Tisdell, 2016). Table 2 shows the emerging categories.

Table 2 *Categories from Round One of data analysis resulting from interviews with employers to determine desired knowledge and skills of agricultural leadership graduates, Texas A&M University, 2016 – 2017*

Categories
Ag Knowledge
Career Fair Prep
Company Culture
Demonstrated Ability
Evaluating Hires
GPR
High Impact Practices (HIP)
Internship/Work Experience
Ranking of HIP
Relocation
Research
Soft Skills
Study Abroad
Number of ALED Students Hired
Texas A&M University - positive (what is TAMU doing well?)
Texas A&M University - negative (what is TAMU not doing well?)
Texas A&M University Culture

The original categories were sorted into themes identified as being repeated frequently and accounting for the most data (Merriam & Tisdell, 2016). Table 2 shows the emerging categories. This was done using note cards with each note card representing a unit of data. The themes from Round One were further analyzed and refined to result in the following categorizations:

- Culture
- Criteria for Hire
- Innate Characteristics
- HIP
- Evaluation

Trustworthiness was established through member checks, multiple peer debriefings, and triangulation to ensure rigor. Participants were sent copies of their interview transcripts to perform member checks. Interviews were peer debriefed with members of the faculty at Texas A&M University. Data was triangulated with archival data that was collected from the Texas A&M University Career Center and the Department of Agricultural Leadership, Education, and Communications. The following pseudonyms were assigned to allow confidentiality: Ray, Carlie, David, Joe, Hillary, Sam, Karen, Rob, and Natalie. Each participant worked in a human resources capacity and held a degree related to agriculture. Eight of the nine companies represented were for-profit enterprises and one of the companies was a not-for-profit enterprise.

Findings

Innate Characteristics Possessed by Agricultural Leadership Students

Positive and negative attributes to Texas A&M University were identified in the statements employers made. For instance, there were frequent comments related to the need for more business curriculum taught to undergraduate students. Additionally, more hands-on curriculum

was expressed as a need related to teaching within the academic structure. Ray eagerly stated, “My only issue is that I wish some disciplines had more emphasis on accounting and finance. There needs to be a stronger emphasis on those areas.” He goes on to state, “There are so many more complex operational structures now and I really wish that Texas A&M University would increase the course load for those areas.” Other employers spoke of agricultural leadership students needing to be better prepared for the professional workforce as compared to other disciplines. Carlie was quick to say, “Working with a lot of departments, I see the differences. Overall, business students know more about how to dress and have overall polish.”

In reference to students being prepared for entering the workforce, the participants expressed that graduates have characteristics that they need. Carlie stated, “Agricultural leadership students are more real world and understand what it takes to really make it in the world.” Carlie’s experience with graduates has been extremely positive. She said that students she has hired with degrees in agricultural leadership typically work the hardest and are the most willing to stay late or come in early. Rob also commented on the work ethic of agricultural leadership students. Natalie stated that the agricultural leadership students he has hired have tremendous amount of “ambition and grit.” Students from agricultural leadership seem to be ready for the on-the-job training that often comes with a new job. Moreover, Ray stated, “Because of the quality of education these students are receiving, they are coming in ahead of the other students.” His company has been extremely satisfied with the students hired with a focus on agricultural leadership. Ray explained what a great fit agricultural leadership students are for his company and although his supervisor would like for him to diversify in his recruiting, it simply “doesn’t make sense.”

Cultural and Academic Fit with Company

Fit within a company was expressed by many participants as an aspect that was just as important as a student's skills and abilities. However, "fit" was described differently by various participants, each provided their own perspective on what this meant. One of the first sentences expressed by Ray was, "First off, they must be a cultural fit." When asked for more information on what that meant, Ray stated, "I love the cultural fit within our organization to start with. It attracts people who have the same value as us." Similarly, David expressed the importance for a new hire to care about people. He explained, "If they are interested in what people are doing and they show that interest to those people, they tend to be more successful than those who only care about agriculture."

A positive attitude and the ability to take part in friendly competition were expressed by all participants. The idea that new hires needed to be able to be competitive without unnecessary animosity was expressed as critical. It was further expressed that when a cultural fit truly works, it is an extremely positive experience for both the hiring manager and the new hire. Ray excitedly explained, "It is the most satisfying feeling when someone I have identified makes it in the business. Nothing gives me more satisfaction than identifying young talent and sharing with them what I have been able to experience in this business." Carlie's idea of cultural fit was expressed as working as a team to accomplish a goal. She stated, "I want my new hires to bring ideas to the table. Students see things hierarchal and that is not always the case [in business]. I want everyone on my team to grow and lead others." A sense of community was expressed by all participants to be important in order to accomplish a goal. New hires need the ability to form a community. Ray passionately explained, "There is a closer feeling among ag leadership students.

They are supportive of each other and have a huge sense of community." Natalie's company has strong core values that new hires must embody. "Texas A&M University core values align closely with our company core values. This helps students relate well and become accustomed to our company culture quicker," explained Natalie.

One aspect that was addressed by participants was the level of production agriculture experience possessed by most recent graduates with agricultural leadership. Participants expressed that they are noticing a decrease in the number of students who possess a production agriculture background and instead are finding that the students they interview possess a general interest in agriculture without first-hand experience. David explained, "I have to adjust my thought pattern related to production agriculture experience in my students. I am finding more individuals who have an interest in agriculture, but did not grow up in that setting."

Criteria for Hire

Multiple factors influence a company's decision to hire one student over another. Grade Point Average or Grade Point Ratio was valued by all participants, particularly if the student had limited experience in terms of work or extracurricular activities. Joe stated that his company maintains a strict 3.0 GPR threshold. He explained, "That threshold teaches us something about the individual." The focus on the GPR was more related to the ability of the student to work hard and apply themselves rather than a true measure of academic success.

Technical skills were also expressed as important. Companies that utilize software and spreadsheets prefer to see students who hold a proficiency in Microsoft Office products such as PowerPoint and Excel (e.g., pivot tables).Agriculture and Natural Resource knowledge was

mentioned by eight of the nine participants. Basic farming and water resources knowledge that can be learned via academic coursework provided within a College of Agriculture becomes transferable as a student begins working. David preferred for students to be "versed in a certain discipline," while Joe expressed that a simple agronomic knowledge and the ability to operate farm equipment provided a great deal of value to an entry-level hire. The most mentioned technical skill was being bilingual, particularly in Spanish.

Soft skills such as drive, professionalism, and initiative were expressed as hard to measure, but important to teach students before they enter the workforce. Further, communication was specifically mentioned by David as important stating, "I look for students who can communicate well. They approach me, they visit well, and they know how to ask questions. Both verbal and written communication is important." Joe expressed that he wants new hires to be self-motivated and self-driven. He explained, "They have to do it without me telling them to. They must find the motivation on their own." As his company is moving towards the addition of an increasing number of virtual locations, being self-directed is key. The same skills are needed by Sam's company, too. "The territories these students are in are large and they must be self-directed to take on the responsibility that is given to them." Being resilient and open-minded were expressed as important to Carlie. Moreover, she expressed a desire to hire an individual "who cares to be there early, is adaptable, and has held leadership positions." All participants commented that you can see work ethic in students who have worked multiple jobs, held officer positions in various clubs, and have accomplished these tasks this while balancing the completion of academics. All participants expressed a desire for a new hire who would push themselves and participate in learning even after they completed their degree.

While participants interviewed were geographically located in Texas, all participants expressed a need for new hires who are geographically flexible and willing to relocate. “Flexibility and the willingness to travel is huge for our company,” explained Karen. Often times to move up the ladder, a new hire must be willing to move across the country. Carlie explained, “Sometimes moving is a stepping stone and sometimes it is permanent. You must be willing to go where we need you.”

Importance of High Impact Experiences

The researcher asked the participants specifically about internship opportunities, study abroad experiences, and research mentorship. Eight of the nine participants in this study highly valued high impact experiences. Joe was quick to say, “High impact experiences are extremely important. They help build the attributes I discussed earlier (self-motivation, initiative, and drive).” Carlie was the only participant who did not highly value these experiences. She only could say, “I do like to see someone who has put themselves outside their comfort zone and is adaptable.” The participants expressed that students must communicate high impact experiences clearly on their resume and verbally in the interview so that the potential employer can understand what the student truly gained from their experience. Karen mentioned high impact experiences show students are looking to make an impact. She explains, “We want know the work you have done and how it makes an impact to society.”

Eight of the participants valued internships as the most important high impact experience. One participant valued study abroad as the most important high impact experience. All nine participants expressed low value in research mentorships for agricultural leadership students.

However, participants conceded that research mentorships would be seen as important when the student is either leading a research team or when they are directly responsible for a significant part of the research.

Appearing indifferent about study abroad, Ray commented, “Study abroad might tell me the student is comfortable and more independent.” Joe explained in a concerned tone, “Sometimes study abroad is a vacation.” He was not impressed by study abroad experiences. Hillary, however, stated, “study abroad shows me they have studied another culture and been exposed to the idea of adapting.” Natalie also praised study abroad experiences and explained, “Study abroad gives a unique cultural experience that is useful in the corporate world.”

All participants spoke highly of internships and were extremely impressed when internships tied directly to what the student wanted to do in terms of a career. “Getting experience in the field related to my company is key,” explained Ray. Ray continued, “A lot of students think they know what they want to do, and then they don’t like it. If they have been through something that translates well with us, then it helps us separate them to the top.”

The participants spent a great deal of time talking about part-time work and extracurricular experiences outside of the traditional high impact experiences discussed above. Joe mentioned that he finds students who have worked in food service typically have an advantage with his company. Joe went on to say, “Specifically think of someone who was a waiter or waitress and how they handled people. Typically, those students have had to push tables, be high producers, and meet expectations.” Students involved in student organizations also rise to the top, according to all participants. “If they hold leadership positions and demonstrate ability to manage school plus a little more, I will give them a stronger look,”

explained Carlie. Rob's company looks to students have who have juggled multiple things during their academic experience. He stated, "I like students who have worked and gone to school. Showing they can manage a schedule shows me they will be able to handle what we throw at them."

Evaluating and Following Up with First Year Hires

The evaluation of new hires was a topic that all participants addressed. Participants shared that most companies have some form of evaluation process for new hires whether it be monthly, quarterly or annually. These evaluations were described as taking place on a continuum of evaluations throughout the year via simplistic, unstructured observations to a much more formal process.

Each participant represented a unique company and as such, a unique evaluation process. Carlie's company was described as results driven. She shared that she looks at a new hire's sales results and believes that is the most tangible way to evaluate a hew hire. She explained, "Their tangible results tell me what actions they are doing." Carlie also expressed that she pays special attention to how coachable the new hires appear to be. She assesses whether or not they are listening and how well they are taking instruction. Joe's company was described as evaluating the new hire each and every day. He pays attention to small aspects such as how willing they are to go the extra mile and whether or not they are focused on the job at hand. He mentioned two specific incidents where students either were on their personal cell phone during an intense work moment or when a student did not stay late to help clean up a testing area. Both of these students were participating in an internship and were not asked back for a second opportunity to work for

the company. The evaluation process used by Ray's company was described as both a formal and informal process. His company had adopted a new assessment process that each new hire must go through. This process ensures consistency. In this process, the new hire's jobs are broken down by specific tasks. Once the student gains proficiency in a task, they are set up for the next stage of development. Additionally, Ray explained that the informal process allows independent observation, "We know the ones that really stand out. You hear their names over and over again. The ones that are good—people talk about them. You just know. You hear, people take notes, and it counts." The company represented by David was described as conducting formal annual performance evaluations for every employee. For new hires, they do a 4 month, 7 month, and then the new hire rotates into the annual evaluation period. Hillary's company requires employees to put together a report each quarter. The new hires must quantify what they have accomplished in these reports, reporting the number of people reached and programs conducted. These reports are compiled and assessed by the direct supervisor of the new hire. Karen's company uses behavioral interviewing type questions to conduct their evaluations. She explains that having an understanding of how their past performance is impacting their future performance, the new hires are able to correct problems they may have. Evaluation in Rob's company is a continual process. "We watch hires from the moment they begin. We watch their work ethic, their production, and continuously give feedback." Finally, Sam's company evaluates at the mid-year and at the end of the fiscal year. "We have 11 competencies that we evaluate people on and we use a rating system. This system is relatively subjective, but it is paired with a quantitative analysis," Sam elaborated.

Conclusions and Implications

It is clear that although each company is looking for specific competencies in new hires recruited from an agricultural leadership program, there are many similarities in what companies recruiting these students are looking for. The participants in this study were all Texas employers. Participants were from millennial (3 participants), Gen X (3 participants), and Baby Boomer (3 participants) generations. Although the researcher was not looking to find differences in generational perspectives, evidence of varying opinions was found between generations.

Technical skills related to agriculture were expressed as key by many employers. Continuing to incorporate agriculture courses into curriculum is important. Employers also expressed business courses as a needed place of emphasis for their new hires to be successful. A recent change to Agricultural Leadership curriculum at Texas A&M University is the requirement of a specialized minor. This addition could prove to be valuable to employers if students select business as a minor. Soft skills, such as self-directedness, communication skills, and the ability to make decisions, were expressed as important by all participants. All nine employers found these skills to be important and encouraged Texas A&M University to do a better job of equipping students. It was concluded that increasing the focus on these skills within coursework was needed.

Through this study, it is evident that high impact experiences are important to the participants. Internships, research mentorships, and study abroad trips are all pieces of the high impact experience puzzle. A lack of knowledge of some of these programs was evident and noted. Study abroad and research mentorship did not generate as much excitement for participants as internships. Employers appeared not as aware of how these opportunities benefit

students. Employers were well versed in internships and their benefit. Employers highly valued extracurricular activities such as student organizations and part-time work. In some instances, these were valued higher than study abroad or research mentorship experiences. The nine employers had a sound grasp on student organizations located at Texas A&M University.

Texas A&M University has a unique culture and atmosphere that employers noted as an advantage to the students. The employers who participated in this study expressed that Texas A&M University is preparing students for industry, but there is room for improvement. In terms of the industry workforce, employers are the customer and students are the product. Employers must be satisfied with the end product or Texas A&M University is not doing the job needed. As the agricultural and natural resources industry continues to evolve at a rapid pace, curriculum and employer expectations should be continuously studied in an effort to keep agricultural leadership curriculum current and relevant.

Recommendations for Future Research

Future research should be conducted to include employers from across the nation. Looking at other states or regions could shed light onto what employers who hire students from a wide variety of states are looking for. The participants in this study were from various generations, as stated above. Future research should work to determine the differences in employer expectations based on the generation of the hiring manager.

Defining exactly what technical skills were needed from an employer standpoint seemed to puzzle three of the participants. Further research should be conducted with more employers to determine additional specificity of technical skills needed by companies employing agricultural

leadership students. Additionally, further research should be conducted to determine which soft skills students need the most assistance with. Relocation to another state or country is necessary depending on which company a student accepts a position with. Further research should also include a study on a student's likeliness to relocate after completing an internship out of state. Moreover, there should be research conducted to determine why students do or do not do an internship.

Research related to competencies achieved through involvement in extracurricular activities would be helpful. Given the lack of knowledge by participants related to study abroad and research mentorships, future research should be conducted to determine which competencies are learned through these experiences and how those competencies can benefit employers.

Research should also be conducted at individual universities and compared and contrasted. Continued studies similar to this one should be conducted every three to five years related to all majors, academic departments, and colleges. Employers must be satisfied with the end product or the university is not doing the job needed. As the agricultural and natural resource industry grows and changes, curriculum and employer expectations should be continuously studied in an effort to keep agricultural leadership curriculum current and relevant.

Recommendations for Practice

All departments offering degrees in Agricultural Leadership should require students to pursue a minor in an area of study to provide employers with a specialized skill set. This minor should complement the Agricultural Leadership degree while adding a unique knowledge base of a

different discipline. Five employers commented on the need for more technical and specific skills. The addition of this minor would help fill that aforementioned gap in skillset.

Some might argue that soft skills cannot be taught (Graham, 2001); however, this study supports the idea that these skills should be incorporated into curriculum. Sessions focused on professional development and career success should be implemented to expose students to various ways to attain soft skills. These sessions should not be limited to a certain classification level, but should be accessible to students across classifications. Making these sessions mandatory, students would be able to properly enter the business environment with confidence. A professional development certificate program could be implemented. Learning outcomes could be developed and programming could be developed to ensure students in the certificate program are at a level of professional development that is workforce ready. This certificate program would allow an employer to be more confident in the student's soft skills and professional ability.

Making a high impact experience mandatory for agricultural leadership students would satisfy the employer's need for these experiences. Furthermore, students would enter the workforce more prepared and more aware of their goals. Academic departments and career services professionals at the university level should work towards educating employers on all aspects of high impact experiences. Promotional material and webinars could be used to explain both study abroad and research mentorship. Furthermore, programming to educate students on how to articulate their study abroad and research mentorship experiences should be implemented. Encouraging students to participate in these activities should be done at all levels of the university. Learning outcomes should be developed and implemented for student

organizations, keeping in mind that the academic experience is preparing students for professional work.

References

Andelt, L. L., Barrett, L. A., & Bosshamer, B. K. (1997). Employer assessment of the skill preparation of students from the college of agricultural sciences and natural resources university of Nebraska-Lincoln: Implications for teaching and curriculum. *NACTA Journal, 41*(1), 47-53. Retrieved from https://www.nactateachers.org/attachments/article/673/Larry_Andelt_NACTA_Journal_Dec_1997-10.pdf

Becker, G. (1964). *Human capital: A theoretical and empirical analysis with special reference to education*. Chicago, IL: The University of Chicago Press.

Briggeman, B., Henneberry, S., & Norwood, F. (2007). How do employers assess job candidate attributes? *NACTA Journal, 51*(1),15-22. Retrieved from http://www.nactateachers.org/attachments/article/242/Briggeman_September_2007_NACTA_Journal-2.pdf

Brown, F. W., & Fritz, S. M. (1994). Determining the breadth of leadership and human resource management/development offerings in post-secondary departments of agricultural education. *Journal of Agricultural Education, 35*(3), 1-5. doi: 10.5032/jae.1994.03001

Coorts, G. D. (1987). Updating today's college curriculum for tomorrow's agriculture. *NACTA Journal, 31*(2), 20-21. Retrieved from https://www.nactateachers.org/attachments/article/1098/Coorts_NACTA_Journal_June_1987-5.pdf

DiBenedetto, C. & Myers, B. (2016). A conceptual model for the study of student readiness for the 21st century. *NACTA Journal, 60*(1), 28-35. Retrieved from https://www.nactateachers.org/attachments/article/2390/9%20DiBenedetto_NACTA%20Journal%20Special%20May%202016.pdf

Doerfert, D. L., & Miller, R. P. (2006). What are agriculture industry professionals trying to tell us? Implications for university-level agricultural communications curricula. *Journal of Applied Communications, 90*(3), 17-31. doi: 10.4148/1051-0834.1273

Erlandson, D. A., Harris, E. L., Skipper, B. L., & Allen, S. D. (1993). *Doing naturalistic inquiry: A guide to methods.* Newbury Park, California: Sage

Graham, D. L. (2001). Employer perceptions of the preparation of agricultural and extension education graduates. *Journal of Southern Agricultural Education, 51*. Retrieved from https://files.eric.ed.gov/fulltext/ED462281.pdf

Heckman, J. L. (2000). *Invest in the very young*. Chicago, IL: Ounce of Prevention Fund. Retrieved from: http://www.ounceofprevention.org/downloads/publications/Heckman.pdf

Irlbeck, E. G., & Akers, C. W. (2009). Employers' perceptions of recent agricultural communications graduates' workplace habits and communication skills. *Journal of Agricultural Education, 50*(4), 63-71. doi: 10.5032/jae.2009.04063

Kilgo, C. A., Sheets Ezell, J. K., & Pascarella, E. T. (2015). The link between high-impact practices and student learning: Some longitudinal evidence. *Journal of Higher Education, 69*(4), 509-525. doi: 10.1007/s10734-014-9788-z

Kuh, G. D. (2008). *High-impact educational practices: What they are, who has access to them, and why they matter.* Washington, D.C.: Association of American Colleges and Universities.

Kunkel, H. O., Maw, I. L., & Skaggs, C. L. (1996). *Revolutionizing higher education in agriculture*. Ames, Iowa: Iowa State University Press.

Kvale, S. (1996). *InterViews.* Thousand Oaks, California: Sage.

Lamm, K. W., Carter, H. S., & Melendez, M. W. (2014). Investigating the linkage between intrinsic motivation and project team satisfaction in undergraduate agricultural leadership students. *Journal of Agricultural Education, 55*(3), 103-115. doi: 10.5032/jae.2014.03103

Leggette, H. R., Black, C., McKim, B. R., Prince, D., & Lawrence, S. (2013). An intrinsic case study of a post-secondary high-impact field experience. *NACTA Journal, 57*(3A), 129-138. Retrieved from https://www.nactateachers.org/attachments/article/2106/26.%20Leggette%20NACTA%20Special%20Issue%20Sept%202013.pdf

Lepak, D. P., & Snell, S. A. (1999). The human resource architecture: Toward a theory of human capital allocation and development. *The Academy of Management Review, 24*(1), 31–48. Retrieved from https://s3.amazonaws.com/academia.edu.documents/7908776/hc_architecture_web.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1514405851&Signature=fmUOO9QUeqrHPgM%2FSLBk1nFHG%2Bg%3D&response-content-disposition=inline%3B%20filename%3DTh

Little, A. W. (2003, December). Motivating learning and the development of human capital. *British Association for International and Comparative Education, 33*(4), 437–452. doi: 10.1080/0305792032000127748

Litzenberg, K. K., & Schneider, V. E. (1989). A profile of tomorrow's agribusiness leaders: The US perspective. *Agribusiness, 5*(3), 249-258. doi: 10.1002/1520-6297

Long, G. A., Straquadine, G., & Campbell, W. F. (1992). Plant science alumni rate their education based upon entry-level professional experience. *Journal of Natural Resources and Life Sciences Education, 21*(1), 34-36. Retrieved from https://www.agronomy.org/files//publications/nse/pdfs/jnr021/021-01-0034.pdf

McKim, B. R., Latham, L., Treptow, E., & Rayfield, J. (2013). A repeated measures study of the short-term influences of high impact practices of college students' learning styles. *NACTA Journal, 57*(3A), 122-128. Retrieved from https://www.nactateachers.org/attachments/article/2107/25.%20McKim%20NACTA%20Special%20Issue%20Sept%202013.pdf

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation.* San Francisco, California: Jossey-Bass A Wiley Brand.

Moore, L. L., Odom, S. F., & Moore, K. T. (2013). What a degree in agricultural leadership really means: exploring student conceptualizations. *Journal of Agricultural Education, 54*(4), 1-12, doi: 10.5032/jae.2013.04001

Odom, S. F., Shehane, M., Moore, L. L., & McKim, B. R. (2014). An analysis of high-impact field experience in agriculture: Documenting critical thinking skills through reflection. *NACTA Journal, 58*(3), 214-220. Retrieved from https://www.nactateachers.org/attachments/article/2227/9.Odom_NACTA%20Journal.pdf

Rateau, J. R., Kaufman, E. K., & Cletzer, D. A. (2015). Innovative classroom strategies that prepare college graduates for workplace success. *Journal of Agricultural Education, 56*(3), 52-68. doi: 10.5032/jae.2015.03052

Roberts, T. G., Harder, A., & Brashears, M. T. (Eds). (2016). American Association for Agricultural Education national research agenda: 2016-2020. Gainesville, FL: Department of Agricultural Education and Communication.

Robinson, S. & Baker, M. (2012). *The decisions principals make when interviewing candidates: implications for improving the human capital of pre-service teachers in agricultural education.* Paper presented at the Southern Association of Agricultural Scientists Conference, Birmingham, Alabama.

Seifert, T. A., Gillig, B., Hanson, J. M., Pascarella, E. T., & Blaich, C. F. (2014). The conditional nature of high impact/good practices on student learning outcomes. *Journal of Higher Education, 85*(4), 531-564. doi: 10.1080/00221546.2014.11777339

Shultz, T. W. (1971). *Investment in human capital: The role of education and of research*. New York, NY: The Free Press.

Smith, E. (2010). Sector-specific human capital and the distribution of earnings. *Journal of Human Capital, 4*(1), 35-61. doi: 10.1086/655467

Smylie, M. A. (1996). From bureaucratic control to building human capital: The importance of teaching learning in education reform. *Educational Researcher, 25*(9), 9–11. doi: 10.3102/0013189X025009009

Stoltzfus, M. (2017). *An oral demographic description of companies who hire ALEC students*. Texas A&M University, College Station.

Suvedi, M., & Heyboer, G. (2004). Perceptions of recent graduates and employers about undergraduate programs in the college of agriculture and natural resources at Michigan State University: A follow-up study. *NACTA Journal, 48*(1), 22-27. Retrieved from http://www.nactateachers.org/attachments/article/457/Suvedi_March04NACTA_JOURNAL-4.pdf

W. K. Kellogg Foundation (1998). *Visions of change in higher education*. East Battle Creek, Michigan: Author.

Wehner, D. J. (1995). Issues facing professionals in agriculture: A communications-intensive course. *NACTA Journal, 39*(1), 10-13. Retrieved from http://www.nactateachers.org/attachments/article/738/Wehner_NACTA_Journal_March_1995-2.pdf

Williams, K., Robertson, T., Kieth, L., & Deal, A. (2014) Skills, knowledge, and abilities employers seek in new professionals entering careers in the fed beef industry. *NACTA Journal, 58*(4), 349-355. Retrieved from https://www.nactateachers.org/attachments/article/2242/14%20Williams_NACTA%20Journal.pdf

CHAPTER III

EMPLOYER EXPECTATIONS OF 21ST CENTURY ENTRY-LEVEL AGRICULTURAL SCIENCE TEACHEREDUCATION GRADUATES: A QUALITATIVE STUDY

Introduction & Literature Review

Conversations related to workplace readiness and competencies needed for all college graduates to meet industry needs is common. Literature focused on agricultural education is somewhat limited and what is available is dated. Recent literature has focused on how to improve classroom teaching to better prepare students for the workplace (Rateau, Kaufman, & Cletzer, 2015) and the importance of team-based projects for students (Lamm, Carter, & Melendez, 2014).

There are differences in the needs as perceived by industry and school districts. Myers and Dyer (2004) stated, “the goal of teacher education is to make the most effective use of the time available to prepare future educators for the task awaiting them,” (p. 47). Though, the structure of agricultural education programs varies greatly between individual programs (McLean & Camp, 2000), some programs focus on pedagogy while others focus on technical skills.

Soft skills, character traits, expectations, and abilities are important for agricultural education graduates. There is a gap in college graduates’ ability to communicate both in written and verbal form (Doerfert & Miller, 2006). Meeting the ever-changing needs of a high-performance workplace is an area of lack for recent graduates (Graham, 2001). One study noted a lack of leadership abilities, particularly related to problem solving and team work, in

agriculture students (Andelt, Barrett, & Bosshamer, 2007). Andelt et al (2007) explained that the market is saturated with positions for graduates, but students are unprepared to fill the roles due to lack of knowledge and skills. The basic competencies taught do not always meet the needs of employers. Thus, there is motivation for institutions of higher education to partner with industry to help prepare graduates to work in a highly competitive market (Graham, 2001).According to Doerfert and Miller (2006), there are differences between academia and industry as each entity has varying ideas related to skills and workplace habits.

Based on prior research, skilled teachers are critical to student achievement (McCaffrey, Lockwood, Koretz, & Hamilton, 2003). To continue to be skilled, teachers must have continuing education opportunities. “To develop programs for professional development of agricultural education teachers, researchers have conducted studies to assess teacher needs,” (Sorensen, Lambert, & McKim, 2014, p. 141). The authors elaborate explaining prior studies have shown early agriculture teachers have a consistent need for professional development opportunities.

Historically and specifically, agricultural mechanics coursework has been considered important and necessary (Burris, Robinson, & Terry, 2005; Wells, Perry, Anderson, Shultz, & Paulsen, 2013). Providing students with opportunities to learn technical skills related to agriculture is becoming increasingly more challenging (Burris et al., 2005; Wells et al, 2013). Adequately teaching technical subject matter is something preservice teachers struggle with, particularly as they try and meet the strict required credit hour limitations for program completion (Burris et al, 2005). Finally, there is a strong need for the development of competent teachers who have an aptitude in technical agriculture (McCubbins, Anderson, Paulsen, & Wells,

2016). To meet the needs of the industry, preservice and in-service training should include a broad area of skills and competencies (Wells et al., 2013).

As we send more preservice teachers and agricultural education graduates into the workforce, it is imperative that we utilize industry professionals to help us measure how well academic institutions are meeting the needs of employers. In their 2009 study, Irlbeck and Akers asked the question, “Are we teaching what the industry needs us to teach?” (p. 65). Another study by Andelt et al. (1997) asked, “Did your students learn what was taught and can today’s students compete in the job market?” (p. 48). Although there are multiple student follow-up studies to assess how well an institution is meeting its objectives, there are no qualitative, open-ended studies (Suvedi & Heyboer, 2004). A cooperative effort between academic institutions and schools is imperative. After a review of literature, no relevant employer focused qualitative study was found.

Defining high impact learning activities (HILA) in his seminal work, Kuh (2008) explains that HILA include first year seminars and experiences; common intellectual experiences (i.e., core curricula across disciplines); learning communities (i.e., the pairing of courses for a cross-disciplinary immersive student experience); writing intensive courses; collaborative assignments and projects (i.e., problem solving in groups); undergraduate research; diversity and global learning (i.e., study abroad opportunities and internationally themed coursework); service learning (i.e., the application of classroom knowledge to outside situations, such as competition teams); internships; and capstone experiences.

Universities and faculty members can gain insight into what skills are needed by looking at how employers assess these skills in their recent hires (Graham, 2001).Williams, Robertson,

Kieth, and Deal (2014) identified specific skills as important: interpersonal skills, leadership ability, problem solving, teamwork, communication skills, and computer skills. Kuh (2008) found integrity, ethical judgment, global awareness, language skills, and the ability to adapt in changing environments as additional desirable traits.

Many studies look at the benefits high impact learning activities have on job preparedness. Kuh (2008) looks at these opportunities as ways to expand critical thinking skills and leadership experience. Multiple authors have conducted studies to assess the role of high impact learning activities for student success in a general higher education environment, e.g., Kilgo, Sheets, and Pascarella (2015), and Seifert, Gillig, Hanson, Pascarella, and Blaich (2014). In agriculture, however, recent work by Leggette, Black, McKim, Prince, and Lawrence (2013), McKim, Latham, Treptow, and Rayfield (2013), and Odom, Shehane, Moore, and McKim (2014) highlights the importance of high impact learning activities and field activities have on undergraduate students. There has not, however, been significant research conducted on the influence of high impact experience on job readiness and student success in their first full-time position. This study sought to address that deficit in this area of research.

Theoretical Framework: Human Capital Theory

This study was supported by a theoretical framework based upon human capital theory. Human capital theory explains the relationship between educational inputs and occupational success (Briggeman, Henneberry, & Norwood, 2007). Educational inputs include courses taken and high impact experience participation. Becker (1964), Little (2003), Shultz (1971), Smith (2010), and Smylie (1996) (as cited by Robinson & Baker, 2012) described the basis for human capital as a

person's knowledge, experiences, education, and skills. This theory is based on the positive and uniqueness an individual's skills are, plus how much the employer values these skills (Lepak & Snell, 1999).

As new skills are learned, a student's human capital is increased (Heckman, 2000). Employers look at a student's skills set and abilities to determine their employability (Becker, 1964). Increasing human capital can be done in multiple ways to make a student more valuable to an employer (Robinson & Baker, 2012). As students learn more skills and a broader range of skills, their human capital is increased (Smith, 2010). Smith studied human capital and how it improves as employees become specifically skilled in a certain area. As employees become more skilled, their human capital increases; however, a greater downside lose occurs when specific opportunities are not available (Smith, 2010).

A framework based around human capital theory and the activities that can impact human capital within a university setting guided the study. Courses taken and high impact experiences are considered educational inputs. For this study, high impact experiences considered included internships, study abroad, and undergraduate research. According to DiBenedetto and Myers (2016), educational inputs can transfer into employability skills such as communication skills, decision making skills, self-management skills, teamwork skills, and leadership skills. Competencies learned or not learned can be impacted by these educational inputs. Employer perceived gaps in competencies needed that are impacted by courses taken and high impact experience participation will be triangulated and evaluated within this study.

Background of Study

Success in the first job is not currently being measured by a university or national association from students pursuing a degree in agricultural education. There is a need to holistically measure the success of students' performance in their first job, post-graduation. There is a need to understand desired competencies needed to properly develop and improve curriculum at the undergraduate level. Understanding the perception of high impact experiences from an employer's perspective can help educate university professionals as well as develop high impact learning activity programs. Results from this study provided information that can be used by employers, university professionals, and faculty.

Interviews with employers who hired agricultural education graduates from 2012 - 2017 were conducted to determine desired competencies and the perception of high impact experiences. There was no recent research that looked directly at desired competencies, high impact experiences, or the relationship between the two, therefore investigation of this topic was beneficial.

Statement of the Problem

Based on a review of literature, a lack of peer-reviewed research on employer expectations of entry-level agricultural education graduates existed. Little is known about the competencies desired and needed, specifically related to high impact experiences, by employers of entry-level graduates with a focus on agricultural education. The current American Association for Agricultural Education National Research Agenda (2016) encourages studies related to competencies needed for an agricultural and natural resource workforce. This study specifically

addressed the AAAE research priority question, “What competencies are needed to effectively educate, communicate, and lead?” (Roberts, Harder, & Brashears, 2016, p. 31).

There were five guiding questions for this study: a) What are the desired competencies students need to be successful in their first job?, b) Which competencies were more desired than others?, c) What impact do high impact experiences have on student’s performance during their first job?, d) Which high impact experiences do employers seek for students to have participated in?, and, e) How well is the university preparing students for their entry-level positions?

Purpose

The purpose of this qualitative study was to determine the knowledge and competencies desired and needed by employers of entry-level graduates of agricultural education and to determine if the graduates hired are meeting the identified needs. It also described the perceived value of three specific high impact experiences from an employer perspective.

Objectives

The purpose was supported by the following objectives:

1) Examine the desired competencies for entry-level positions for agricultural science teacher education graduates,
2) Examine the level of importance of desired competencies for entry-level positions for agricultural science teacher education graduates,
3) Examine the high impact experiences valued by entry-level employers of agricultural science teacher education graduates,

Methodology

Utilizing non-probability, purposeful sampling the researcher identified employers to interview. They were considered an expert panel. This expert panel was called upon to gain meaningful information as they possess special experiences and competences (Merriam & Tisdell, 2016). Employers consistently worked with the Department of Agricultural Leadership, Education, and Communications to identify and hire graduates.

Six employers were requested for participation. These six employers had collectively hired 20 agricultural science teacher education graduates from 2012 – 2017. Three of the employers were agricultural science teachers at Texas schools. One of the employers was a principal at a Texas school. The remaining two employers were from youth development organizations. The schools ranged in size from single teacher programs to multi-teacher programs. The employers ranged from 40 – 65 years of age and each held between 13 years of experience and 30 years of experience in their respective fields. Five employers were male and one employer was female, which is representative of this area. All employers who were interviewed were located in Texas. Each participant was assigned a pseudonym to ensure confidentiality. Those pseudonyms were: Leon, Bonnie, Dane, Don, Tony, and Rob. See Table 3 for participants' individual demographic information.

Table 3 *Agricultural education participants' demographic information, Texas A&M University, 2016 – 2017*

Name	Position	Level of Experience
Bonnie	Agricultural Science Teacher	30 Years in Teaching
Dane	Farm Bureau	30 Years of Experience
Don	Agricultural Science Teacher	27 Years in Education
Leon	Agricultural Science Teacher	28 Years in Education
Rob	School Administrator	22 Years in Education
Tony	4-H	24 Years in Extension

Each participant took part in a semi-structured interview (Kvale, 1996). The interview focused on preferred knowledge and skills needed as well as understanding of the importance of high impact experiences related to entry-level undergraduate hires. Each semi-structured interview lasted approximately 45 minutes. An interview guide (Appendix A) was used during each interview to help facilitate the order of topics addressed during the interview (Kvale, 1996). Member checking was accomplished by requesting the participants to review interview transcripts and respond with any changes or additions. All interviewees participated in the transcript review process. A peer debriefing was held with the researcher and another colleague prior to data analysis (Erlandson, Harris, Skipper, & Allen, 1993).

Using constant comparative analysis to analyze the data, the data was organized into categories and themes. Merriam and Tisdell (2016) define category "the same as a theme, a pattern, a finding, or an answer to a research question," (p. 204). Each set of data from each interview was analyzed immediately following member checking and was compiled with the previous interview data. This allowed for analysis to be a consistent and progressive process which allowed the emergence of categories throughout data collection. Open coding was used as

the research considers the transcripts and observations made during the interviews (Merriam & Tisdell, 2016). Codes were assigned to pieces of data and categories were formed. This step was repeated at the end of each interview. Once data saturation was met, interviews were concluded (Merriam & Tisdell, 2016). Trustworthiness was established through member checks, multiple peer debriefings, and triangulation to ensure rigor. Participants were sent copies of their interview transcripts to perform member checks. Interviews were peer debriefed with members of the faculty at Texas A&M University. Data was triangulated with archival data that was collected from the Department of Agricultural Leadership, Education, and Communications. Table 4 shows the emerged themes.

Table 4 *Categories from Round One of data analysis resulting from interviews with employers to determine desired knowledge and skills of agricultural education graduates, Texas A&M University, 2016 – 2017*

Categories
Ag Knowledge
Career Fair Prep
Company Culture
Demonstrated Ability
Evaluating Hires
GPR
High Impact Practices (HIP)
Internship/Work Experience
Ranking of HIP
Relocation
Research
Soft Skills
Study Abroad
# of AGSC Students Hired
Texas A&M University + (what is TAMU doing well?)
Texas A&M University – (what is TAMU not doing well?)
Texas A&M University Culture

The categories were sorted into themes identified as being repeated frequently and accounting for the most data (Merriam & Tisdell, 2016). This was done using notecards spread across tables. Each notecard represented one unit of data. Units were then grouped into respective categories.

The themes from Round One were further analyzed and refined to result in the following categorizations:

- Desired Characteristics
- Job Preparedness and Culture
- Areas of Improvement Needed
- High Impact Experiences
- Evaluation

Findings

Characteristics Desired by Employers from Agricultural Education Graduates

Employers shared a variety of characteristics they were looking for when seeking new employees. Having the desire to teach and educate young people was a characteristic at the forefront for all six participants. Understanding the commitment and dedication needed to be a successful teacher was a common underlying theme throughout each interview. Bonnie eagerly explained, “The first thing I look for is commitment and dedication. They have to have the ‘want’ to teach.” She goes on to state, “Content knowledge is important, but the students who want to be teachers have the desire to learn, so they learn on the job.”

A wide arrange of skills and abilities is important to most hiring managers. Being able to diversify and work within many facets of agricultural is key. “Students need to possess the ability to keep records, weld, work on small engines, and many other hands-on skills,” explained Leon. Moreover, students should not specialize in one area of the industry as that can lead to a

negative impact on the students or groups they are serving. “A well-rounded student is extremely important to me,” Don stated.

“Drive and professionalism is key. I have had several student teachers who have no professionalism. Their conversations and behavior around high school students is awful,” Bonnie explained. Each employer commented on professionalism and the importance of this soft skill. “Bottom line is that maturity is huge,” state Dane. Maturity is much more than their age or experiences. Communication skills, professionalism, motivation, and eagerness to learn and improve all influence maturity. Don explained, “I look to potential hires’ social media profiles to tell me about their maturity. How they carry themselves online is often extremely telling.”

Students need to be able to converse well with others. “Being able to connect and articulate well is important,” explained Don. Presentation skills and business etiquette skills are highly sought out by employers of agricultural education graduates.

Communicating face to face, in writing, and in speaking are valued by all participants. Being able to ask questions, research information, and take constructive criticism are all communication skills that must be possessed by graduates.

Employers want graduates who have a strong agricultural background. Rob explained, “I want to know they have strength in agriculture and experience in the industry to pass on to students.” Diversity and breadth of education is important. Having cultural and community awareness is also important. Employers want to know their hire has experience in 4-H, FFA, and other student organizations as a high school and college student. Being involved shows initiative to excel and achieve goals while maintaining scholastic responsibilities. Wearing multiple hats is common as an agricultural education graduate, so diversity of degrees and courses is a positive

addition to many programs and companies. Continued education in the form of a graduate degree can show the desire to learn. “Desiring to learn more skills on the job is a highly sought after behavior for me,” explained Bonnie.

Ability to Adapt to a Changing Environment

Adaptability and ability to change emerged in all interviews. “Although changing technology is difficult, you have to really try to adopt early. It is easier early on and you can then stay ahead of the game,” explained Bonnie. When most of the participants began their careers, there were no computers. Most started out with a piece of chalk and a chalkboard. Tony said, “You must be able to ask questions and evolve with the technology. Some places are extremely advanced while others are not. You must remain flexible.”

Being defined by the courses taken and specific skills learned during that time period is not enough. Dane said, “People will perform up or down to their potential. Their education does not define them.” Networking is another component that changes over time. Students should understand how to utilize their networking muscle and be able to network in their careers. “After their degree is over, they must learn to rely each other,” Tony said. Networking also provides graduates with a support system that they will need as they embark on their career.

Areas of Improvement for Texas A&M University Department of Agricultural Leadership, Education, and Communications

“Teachers are too specialized in today’s time. They have their own areas and only want to work in that area,” explained Leon. In recent years, students specialize in one area and do not have the

skills to teach other topics. Dane pointed out, “About 80 – 90% could not survive in a single teaching program based on their skill set.” Those who have been teaching 30 or more years are having to fill in the gaps where the universities are falling short.

FFA members are negatively impacted by agricultural teachers being too specialized. “Competition teams are impacted as students tend to draw to the teams coached by their favorite teachers as opposed to the team where they can make the most impact,” explained Dane. Students are specializing in one area and are unable to teach other topics. When one teacher is too specialized, the department becomes single-focused and departmentalized. There are also adverse impacts to the budget for these departments. Each participant pointed out the lack of agricultural mechanics knowledge in recent graduates. “Agricultural mechanics takes a huge hit as it is male dominant and we are graduating more females than males,” Bonnie stated.

Every employer reported that recent graduates were viewed as having alack in professionalism and maturity. Leon explained many lack the agricultural experience that recent graduates once had and also pointed out that many lack the classroom management skills that are imperative to being a quality teacher. Dane explained that new teachers try to be students’ buddies as opposed to their teacher and mentor. Bonnie stated that graduates lack communication and business etiquette skills. Don explained, “They can accurately use technology, but have no communication skills.” Also pointed out by all participants is the lack of proper writing ability within graduates of agricultural education. Tony explained, “Young people come into the field with no communications skills. They usually are able to learn them, though.”

Their coursework does not prepare them for the intensity and time commitment required to be a successful agriculture teacher. “In fact, students often use agriculture education as a fall

back plan to other careers," Bonnie explained. She goes on to say, "Many become teachers because they had a great experience as a high school student. They do not understand the preparation, training, and hours that go into becoming a teacher."

Perceptions of High Impact Experiences

High impact experiences were important to the participants. Most participants want their hires to student-teach at a reputable school with a reputable teacher. The real world experience they receive in this opportunity can be carried over into their teaching career. All participants disregarded research experience as not useful in today's industry. "We are in a different society with Google. It is easier to Google something than actually research a topic," explained Tony.

"I do not look for students to have study abroad," Leon explained. All participants agreed that study abroad can be looked upon as a vacation. Tony pointed out that a study abroad experience can assist with cultural awareness, but students must know how to market that experience on their resume to properly showcase the competencies they learned. He also explained how social media impacts the perception of study abroad experiences. Students post more of the fun experiences they have as opposed to the learning experiences.

"Livestock show internships and internships that help us fill gaps are important," according to Bonnie. Beyond those two examples, she is indifferent to internships as a high impact learning activity. Dane stated that he preferred policy internships. Legislature internships assist with cultural awareness and political knowledge. Most importantly to Tony was internships showing an aptitude for how students will behave in the real world. Don explained, "I would rather a student have balanced a part-time job in college as opposed to an internship."

Showing the initiative to work and go to school shows a work ethic that is important to the profession.

Youth, Community, and Experience

The agricultural teacher of 2017 looks much different than the agricultural teacher of 1995. “The candidate who wants to become an ag teacher has changed from being that rural kid to an urban kid who does not have the same agricultural experience,” explained Dane. This can provide both positive and negative implications for the young people these teachers are working with. Teachers tend to be more anxious and fearful if they do not have real world agricultural experience. They also are not able to work with a wide variety of students. “When teachers do not have the experience or are too specialized, the young people in their program tend to gravitate to the teacher they like best as opposed to the teacher who is working on the projects the student excels in,” Dane stated. He commented that students must have the mile deep and mile wide preparation in order to sustain and support a one teacher program.

Tony commented on the importance of service, teaching, and leading in the field of extension and education. He commented, “in our job, if you have those three areas, then the rest falls into place.” All participants explained the importance of having an attitude of helpfulness and the desire to be a continuous learner. To be an educator, one must constantly be wanting to learn and improve. Being able to teach in a variety of ways helps students of any learning style be able to synthesize and learn information.

Evaluating and Following Up with First Year Hires

Because of the regulations many schools and government entities must follow, all participants followed a very specific evaluation process mandated by their district or state office. The formal evaluations take place by principals, assistant principals, and senior agriculture teachers. Two of the participants oversee multiple teachers at multiple schools. “At one time I was overseeing 26 teachers on five campuses,” Dane explained. Bonnie had a similar experience. “I supervise 5 young teachers. I check on them weekly. We set goals and work to achieve those goals,” explained Leon. Ron stated, “We ensure each teacher is following what is needed to make sure the students are successful.”

Bonnie said, “We have a four teacher department and I have been in the profession the longest. We are varied by age and experience. We talk through how to handle certain situations and rely on each other to make sure we are doing what is right.” In Bonnie’s district, there are also administrative walk-throughs. All participants commented on the administration’s support of their programs. All of the participants mentor younger teachers and employees. “I try and train younger teachers through showing them ways to make their jobs better and easier,” stated Bonnie.

Don and Dane provided examples of ways to improve evaluation and training methods. Dane talked about the disconnect between CTE supervision and curriculum supervision. He stated, “Often, the district administrators and campus teachers are working to achieve different goals. It is important to be on the same page. To do this, we must work together.” Don evaluates his hires on their business etiquette skills and their ability to work with others in the community.

He has his employees do a weekly activity report. Their evaluation and training is always led by learning objectives set the week or month before.

Conclusions and Implications

Although specific competencies are sought by each entity interviewed, there are similarities and differences in what entity recruiting these students are looking for. The participants in this study were all Texas employers. Three of the participants were senior agricultural science teachers, one was a secondary principal, and the remaining two were from youth development organizations. While the soft skills all participants looked for were similar, the secondary educators looked for a specific set of technical skills while the youth development organization employees looked for a broader skillset.

High impact experiences are expressed as important by all participants. Internships, research mentorships, and study abroad trips are all considered high impact experiences. Student-teaching, when talking to the participants, is considered a high impact learning activity and relates most closely to internships. Having the student-teaching experience is imperative to the participants. There is also value put on having a livestock show internship from the agricultural science teachers. Study abroad was valued as an opportunity to bring cultural awareness to students, but participants did not seem to have a clear understanding of what a study abroad experience entailed. Participants valued part-time work and extracurricular activities as much or more than research mentorships and study abroad experiences.

Having a sound technical agricultural skillset is key to many employers. Teachers are expected to know how to properly weld, fix simple mechanics, and teach others these skills. A

lack of curriculum in these topics was evident and noted. The lack of technical skills in new teachers creates a silo of specialized teachers who cannot teach across all topics. Single teaching programs are negatively impacted by this problem.

Soft skills such as professionalism, verbal communication, written communication, business etiquette, and maturity appeared to be areas of lack. All participants view this as an extremely weak area of millennials and generation-Z individuals. There was disconnect between the behavior expected of students and the actual behavior of students. Moreover, the students were found to not be prepared to work hard and work long hours.

Texas A&M University provides students with a unique culture and atmosphere. Participants noted this experience is one of the reasons they continue to seek graduates from Texas A&M University. Participants are considered the customer and students are considered the product. It is the university's responsibility to continue meeting the needs of the customer with the product.

Recommendations for Future Research

Future research should be conducted to include a larger group of employers. Employer needs and desires can differentiate based on location, conducting similar studies in other states or other regions would be helpful for comparison. Pairing these results with a quantitative study would provide cross-comparison results. Including professional associations to engage more participants in focus groups, interviews, and observations should be considered.

Scholars should look at the specific technical skills needed by employers. Future research should be conducted to define exactly what technical skills are needed by both educational

institutions and youth organizations. These are the primary employers of agricultural education students. Understanding why students need specific technical skills will give educators and administrators the tools to develop proper curriculum.

All six employers noted soft skills as an area of issue. Future research should look into these soft skills and work to understand how to measure them. Understanding where students are gaining and developing these soft skills can springboard curriculum development.

The evaluation and understanding of high impact experiences differed between employers. Data was collected that showed competency development from high impact experiences, extra-curricular activities, and part-time employment. Future research should evaluate high impact experiences and work to understand what students are learning from these experiences.

Finally, a longitudinal study following a group of students throughout their university experience and first three years of their job should be conducted as a follow-up to this study. A study similar to this one should be conducted every three to five years and access all majors and academic departments. Employer expectations will change as the industry changes. In order to provide the best product, research should continuously be done to stay ahead of changes.

Recommendations for Practice

Agricultural education students must be required to take specific courses that provide them with the skills needed to teach all aspects included in agricultural education curriculum. The curriculum should end with a capstone course the ensure students meet all requirements needed to properly teach students as an agricultural education educator.

This study supports the idea that soft skills must be incorporated into the curriculum. Professional development, business etiquette, and career success should be incorporated into curriculum as either a specific course or as specific parts of courses. Professional development should not be classification based, but should be an expected portion of each level of education. Specific learning outcomes should be compiled to meet the needs of prior and current research related to soft skills. These objectives would be the first step towards a professional development certificate that could measure students' professional skills. This certificate would add credibility to a student who claims they have soft skills and professional aptitude.

Equipping students with the ability to convey their high impact experiences is a practice universities should adopt in their career centers and academic departments. Students are often unaware of how to promote their experiences, and consequently, employers do not learn the full depth and breadth of competencies students may have learned during their high impact learning activity. Programming should be implemented to equip students with how to market their on campus, off campus, and professional experiences. Finally, learning objectives should be derived to ensure the product is meeting the needs of the customer.

References

Andelt, L. L., Barrett, L. A., & Bosshamer, B. K. (1997). Employer assessment of the skill preparation of students from the college of agricultural sciences and natural resources university of Nebraska-Lincoln: Implications for teaching and curriculum. *NACTA Journal*, *41*(1), 47-53. Retrieved from https://www.nactateachers.org/attachments/article/673/Larry_Andelt_NACTA_Journal_Dec_1997-10.pdf

Becker, G. (1964). *Human capital: A theoretical and empirical analysis with special reference to education*. Chicago, IL: The University of Chicago Press.

Briggeman, B., Henneberry, S., & Norwood, F. (2007). How do employers assess job candidate attributes? *NACTA Journal, 51*(1),15-22. Retrieved from http://www.nactateachers.org/attachments/article/242/Briggeman_September_2007_NACTA_Journal-2.pdf

Burris, S., Robinson, S. J., & Terry, R. (2005). Preparation of pre-service teachers in agricultural mechanics. *Journal of Agricultural Education, 46*(3), 23-34.

DiBenedetto, C. & Myers, B. (2016). A conceptual model for the study of student readiness for the 21st century. *NACTA Journal, 60*(1), 28-35. Retrieved from https://www.nactateachers.org/attachments/article/2390/9%20DiBenedetto_NACTA%20Journal%20Special%20May%202016.pdf

Doerfert, D. L., & Miller, R. P. (2006). What are agriculture industry professionals trying to tell us? Implications for university-level agricultural communications curricula. *Journal of Applied Communications, 90*(3), 17-31. doi: 10.4148/1051-0834.1273

Erlandson, D. A., Harris, E. L., Skipper, B. L., & Allen, S. D. (1993). *Doing naturalistic inquiry: A guide to methods.* Newbury Park, California: Sage

Graham, D. L. (2001). Employer perceptions of the preparation of agricultural and extension education graduates. *Journal of Southern Agricultural Education, 51*. Retrieved from https://files.eric.ed.gov/fulltext/ED462281.pdf

Heckman, J. L. (2000). *Invest in the very young*. Chicago, IL: Ounce of Prevention Fund. Retrieved from: http://www.ounceofprevention.org/downloads/publications/Heckman.pdf

Irlbeck, E. G., & Akers, C. W. (2009). Employers' perceptions of recent agricultural communications graduates' workplace habits and communication skills. *Journal of Agricultural Education, 50*(4), 63-71. doi: 10.5032/jae.2009.04063

Kilgo, C. A., Sheets Ezell, J. K., & Pascarella, E. T. (2015). The link between high-impact practices and student learning: Some longitudinal evidence. *Journal of Higher Education, 69*(4), 509-525. doi: 10.1007/s10734-014-9788-z

Kuh, G. D. (2008). *High-impact educational practices: what they are, who has access to them, and why they matter.* Washington, D.C.: Association of American Colleges and Universities.

Kvale, S. (1996). *InterViews.* Thousand Oaks, California: Sage.

Lamm, K. W., Carter, H. S., & Melendez, M. W. (2014). Investigating the linkage between intrinsic motivation and project team satisfaction in undergraduate agricultural leadership students. *Journal of Agricultural Education, 55*(3), 103-115. doi: 10.5032/jae.2014.03103

Leggette, H. R., Black, C., McKim, B. R., Prince, D., & Lawrence, S. (2013). An intrinsic case study of a post-secondary high-impact field experience. *NACTA Journal, 57*(3A), 129-138. Retrieved from https://www.nactateachers.org/attachments/article/2106/26.%20Leggette%20NACTA%20Special%20Issue%20Sept%202013.pdf

Lepak, D. P., & Snell, S. A. (1999). The human resource architecture: Toward a theory of human capital allocation and development. *The Academy of Management Review, 24*(1), 31–48. Retrieved from https://s3.amazonaws.com/academia.edu.documents/7908776/hc_architecture_web.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1514405851&Signature=fmUOO9QUeqrHPgM%2FSLBk1nFHG%2Bg%3D&response-content-disposition=inline%3B%20filename%3DTh

Little, A. W. (2003, December). Motivating learning and the development of human capital. *British Association for International and Comparative Education, 33*(4), 437–452. doi: 10.1080/0305792032000127748

McCaffrey, J. R., Lockwood, D. F., Koretz, D. M., & Hamilton, L. S. (2003). Evaluating value added models for teacher acco6untability [Monograph]. Santa Monica, CA: RAND Corporation. Retrieved from http://www.rand.org/content/dam/rand/pubs/monographs/2004/RAND_MG158.pdf

McCubbins, O. P., Anderson, R. G., Paulsen, T. H.A., & Wells, T. (2016). Teacher-perceived adequacy of tools and equipment available to teach agricultural mechanics. *Journal of Agricultural Education, 57*(3), 223-236. doi: 10.5032/jae.2016.03223

McKim, B. R., Latham, L., Treptow, E., & Rayfield, J. (2013). A repeated measures study of the short-term influences of high impact practices of college students' learning styles. *NACTA Journal, 57*(3A), 122-128. Retrieved from https://www.nactateachers.org/attachments/article/2107/25.%20McKim%20NACTA%20Special%20Issue%20Sept%202013.pdf

McLean, R. C., & Camp, W. G. (2000). AN examination of selected preservice agricultural teacher education programs in the United States. *Journal of Agricultural Education, 41*(2), 25-35. doi: 10.5032/jae.2000.02025

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation.* San Francisco, California: Jossey-Bass A Wiley Brand.

Myers, B. E., & Dyer, J. E. (2004). Agriculture teacher education programs: A synthesis of the literature. *Journal of Agricultural Education, 45*(3), 44-52. doi: 10.5032/jae.2004.03044

Odom, S. F., Shehane, M., Moore, L. L., & McKim, B. R. (2014). An analysis of high-impact field experience in agriculture: Documenting critical thinking skills through reflection. *NACTA Journal, 58*(3), 214-220. Retrieved from

https://www.nactateachers.org/attachments/article/2227/9.Odom_NACTA%20Journal.pdf

Rateau, J. R., Kaufman, E. K., & Cletzer, D. A. (2015). Innovative classroom strategies that prepare college graduates for workplace success. *Journal of Agricultural Education, 56*(3), 52-68. doi: 10.5032/jae.2015.03052

Roberts, T. G., Harder, A., & Brashears, M. T. (Eds). (2016). American Association for Agricultural Education national research agenda: 2016-2020. Gainesville, FL: Department of Agricultural Education and Communication.

Robinson, S. & Baker, M. (2012). *The decisions principals make when interviewing candidates: implications for improving the human capital of pre-service teachers in agricultural education.* Paper presented at the Southern Association of Agricultural Scientists Conference, Birmingham, Alabama.

Seifert, T. A., Gillig, B., Hanson, J. M., Pascarella, E. T., & Blaich, C. F. (2014). The conditional nature of high impact/good practices on student learning outcomes. *Journal of Higher Education, 85*(4), 531-564. doi: 10.1080/00221546.2014.11777339

Shultz, T. W. (1971). *Investment in human capital: The role of education and of research*. New York, NY: The Free Press.

Smith, E. (2010). Sector-specific human capital and the distribution of earnings. *Journal of Human Capital, 4*(1), 35-61. doi: 10.1086/655467

Smylie, M. A. (1996). From bureaucratic control to building human capital: The importance of teaching learning in education reform. *Educational Researcher, 25*(9), 9–11. doi: 10.3102/0013189X025009009

Sorensen, T. J., Lambert, M. D., & McKim, A. J. (2014). Examining Oregon agriculture teachers' professional development needs by career phase. *Journal of Agricultural Education, 55*(5), 140-154. doi: 10.5032/jae2014.05140

Suvedi, M., & Heyboer, G. (2004). Perceptions of recent graduates and employers about undergraduate programs in the college of agriculture and natural resources at Michigan State University: A follow-up study. *NACTA Journal, 48*(1), 22-27. Retrieved from http://www.nactateachers.org/attachments/article/457/Suvedi_March04NACTA_JOURNAL-4.pdf

Wells, T., Perry, D. K., Anderson, R. G., Shultz, M. J., & Paulsen, T. H. (2013). Does prior experience in secondary agricultural mechanics affect pre-service agricultural education teachers' intentions to enroll in post-secondary agricultural mechanics coursework? *Journal of Agricultural Education, 54*(4), 222-237, doi: 10.5032/jae.2013.04222

Williams, K., Robertson, T., Kieth, L., & Deal, A. (2014) Skills, knowledge, and abilities employers seek in new professionals entering careers in the fed beef industry. *NACTA Journal*, *58*(4), 349-355. Retrieved from https://www.nactateachers.org/attachments/article/2242/14%20Williams_NACTA%20Journal.pdf

CHAPTER IV

EMPLOYER EXPECTATIONS OF 21ST CENTURY ENTRY-LEVEL AGRICULTURAL COMMUNICATIONS GRADUATES: A QUALITATIVE STUDY

Introduction & Literature Review

Within higher education and industry, conversations surrounding workplace readiness and competencies needed for college graduates is common. Literature related specifically to agricultural communications graduates is limited and dated. The agricultural communications industry grows and evolves rapidly as an academic field and industry. Quality communicators are needed more than ever to support the industry (Tucker, Whaley, & Cano, 2003). Agricultural communicators work to educate the public about agriculture through communication mediums (Boone, Meisenbach, & Tucker, 2000). The agricultural industry looks to communicators to lead them through challenges and changes of knowledge management (Doerfert & Miller, 2006).

Agricultural communications began as a word-of-mouth form of communication where information was passed from farmer to farmer (Boone, Meisenbach, & Tucker, 2000). The authors explain that agricultural publications were first printed in 1790 intending to spread information to farmers. Two hundred years later, the profession is now a diverse industry that develops news, sends news, and markets information (Tucker et al, 2003).

The industry has driven a need for academic departments to house majors focused on agricultural communications. The first agricultural communications course was taught by Will H. Ogilvie at Iowa State University in 1905 (Marvin, 1946). University of Wisconsin offered the first undergraduate degree in agricultural journalism in 1930. Over the years, agricultural

communications has been offered under various departments such as agricultural education and rural sociology (Tucker et al, 2003). These departments sought to develop students' backgrounds in agriculture and teach them the basics of communications skills with an emphasis in journalistic writing (Terry, Vaughn, Vernon, Lockaby, Bailey-Evans, & Rehrman, 1994).

In order to prepare students for the highly competitive global market, it is important industry and higher education form partnerships. According to Graham (2001), these partnerships have strong implications for agriculture graduates. Industry needs change over time and higher education systems must stay relevant. Moreover, agricultural curricula must be continuously reviewed and revised (Kunkel, Maw, & Skaggs, 1996). The 1997 study by Andelt, Barrett, and Bosshamer found that many jobs require competencies that are not found in curriculum.

With the ever changing industry, changes in college curricula, and the changes in technology over time, there is a need to determine skills and competencies desired by agriculture employers hiring students at the entry-level (Graham, 2001). The author explains there are many factors contributing to a student's career readiness. The kinds of students receiving a degree in agriculture are changing (Long, Straquadine, &Campbell, 1992). "As the agricultural industry changes over time, the educational system pertaining to agriculture and related subjects must not fall behind," (Graham, 2001, p. 22).

Colleges should seek to graduate students who are at the cutting-edge of knowledge and technology (Coorts, 1987). This is especially true for agricultural communications students. Multiple studies show that well-rounded curriculum is important to meet the needs of employers and industry (Andelt, Barrett, & Bosshamer, 1997). "The task of producing marketable graduates

requires on-going sensitivity to changing needs and perceptions of prospective employers," (Andelt et al., 1997, p. 47).

Faculty and staff should participate in workshops, conferences, and career fairs to continue building and maintaining partnerships with industry representatives (Suvedi & Heyboer, 2004). These partnerships help create awareness and knowledge of career opportunities. These interactions also have enormous implications for agricultural students (Graham, 2001). In an effort to improve skills, competencies, industry, and academic institutions have partnered in multiple ways to achieve common and separate goals (Graham, 2001).

Research related to career opportunities and career readiness of undergraduate students is limited and what exists is dated. The research has focused on career preparedness as well as specific skill needs. Graham (2001) found that students are prepared for their entry-level positions. Andelt et al. (1997) expressed a commitment to education and industry preparedness by industry leaders. Soft skills such as interpersonal and communication skills were ranked high by employers (Coorts, 1987). Leadership preparation (Brown & Fritz, 1994) and resume, cover letter, and interview skills were lacking (Suvedi & Heyboer, 2004). Technical skills have historically been an area lacking as well. Andelt et al. (1997) found employers seek students who have strong computer skills and the ability to analyze quantitatively while managing information well. It was recommended that classes be taught to help improve technical skills for students pursuing degrees in agriculture (Andelt et al, 1997). The 1989 study by Litzenberg and Schneider provided six categories important to agricultural firms—business and economics; computer, quantitative, and management information; technical skills, communication skills; interpersonal skills; and work experience. The study also mentioned a need for science aptitude and a high

level of interpersonal skills. Wehner (1995) expressed the real world need for students to be able to communicate about production agriculture effectively to the public.

There are differences between academia and industry as each entity has varying ideas related to skills and workplace habits (Doerfert & Miller, 2006). Basic competencies taught do not always meet the needs of the employers; thus, there is encouragement for universities to partner with industry to help prepare graduates for work (Graham, 2001). There is a gap in communication skills and the ability to meet the challenges of a high performance workplace due to the lack of writing and persuasive communication skills (Doerfert & Miller, 2006). In the 2009 study by Irlbeck and Ackers, the researchers found "several participants commented that graduates have unrealistic expectations about pay and promotion" (p. 69). Additionally, these graduates exhibit on-the-job awkwardness and lack the business-savvy needed to appear mature in the workforce (Graham, 2001). Moreover, the market is saturated with agriculture graduates who are unprepared to fill roles due to lack of knowledge, skills, and abilities (Andelt et al, 1997).

As institutions grow and graduate more agricultural graduates into the workforce, we must continue to measure industry professionals' perception of graduates and their ability to perform. In their 2009 study, Irlbeck and Akers asked the question, "Are we teaching what the industry needs us to teach?" (p. 65). Another study by Andelt et al. (1997) asked, "Did your students learn what was taught and can today's students compete in the job market?" (p. 48). The author followed up these questions with the statement, "The more that is known about competencies needed in these careers and taken into account in curriculum development, the more employable graduates will be in the marketplace" (p. 48). Although there are multiple

student follow-up studies to assess how well an institution is meeting its objectives, there are no qualitative, open-ended studies (Suvedi & Heyboer, 2004).“Due to changes in college curricula, increased technical competencies, and changing industry, there is a need to determine the entry-level knowledge, skills, and abilities required of college graduates” (Graham 2001, p. 4). In order to look closer at this information, a cooperative effort between academic institutions and industry is imperative. After a review of literature, no relevant employer focused qualitative study was found.

High impact learning activities are discussed and defined in Kuh’s (2008) seminal work. According to the author, these experiences can include first year seminars and experiences; common intellectual experiences (i.e., core curricula across disciplines); learning communities (i.e., the pairing of courses for a cross-disciplinary immersive student experience); writing intensive courses; collaborative assignments and projects (i.e., problem solving in groups); undergraduate research; diversity and global learning (i.e., study abroad opportunities and internationally themed coursework); service learning (i.e., the application of classroom knowledge to outside situations, such as competition teams); internships; and capstone experiences.

There are studies that examine the direct benefits of high impact learning activities as a mechanism to develop career readiness skills. Kuh (2008) explains high impact learning activities give students an opportunity to expand critical thinking skills and gain leadership experience. There has been literature published assessing the role of high impact learning activities for student success in a general higher education environment, e.g., Kilgo, Sheets, and Pascarella (2015), and Seifert, Gillig, Hanson, Pascarella, and Blaich (2014). In agriculture,

however, recent work by Leggette, Black, McKim, Prince, and Lawrence (2013), McKim, Latham, Treptow, and Rayfield (2013), and Odom, Shehane, Moore, and McKim (2014) highlights the influence High Impact Learning activities and field activities have on undergraduate students. There has not, however, been significant research conducted on the impact of high impact experience on job readiness and student success in employment. This article addressed that gap.

Theoretical Framework: Human Capital Theory

This study employed a conceptual framework using the human capital theory (Robinson & Baker, 2012). Becker (1964), Little (2003), Shultz (1971), Smith (2010), and Smylie (1996) (as cited by Robinson & Baker, 2012) described the basis for human capital as a person's knowledge, experiences, education, and skills. Human capital is based on how positive and unique an individual's skills are and how much an employer values these skills (Lepak & Snell, 1999). This theory is used to explain the relationship between educational inputs and occupational success (Briggeman, Henneberry, & Norwood, 2007).

A student's human capital increases as new skills are learned (Heckman, 2000). Becker (1964) stated potential employers assess a student's skill set and abilities to determine student's employability. Many activities increase human capital and make a student more valuable to the employer (Robinson & Baker, 2012). Employability is based on human capital which means as individuals learn more skills and a broader range of skills, their human capital increases (Smith, 2010). Human capital changes as employees become specifically skilled in an area.

Consequently, as employees become more skilled, their human capital increases; however, a greater downside lose occurs when specific opportunities are not available (Smith, 2010).

The author sought to create a framework based around human capital theory. Educational inputs can include courses taken and high impact experience participation. For this study, high impact experiences considered to be internships, study abroad, and undergraduate research. DiBenedetto and Myers (2016) explain that educational inputs can transfer into employability skills such as communication skills, decision making skills, self-management skills, teamwork skills, and leadership skills. Competencies learned or not learned can be impacted by these educational inputs. Employer perceived gaps in competencies needed that are impacted by courses taken and high impact experience participation were triangulated and evaluated within this study.

Background of Study

Success in the first job post-graduation is not currently measured by a university or national association from students pursuing a degree in agricultural communications and journalism. To understand desired competencies, there was a need to measure the success of students' performance in their first job post-graduation. Programs can be improved and properly developed based on understanding the industry's needs and wishes. University professionals need to know the perception of high impact learning practices from an employer standpoint in order to continue improvement of these programs. The results from this study provide information that can be used by employers, university professionals, and faculty.

Employers who have hired agricultural communications and journalism graduates over the last five years were interviewed to determine desired competencies and the perception of high impact learning practices. There was no recent research that looked directly at desired competencies, high impact learning practices, or the relationship between the two, therefore investigation of this topic was beneficial.

Statement of the Problem

A lack of peer reviewed research was found after a review of literature gave no insight on employer expectations of entry-level agricultural communications and journalism graduates. Little is known about the competencies desired and needed, specifically related to High Impact Experiences, by employers of entry-level graduates with a focus on agricultural communications and journalism. The current American Association for Agricultural Education National Research Agenda (2016) encourages studies related to competencies needed for an agricultural and natural resource workforce. This study specifically addresses the AAAE research priority question, "What competencies are needed to effectively educate, communicate, and lead?" (Roberts, Harder, & Brashears, 2016, p. 31).

The five guiding questions for this study were: a) What are the desired competencies students need to be successful in their first job?, b) Which competencies are more desired than others?, c) What impact do high impact experiences have on a student's performance during their first job?, d) Which high impact experiences do employers seek for students to have participated in?, and e) How well is the university preparing students for their entry-level positions?

Purpose

The purpose of this qualitative study was to determine the knowledge and competencies desired and needed by employers of entry-level graduates of agricultural communications and journalism and to determine if the graduates hired are meeting the identified needs. It also described the perceived value of three specific high impact experiences from an employer perspective.

Objectives

The purpose was supported by the following objectives:

1) Examine the desired competencies for entry-level positions for agricultural communications and journalism graduates,
2) Examine the level of importance of desired competencies for entry-level positions for agricultural communications and journalism graduates,
3) Examine high impact experiences valued by entry-level employers of agricultural communications and journalism graduates,

Methodology

The researcher identified employers to interview using non-probability, purposeful sampling. These employers were interviewed to gain meaningful information as they possess special experience and competence (Merriam & Tisdell, 2016). They were considered an expert panel. Employers either annually attended the Texas A&M University Career Fair at Texas A&M University or have consistently worked with the Department of Agricultural Leadership, Education, and Communications to identify and hire graduates.

Eight employers were solicited for participation. These eight employers had collectively hired 80 agricultural communications and journalism graduates in the last five years. The employers each had diverse backgrounds and degrees. Five of the employers were graduates of Texas A&M University. The other three were graduates of out-of-state universities. Six of the employers worked for organizations while two were owners of small businesses. The employers ranged from 26 – 65 years of age. They ranged from four years of experience to 40 years of experience in their respective fields. Six employers were male and two employers were female. Seven employers were located in Texas and one employer was located out of state. These employers were chosen to participate based on their varying levels of experience and their school or company profile. Each participant was assigned a pseudonym to ensure confidentiality. Those pseudonyms were: Amber, Callie, Camille, Harrison, Julie, Raquel, Sally and Tyler. See *Table* 5 for information about the participants' position and years of experience.

Table 5 *Agricultural communications participants' demographic information, Texas A&M University, 2016 – 2017*

Name	Position	Years of Experience
Amber	Owner	8 Years
Callie	Sales Manager	4 Years
Camille	Sales Manager	15 Years
Harrison	Recruiter	4 Years
Julie	Recruiter	40 Years
Raquel	Owner	19 Years
Sally	Recruiter	11 Years
Tyler	Sales Manager	12 Years

The researcher utilized a semi-structured interview process lasting approximately 45 minutes (Kvale, 1996) per participant. The interview focused on preferred knowledge and skills needed as well as understanding of the importance of high impact learning practices related to entry-level undergraduate hires. An interview guide (Appendix A) was used during each interview to help facilitate the order of topics addressed during the interview (Kvale, 1996).

Using constant comparative analysis to analyze the data, the data was organized into categories and themes. Merriam and Tisdell (2016) define a category as "the same as a theme, a pattern, a finding, or an answer to a research question" (p. 204). Each set of data from each interview was analyzed immediately following member checking. The data was then compiled with the previous interview data. This allowed for analysis to be a consistent and progressive process which allowed the emergence of categories throughout data collection. Open coding was used as the researcher evaluated the transcripts and observations made during the interviews (Merriam & Tisdell, 2016). Codes were assigned to pieces of data and categories were formed. This step was repeated at the end of each interview. Once data saturation was met, interviews were concluded (Merriam & Tisdell, 2016).

The categories were sorted into themes identified as being repeated frequently, and accounting for the most data (Merriam & Tisdell, 2016). Table 6 shows the categories that emerged. This process was accomplished using notecards and tables. Notecards represented one unit of data. Units were then inputted into tables that correlated to the respective category.

Table 6 *Categories from Round One of data analysis resulting from interviews with employers to determine desired knowledge and skills of agricultural communication graduates, Texas A&M University, 2016 – 2017*

Categories
Ag Knowledge
Career Fair Prep
Company Culture
Demonstrated Ability
Evaluating Hires
GPR
High Impact Practices (HIP)
Internship/Work Experience
Ranking of HIP
Relocation
Research
Soft Skills
Study Abroad
Number of AGCJ Students Hired
Texas A&M University - Positive (what is TAMU doing well?)
Texas A&M University - Negative (what is TAMU not doing well?)
Texas A&M University Culture

The themes from Round One were further analyzed and refined to result in the following categorizations:

- Desired Characteristics
- Job Preparedness and Culture
- Areas of Improvement Needed
- HIE
- Evaluation

Member checking was accomplished by requesting the participants to review interview transcripts and respond with any changes or additions. All interviewees participated in the transcript review process. A peer debriefing was held with the researcher and another colleague prior to data analysis (Erlandson, Harris, Skipper, & Allen, 1993).Trustworthiness was

established through member checks, multiple peer debriefings, and triangulation to ensure rigor. Participants were sent copies of their interview transcripts to perform member checks. Interviews were peer debriefed with members of the faculty at Texas A&M University. Data were triangulated with archival data that was collected from the Texas A&M University Career Center and the Department of Agricultural Leadership, Education, and Communications.

Findings

Characteristics Desired from Agricultural Communication and Journalism Students

Employers desire to hire graduates who understand journalism and editing. They need graduates who have a clear understanding of the current software and know how to use it in multiple settings. Raquel explained, "Students need experience in Adobe Creative Suite and Microsoft Office." Many agricultural communication and journalism students work in the radio industry. In this industry, it is important for graduates to understand the culture and dynamics of this industry. "Potential, big personality, and format fit are important to work in radio," explained Tyler. He went on to explain the importance of understanding editing, formatics, prepping and executing shows, and other technical skills.

All eight employers noted multiple soft skills where students should be well versed. Adaptability rose to the top of Callie's desires in students' soft skills. Other companies, such as the ones employing Harrison and Julie, hire sellers -- who are entrepreneurially focused. Harrison continued to explain his company attracts graduates who are customer service minded, who have been a manager, and who have dealt with a wide variety of people. He stated, "Our product is people, so it is important to have people who have dealt with lots of people in their

prior experiences." Four of the respondents discussed the need for time management skills and sought to hire graduates who had worked part-time or full-time in college.

Being a quick learner was a common theme among all participants while most participants wanted to hire graduates who are quick learners and problem solvers. Independent workers thrive in most communication environments. The employers interviewed wanted graduates who could be given a task and find the solution themselves. Finally, Tyler explained "Specialized skills are great, but you cannot teach problem solving and critical thinking skills. Those are the most important skills a graduate can possess." Julie also looks for problem solving stating, "We look at commitment seeking things such as command, problem solving, positivity, and interpersonal skills." Being able to work with many diverse populations is key in today's work force. Amber sought students who were ambitious and held a drive to succeed. All employers mentioned goal setting and the ability to show passion and drive in what they do. Employers expressed a need for graduates who have a vision for what they want to accomplish in the long run.

Callie explained, "We look for real world experience, particularly in the division in which we are hiring at the time." Each employer mentioned the need for real-world work experience. Amber sought graduates who had prior customer service experience. "Experience and competency in preferred areas is key for our shop," described Raquel. Camille wants graduates who are not afraid to get their hands dirty. She goes on to say, "We work long hours and are not always paid for the extra hours. Employees must have heart."

Employer Feedback Specific to the University

All employers commented on the faculty who teach agricultural communications. “Faculty do a great job teaching the technical skills needed in the industry,” explained Tyler. This employer hires from multiple universities and claimed Texas A&M University faculty do the best job in the business in terms of preparing students in technical skills. Two of the employers were former students of the agricultural communications and journalism program and commented on how prepared they were when they graduated from the program. Callie said, “I went into the radio industry and am able to apply my education every day. The projects and daily activities within courses I took help me tremendously.”

Harrison commented on the value of holding a degree from Texas A&M University. He said, “Earning a degree from Texas A&M University gives added credibility to the ability of the students. The degree programs at Texas A&M University get students prepared for multiple positions.” All employers interviewed, alumni and non-alumni, commented on how respectful Texas A&M University was in terms of preparing students for the marketplace. They each commented positively on Texas A&M University.

An employer who did not graduate from the Texas A&M University agricultural communications program commented, “Compared to my preparation, I feel like these students are well and above prepared.” Employers all commented on the encouragement from faculty to work in the industry and complete internships. Sally also compared Texas A&M University to other universities with similar programs stating, “Compared to other institutions, they do really well.” Tyler even commented that underclassmen do extremely well in internships and part-time jobs with his company. Finally, Tyler stated, “Combining the rigorous coursework with

everything Texas A&M University brings to the table in general, resources on campus, and learning via travel opportunities, Texas A&M University is well ahead of the curve."

Areas of Improvement for Texas A&M University Department of Agricultural Leadership, Education, and Communications

Although the employers were highly complementary of Texas A&M University graduates, they did point out issues they found based on the students' performance in their job. Raquel explained on-the-job training is required once graduates arrive. She stated, "They sometimes lack the skills to get jobs done or get them completed." She also commented that many graduates are not training in the most recent technology, making their current skillset irrelevant.

Sally mentioned a lack of etiquette in a communication, professional, and even dining sense. Harrison mentioned a lack of interview skills. "Students are not comfortable in the interview. They are stiff and give prepared answers that do not let us get to know the real candidate at hand," he said. Multiple employers mentioned the lack of interview skills and the difficulty they had breaking through the graduates' exterior shell.

Finally, Callie described a lack of business aptitude in students. "Business is a huge learning curve as there is not much opportunity to apply business within the agricultural communications degree," she explained. Amber agreed saying, "The ability to understand business relationships and exhibit common sense is often lost in new graduates."

Perceptions of High Impact Experiences

Most employers showed appreciation for and found value in high impact experiences. All eight employers commented on the high value of internships. The employers also found value in industry relevant part-time work. Amber said "If the student does not have any work experience, I will not even interview them." Internships are viewed as an opportunity to get the graduate's feet wet. Harrison stated, "It is a great segue into the real world. Internships show the student has tried to grow and develop as a person and as a professional." Holding a job or completing an internship shows the graduate has time management skills and an ability to take on more than just school. Hands-on experience was sought by every employer interviewed. "If you have some sort of internship experience under your belt, then you are more apt to get higher level job duties earlier. I suggested all students get some real experience prior to graduating," Tyler said. Amber suggested that all departments require students to complete an internship during the degree program.

Study abroad was a popular high impact learning activity. Some employers valued this experience more than others. Two of the employers viewed study abroad as a "glorified vacation" while the remaining six employers thought study abroad gave students a sense of cultural competence. "I feel study abroad is fabulous. I want students who understand the world we live in and can relate to a diverse population," Julie explained. Harrison viewed study abroad as an opportunity for students to get out of their comfort zones. Amber, however, described study abroad as "a great opportunity to see the world, but says nothing about their ability." She and Raquel both passionately disregarded any value to a study abroad experience and encouraged students to pursue internships if given a choice.

None of the employers ranked research as a priority as it related to high impact experiences. They each stated a research mentorship would be third behind internships and study abroad experiences. They all commented there is no correlation between students' ability in the communications industry and their research experience. Harrison plainly stated, "Research does not fit well into our business."

Evaluating and Following Up with First Year Hires

Evaluation processes differed between the employers, but each employer and company expressed some sort of evaluation process. For Callie's company, employees set quarterly goals and are measured based on those goals. If they are underperforming, they are evaluated more consistently to help improve those measures. Harrison's company administers quarterly, bi-annual, and annual evaluations. Their entry-level hires go through a 13 – 16 month training program. "In our training program, graduates are required to hit certain numbers and fill certain leadership roles. Once these measures are hit, graduates are moved to a full-time role that suits their skillset," explained Harrison. Amber, Sally, and Raquel indicated that annual evaluations are conducted after the completion of the first year of work. These employers put their hires through a probationary period the first 90 days where they are evaluated frequently. Camille's company does not have a formalized evaluation process, but she personally meets with new hires weekly to coach and assist them in their success. Tyler's company is similar to Camille's in that there is no formalized process. The hiring managers with his company meet daily with new hires the first 90 to 120 days. Julie's company has the most formalized and strenuous evaluation process of the interviewed employers. Her company evaluates their employees on an on-going

basis. They give real-time feedback daily and guide their employees on core values, goals, and performance based objectives. She stated, “Employees who are engaged with our values are here for the long haul.”

Conclusions and Implications

Each employer interviewed was looking for specific competencies in new hires. The recruiters who hired agricultural communications graduates were looking for students who are well rounded with technology skills, soft skills, and previous experiences related to the industry. The participants in the study were all from Texas. These participants represented the millennial generation (3 participants), the Gen X generation (4 participants), and the Baby Boomer generation (1 participant). Although differences in generational perspectives was not one of the original described purposes of this study, variations of opinions were found.

Specific technical skills related to the journalism and communications industry were highly sought after by most employers. These skills change frequently and rapidly meaning the students must often be self-motivated learners who seek to stay current in their skillset. Written communication skills and the ability to effectively transfer knowledge through communication are both important skillsets. Employers gave credit to the curriculum and professors at Texas A&M University. The combination of curriculum, high impact practices, and resources Texas A&M University offers provided students with an experience highly sought after by employers. That being said, employers indicated soft skills and etiquette were aspects lacking in new hires. Graduates required too much on the job training and coaching in those initial first months on the job. Business acumen and etiquette were both missing from graduates pursuing degrees in

agricultural communications. Other soft skills, such as self-directedness, the ability to learn quickly, and decision-making skills were expressed as important and lacking. The participants all encouraged Texas A&M University to look at ways to improve graduates' skill level in these areas.

Throughout this study, the perception of high impact experiences was revealed as important to participants. These experiences ranged from internships to study abroad to research mentorship opportunities. Participants were all familiar with internships but lacked some knowledge of study abroad and even more knowledge of research mentorship. Many viewed study abroad as more of a vacation than an educational experience based on how students market their experience abroad. Participants had a strong understanding of the impact and value of internships. Additionally, participants valued graduates who had experience with part-time work and extracurricular activities. In some instances, these were valued at a higher level than study abroad and they were always valued at a higher level than research mentorship.

The employers all had prior experience with Texas A&M University from recruiting graduates for multiple years. Those interviewed praised the students, curriculum, and professors while providing insightful information to assist with improving students' ability to be prepared for the workforce, market their high impact experience, and continue to professionally develop. Employers expressed that Texas A&M University is preparing students for the workforce, but there is room for improvement. Universities and departments must remember that employers are the customer and students are the product. As the industry develops and employer expectations change, curriculum must be reviewed continuously in an effort to stay relevant and current.

Recommendations for Research

Future research should be conducted to further our understanding about employers of agricultural communications, their perceptions of high impact experiences, and their motivation for hiring graduates of Texas A&M University.

Research should be expanded to include employers from all regions of the United States and then those results should be compared. Increasing the number of participants and including prolonged engagement with observations within the data collection would complement the current study. This expansion and addition would shed light on the differences and similarities of employers from varying regions and demographics.

Future research should expand the number of participants and include an additional quantitative instrument. This instrument could seek to determine the numerical value of specific high impact experiences and how they influence students' first job decisions. This study could also explore the differences in generational perceptions of high impact experiences from the employers' perspective.

A study to rank and describe the soft skills and technical skills needed would be helpful for curriculum development. This study would also help universities know where and at what level their curriculum needs the most improvement. The results from this study could act as a road map for university administrators, professors, and instructors.

A longitudinal study should be conducted over 5 – 10 years to document the impact of high impact experiences on students as they enter into their mid-career. This study could follow students throughout their career and document the long-term impact their educational experience

and high impact experience has on their career decisions, success, and satisfaction. Additionally, this study could gather a breadth of information from employers, companies, and organizations.

Finally, similar studies should be conducted every 3-5 years. This would allow for universities to continue to understand and meet industry expectations while allowing employer relations to foster and thrive through building relationships. Employers are the customer and the students are the product; ensuring the customer is satisfied with the product can only add to and help improve curriculum within agricultural communications.

Recommendations for Practice

There is an expectation from employers that a student with an undergraduate level degree should have a strong set of soft and technical skills. Based on the results from this study, both areas have room for improvement. Many claim soft skills cannot be taught (Graham, 2001). However, giving students an opportunity to learn and practice soft skills would be beneficial for both the university and employers. Students should be provided multiple opportunities to learn soft skills while completing their undergraduate degree. Educational sessions or a mini-symposium for students to attend could provide the tools needed. Making these sessions mandatory would assist in helping students be prepared for their first job in terms of communications and business etiquette. Also, the development and implementation of a professional development certificate could add credibility to students related to soft skills needed to perform well in a business environment.

Technical skills are extremely important to the agricultural communications field. These skills can be taught in courses, yet they change as quickly as they are being taught. Universities

should work to provide students with the tools needed to self-teach these skills as they change. Giving students a strong technical foundation can assist with this area of need. For a long-term goal, universities could work to add continuing education to their curriculum and provide former students opportunities to take classes after graduation. These courses could be offered online or in person.

From the results, it is clear high impact experiences are important and needed from the employers' standpoint. To ensure students have these highly valued educational opportunities, high impact experiences should be mandatory. This would satisfy the employers' need for these experiences and ensure students are entering the workforce prepared and aware of their career goals. In addition to making the experience mandatory, students should also attend mandatory programming that would provide the tools to market and promote their high impact experience properly. Many employers seemed unsure about study abroad and research mentorships. This is likely due to the students' inability to properly market the experience. University administrators and career services professionals should educate employers about the value of a high impact experience. Students should be encouraged to participate in high impact experiences at every level. Finally, learning outcomes should be developed and implemented for student organizations to ensure the experience is preparing students for their future professional work.

References

Andelt, L. L., Barrett, L. A., & Bosshamer, B. K. (1997). Employer assessment of the skill preparation of students from the college of agricultural sciences and natural resources university of Nebraska-Lincoln: Implications for teaching and curriculum. *NACTA Journal*, *41*(1), 47-53. Retrieved from https://www.nactateachers.org/attachments/article/673/Larry_Andelt_NACTA_Journal_Dec_1997-10.pdf

Becker, G. (1964). *Human capital: A theoretical and empirical analysis with special reference to education*. Chicago, IL: The University of Chicago Press.

Boone, K., Meisenbach, T., & Tucker, M. (2000). *Agricultural communications: Changes and challenges*. Ames, IA: Iowa State University Press.

Briggeman, B., Henneberry, S., & Norwood, F. (2007). How do employers assess job candidate attributes? *NACTA Journal, 51*(1),15-22. Retrieved from http://www.nactateachers.org/attachments/article/242/Briggeman_September_2007_NACTA_Journal-2.pdf

Brown, F. W., & Fritz, S. M. (1994). Determining the breadth of leadership and human resource management/development offerings in post-secondary departments of agricultural education. *Journal of Agricultural Education, 35*(3), 1-5. doi: 10.5032/jae.1994.03001

Coorts, G. D. (1987). Updating today's college curriculum for tomorrow's agriculture. *NACTA Journal, 31*(2), 20-21. Retrieved from https://www.nactateachers.org/attachments/article/1098/Coorts_NACTA_Journal_June_1987-5.pdf

DiBenedetto, C. & Myers, B. (2016). A conceptual model for the study of student readiness for the 21st century. *NACTA Journal, 60*(1), 28-35. Retrieved from https://www.nactateachers.org/attachments/article/2390/9%20DiBenedetto_NACTA%20Journal%20Special%20May%202016.pdf

Doerfert, D. L., & Miller, R. P. (2006). What are agriculture industry professionals trying to tell us? Implications for university-level agricultural communications curricula. *Journal of Applied Communications, 90*(3), 17-31. doi: 10.4148/1051-0834.1273

Erlandson, D. A., Harris, E. L., Skipper, B. L., & Allen, S. D. (1993). *Doing naturalistic inquiry: A guide to methods.* Newbury Park, California: Sage

Graham, D. L. (2001). Employer perceptions of the preparation of agricultural and extension education graduates. *Journal of Southern Agricultural Education, 51*. Retrieved from https://files.eric.ed.gov/fulltext/ED462281.pdf

Heckman, J. L. (2000). *Invest in the very young*. Chicago, IL: Ounce of Prevention Fund. Retrieved from: http://www.ounceofprevention.org/downloads/publications/Heckman.pdf

Irlbeck, E. G., & Akers, C. W. (2009). Employers' perceptions of recent agricultural communications graduates' workplace habits and communication skills. *Journal of Agricultural Education, 50*(4), 63-71. doi: 10.5032/jae.2009.04063

Kilgo, C. A., Sheets Ezell, J. K., & Pascarella, E. T. (2015). The link between high-impact practices and student learning: Some longitudinal evidence. *Journal of Higher Education, 69*(4), 509-525. doi: 10.1007/s10734-014-9788-z

Kuh, G. D. (2008). *High-impact educational practices: What they are, who has access to them, and why they matter.* Washington, D.C.: Association of American Colleges and Universities.

Kunkel, H. O., Maw, I. L., & Skaggs, C. L. (1996). *Revolutionizing higher education in agriculture*. Ames, Iowa: Iowa State University Press.

Kvale, S. (1996). *InterViews.* Thousand Oaks, California: Sage.

Leggette, H. R., Black, C., McKim, B. R., Prince, D., & Lawrence, S. (2013). An intrinsic case study of a post-secondary high-impact field experience. *NACTA Journal, 57*(3A), 129-138. https://www.nactateachers.org/attachments/article/2106/26.%20Leggette%20NACTA%20Special%20Issue%20Sept%202013.pdf

Lepak, D. P., & Snell, S. A. (1999). The human resource architecture: Toward a theory of human capital allocation and development. *The Academy of Management Review, 24*(1), 31–48. Retrieved from https://s3.amazonaws.com/academia.edu.documents/7908776/hc_architecture_web.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1514405851&Signature=fmUOO9QUeqrHPgM%2FSLBk1nFHG%2Bg%3D&response-content-disposition=inline%3B%20filename%3DTh

Little, A. W. (2003, December). Motivating learning and the development of human capital. *British Association for International and Comparative Education, 33*(4), 437–452. doi: 10.1080/0305792032000127748

Litzenberg, K. K., & Schneider, V. E. (1989). A profile of tomorrow's agribusiness leaders: The US perspective. *Agribusiness, 5*(3), 249-258. doi: 10.1002/1520-6297

Long, G. A., Straquadine, G., & Campbell, W. F. (1992). Plant science alumni rate their education based upon entry-level professional experience. *Journal of Natural Resources and Life Sciences Education, 21*(1), 34-36. Retrieved from https://www.agronomy.org/files//publications/nse/pdfs/jnr021/021-01-0034.pdf

Marvin, K. (1946). Agricultural Journalism in Iowa. A Century of farming in Iowa 1846-1946, Ames, IA: The Iowa State College Press.

McKim, B. R., Latham, L., Treptow, E., & Rayfield, J. (2013). A repeated measures study of the short-term influences of high impact practices of college students' learning styles. *NACTA Journal, 57*(3A), 122-128. Retrieved from https://www.nactateachers.org/attachments/article/2107/25.%20McKim%20NACTA%20Special%20Issue%20Sept%202013.pdf

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation.* San Francisco, California: Jossey-Bass A Wiley Brand.

Odom, S. F., Shehane, M., Moore, L. L., & McKim, B. R. (2014). An analysis of high-impact field experience in agriculture: Documenting critical thinking skills through reflection. *NACTA Journal, 58*(3), 214-220. Retrieved from https://www.nactateachers.org/attachments/article/2227/9.Odom_NACTA%20Journal.pdf

Roberts, T. G., Harder, A., & Brashears, M. T. (Eds). (2016). American Association for Agricultural Education national research agenda: 2016-2020. Gainesville, FL: Department of Agricultural Education and Communication.

Robinson, S. & Baker, M. (2012). *The decisions principals make when interviewing candidates: implications for improving the human capital of pre-service teachers in agricultural education.* Paper presented at the Southern Association of Agricultural Scientists Conference, Birmingham, Alabama.

Seifert, T. A., Gillig, B., Hanson, J. M., Pascarella, E. T., & Blaich, C. F. (2014). The conditional nature of high impact/good practices on student learning outcomes. *Journal of Higher Education, 85*(4), 531-564. doi: 10.1080/00221546.2014.11777339

Shultz, T. W. (1971). *Investment in human capital: The role of education and of research*. New York, NY: The Free Press.

Smith, E. (2010). Sector-specific human capital and the distribution of earnings. *Journal of Human Capital, 4*(1), 35-61. doi: 10.1086/655467

Smylie, M. A. (1996). From bureaucratic control to building human capital: The importance of teaching learning in education reform. *Educational Researcher, 25*(9), 9–11. doi: 10.3102/0013189X025009009

Suvedi, M., & Heyboer, G. (2004). Perceptions of recent graduates and employers about undergraduate programs in the college of agriculture and natural resources at Michigan State University: A follow-up study. *NACTA Journal, 48*(1), 22-27. Retrieved from http://www.nactateachers.org/attachments/article/457/Suvedi_March04NACTA_JOURNAL-4.pdf

Terry, R., Vaughn, P., Vernon, S., Lockaby, J., Evans, F., & Rehrman, M. (1994). *Enhancing the agricultural communications curriculum: a vision for the future.* Unpublished manuscript, Texas Tech University, Lubbock.

Tucker, M., Whaley, S., & Cano, J. (2003). Agricultural education and agricultural communications: striking a proper balance in the academy. *Journal of Agricultural Education, 44*(1), 22-30. doi: 10.5032/jae.2003.01022

Wehner, D. J. (1995). Issues facing professionals in agriculture: A communications-intensive course. *NACTA Journal, 39*(1), 10-13. Retrieved from

http://www.nactateachers.org/attachments/article/738/Wehner_NACTA_Journal_March_1995-2.pdf

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Overview of Findings

Research relating to employer expectations was limited prior to this study. Most research is dated and what exists concentrates individually on agricultural leadership, education, or communications. These three articles sought to examine and explore employer expectations of recent graduates related to their perception of their soft skills, technical skills, and high impact experiences. Moreover, this article sought to address the American Association of Agricultural Education National Research Agenda priority question, "What competencies are needed to effectively educate, communicate, and lead?" (Roberts, Harder, & Brashears, 2016, p. 31). Through a literature review and interviews with employers who had hired agricultural leadership, education, and communications students over the last five years, it was clear employers have some similarities and some differences in their needs. Looking at these diverse opinions, many conclusions can be drawn. This study also looked specifically at high impact experiences and the value employers place on internships, study abroad, and research mentorships, respectively.

Skills and Competencies Needed

Soft skills, technical skills, and high impact experiences emerged within each article as areas of need for students based on employers' desires. Employers all sought after graduates with quality soft skills, the ability to learn technical skills, and a strong agricultural competence.

Employers want students who have the ability to communicate well with others while getting a job done effectively and efficiently. Many employers commented on students needing to have extremely strong written and verbal communication skills. While these skills are considered soft and many will argue that these skills cannot be taught (Doerfert & Miller, 2006), employers are adamant that we must include communication skills in the curriculum being taught at the undergraduate level.

While having soft skills is important, having the ability to learn technical skills when asked was expressed as equally important. Technology changes daily and this adds a significant learning curve many new hires and long-standing employees must adapt to. Employers see issues in students' ability to learn technology based on the lack of exposure many students have to technological changes. An open-minded attitude towards technological changes is important for students to embody as they embark on their new careers (Irlbeck & Akers, 2009).

Agricultural competence and understanding the diversity within agriculture is important for new hires (Kunkel, Maw, & Skaggs, 1996). Companies in today's industries typically are very diverse in goods, products, or services they are providing. Having a sound, broad understanding of agriculture serves new hires well as they begin their careers in a company with employers who will expect the new graduates to perform at a high level.

Perception and Evaluation of High Impact Experiences

Employers all commented on how students who complete a high impact experience almost always perform better in the areas of soft skills, technical skills, and agricultural competence (Kuh, 2008). These students have exposure through their high impact experience to situations

and cultural experiences that you cannot necessarily have in the classroom. These experiences and exposure assists these students in being more competent in many areas.

In terms of high impact experiences, employers seek students who participate in internships over other high impact experiences such as research mentorship or study abroad. In the latter, most employers ranked study abroad over research mentorship. For employers of agricultural education graduates, student-teaching is considered the most important high impact experience. This differed from what employers of agricultural leadership or agricultural communications graduates stated.

Employers in each study spoke of the importance of part-time work and extracurricular involvement outside of the classroom. In many cases, this was more sought after than study abroad or research mentorship. While the university system does not qualify part-time work and extracurricular involvement as a high impact experience, many employers and their companies do. Employers noted the balance, time management skills, and communication skills students learn by having a part-time job or serving as a leader in a student organization while in college. Often times, according to many employers, this ability to manage a job, extracurricular activities, and a full course load is more impressive and provides more transferrable skills to the workplace. While high impact experiences were the focal point of the interview guide and questions asked, many employers took the conversation to cover other areas.

Numerous opportunities to participate in high impact experiences and the amount of students participating in multiple high impact experiences impacts employers' desire to recruit and hire Texas A&M University graduates. While high impact experiences are not required, employers know that many students take advantage of them. They feel confident when they

come to campus to recruit that the majority of the students they will talk to have one or two high impact experiences on their resume.

For many employers, there is a lack of understanding relating to high impact experiences (Andelt, Barrett, & Bosshamer, 1997). While they understand internships and the positive impact from this experience, they do not always have a full grasp on study abroad or research mentorship. Employers do not see how these activities can positively impact their company and their new hires. Universities do not do a good job marketing the impact of these experiences to employers. Employers are lacking an understanding of the cultural competency and problem-solving skills students develop by participating in a study abroad or research project. Communication of these benefits is crucial.

Perception and Evaluation of Curriculum

Employers of all three disciplines discussed the impressive quality of curriculum being offered at Texas A&M University. Employers like the diversity of curriculum within the majors discussed. Employers would like there to be more curriculum related to professional development and communication skills. Additionally, ensuring students have a high competency in agriculture requires more agricultural classes than employers are finding students to have taken. That being said, employers sang many praises about the impressive curriculum that relates specifically to leadership, education, and communications. Most of the employers commented on Texas A&M University being ahead of the game in terms of the curriculum offered to students.

Additionally, relationships with specific faculty members and administrators on-campus help facilitate meaningful partnerships with industry. Faculty members and staff members who

make efforts to work with industry on research projects or have preexisting relationships with industry professionals are often able to assist students in identifying internships or full-time positions. The rapport built through these relationships is long-lasting and very impactful for both students and employers.

Although there are differences in the curriculum within each selected major, there are many similarities related to the skills sought by employers and the employers' perception of high impact experiences. Employers expressed a need for improving students' business etiquette skills (Litzenberg & Schneider, 1989). As new hires, students are asked to interact with customers and other employees from the onset of their employment. Having the ability to use proper etiquette while doing this is key to beginning employment effectively.

A summary of the conclusions mentioned above can be found below in Figure 2.

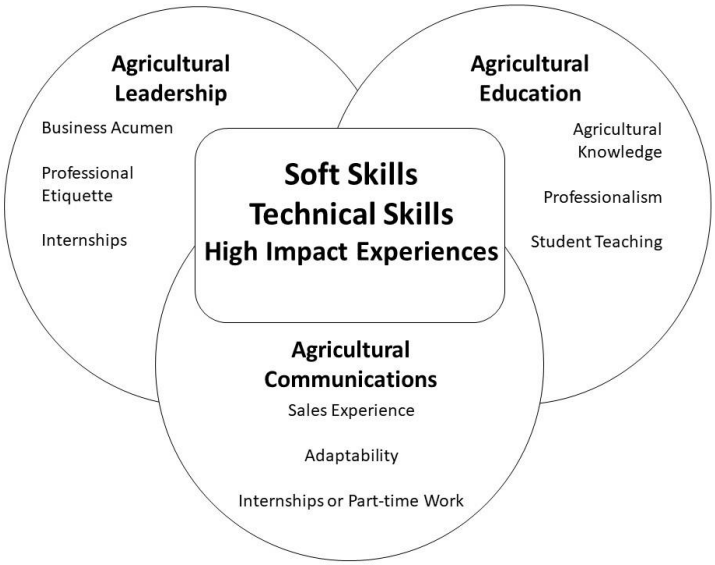

Figure 2: *Similarities and differences among employers regarding expectations of graduates in agricultural leadership, agricultural education, and agricultural communications, Texas A&M University, 2017*

Recommendations for Research

Further research should be conducted to continue to understand employers of agricultural leadership, education, and communications' students, their perceptions of high impact experiences, and their motivation for hiring graduates of Texas A&M University.

Research should be expanded to include employers from all regions of the United States. The results should be compared and contrasted between the regions and disciplines. Adding prolonged engagement while increasing the number of participants would also compliment the already gathered data. Differences and similarities between regions and disciplines can be learned from this expansion.

It is recognized that employers from different regions require different knowledge, skills, and abilities from their new hires. Performing this qualitative research study with employers from all regions of the United States would allow for a cross comparison to be accomplished. Researchers could also pull archival data from other institutions to document employment paths for graduates. Using this information and the new information that would be found from the broader study, more holistic results could help universities in their curriculum and high impact experience development.

Including a quantitative instrument in the expansion of this research would be beneficial. This instrument could seek to determine the numerical value of specific high impact experiences and how they influence students' first job decisions. Future studies should look at the differences in perceptions of high impact experiences. Employers did rank their perception of high impact experiences within this qualitative study, but they did not associate a specific numerical value to that perception. Further research could look at how specific types of internships, specific types of

study abroad, and specific types of research mentorships are ranked among their peers. Taking a look at the length of engagement in each experience, the knowledge acquired, and the impact that length of engagement and knowledge had on the student, universities can start to understand which of their high impact experience options are best suited for specific students.

The study reported here did not rank the soft and technical skills employers seek. Future research should include a quantitative instrument to rank and describe these skills in order to know how to best incorporate them into curriculum development. It was quite apparent that employers value specific skills, but it is still unknown which skills are most valuable and which are least valuable. Understanding where and at what level curriculum improvement is needed is critical. As departments look at course mapping and try to make the academic experience most effective, this data would provide insight into what employers are specifically looking for and how we can work together to achieve it. These future findings could act as a road map for university administrators, professors, and instructors.

Incorporating a longitudinal study to look at students' job placement and high impact experience participation over a five to ten to 15-year period should be conducted. This study could track students to document the long-term impact their higher education has on their career decisions, success, and satisfaction. Additionally, this study would gather a breadth of information from employers, companies, and organizations. People are known to change jobs and careers more frequently now than ever before. Following a student for 15 or more years would prove to be challenging, but very beneficial to document long-term effects of curriculum and high impact experiences. The longitudinal study would need to have a diverse set of participants who went to work for both similar and different industries. The participant groups

should have diversity in their academic achievements, high impact experiences, and overall demographics.

With these longitudinal studies, future research should be conducted to look at which approaches to skill development are best. Incorporating instructional scaffolding and evaluating the outcomes would assist students in selecting their preferred learning activity to accomplish a specific learning outcome. This could be done longitudinally or on a one-time basis. Both would bring benefit to future research. Comparing and contrasting how students prefer to learn career development material, how they prefer to gain soft skills, and how they prefer to improve upon their technical competence would allow for faculty and university administrators to make educated decisions on how information is disseminated.

Looking specifically at Texas A&M University, future research should be conducted to look at faculty expectations of the Career Center. There are a multitude of resources available to faculty members and these resources are not always taken advantage of (Stoltzfus, personal communication, March 14, 2017). Moreover, understanding how faculty members want to use the Career Center could better equip the Career Center to provide the appropriate resources and vice versa.

Similar studies should be conducted every three to five years. While many surveys are sent to students and even some employers, there is not a completely universal, mandatory way to capture information related to both the employers' and the students' perceptions of academic and high impact experiences. Conducting a mixed method study with a purposeful sample could help fill in the data gap that currently exists. This data can assist universities as they work to understand and meet industry expectations. Employer relations and identification of new

employers could emerge from these future studies. Employer relations can foster and thrive through these relationships. Universities should keep in mind that employers are the customer and the students are the product; ensuring the customer is satisfied with the product can only add to and improve curriculum within agricultural leadership, education, and communications. While the acquisition of knowledge is a key component to students attending college, most students are in the academic setting with the goal of one day finding a job. It is imperative that the university works to developing curriculum and experiences that will assist the student in achieving that goal.

Recommendations for Practice

Both soft skill knowledge and technical skill competencies need improvement across all three majors. Many claim soft skills cannot be taught (Graham, 2001); however, giving students an opportunity to learn, practice, and implement their soft skills would be beneficial for employers and universities. Students should have multiple opportunities to develop these skills. These opportunities should provide students with educational experiences and credibility to take to the workforce.

These opportunities include educational information sessions. These sessions can become mandatory to assist in preparing students for their first job. Also, the development and implementation of a professional development certificate would add credibility to students as they claim in interviews to have the soft skills needed to perform well in a business environment. Students are hungry for this knowledge and I am often asked by students for ways to improve

their soft skills. Providing more educational opportunities outside the classroom would be of great benefit to both students and employers.

In addition to educational information sessions, capstone courses could include specific objectives taught by the university Career Center. This could be taught within each department or across majors, but would allow students to have prolonged exposure to the university Career Center in order to expose students to the resources available. Further, more should be done to assist in the development of positive relationships between faculty members and the university Career Center. All faculty members should be aware of the university Career Center and the many resources that are available.

Professional development, communication skills, and business acumen are all areas of lack as it relates to recent graduates. A professional development certificate and educational information sessions are the beginning of bridging the gap. Transcripting these opportunities so that students are able to show proof they have completed this specific training will be a value-added effort for both students and employers.

Technical skills, regardless of industry area, are important. Technology changes quickly and often what students learn in class is no longer applicable in industry. In many cases, students learn technology in class that has become obsolete by the time they are in the workforce. While it is important to teach technology skills, it is equally important to employers that the students know how to adapt and learn new technologies over time. Universities should work to give students the ability to self-teach skills as they change. A strong technical foundation can assist in this area of need. Base knowledge is helpful as students are exposed to new and developing technologies.

For a long-term goal, universities can add these technical areas to specific continuing education courses. Former students can then take the continuing education classes after graduation. While students are able to take classes as a non-degree seeking student, this option is often not affordable and not well-marketed. Providing former students with continuing education courses and marketing them appropriately would be an added level of income for the department while providing a much needed service to the industry, employers, and students.

High impact experiences are clearly important and needed. These experiences should be mandatory and always credit-bearing. Employers would be satisfied with this curriculum change and according to employers, students would be more workforce ready when they graduate. Moving out of state to complete an internship, going on a study abroad, and research experiences require the student to incur costs that are difficult to manage. A tuition relief for these hours or some other sort of financial reprieve could make this more attainable for many students. While there is scholarship and financial aid available for some high impact experiences, it does often cover every cost or does not apply to some high impact experiences. Taking a deeper look at how universities can eliminate financial barriers for students would encourage more students to take advantage of these opportunities.

Moreover, students should attend mandatory programming after their high impact experience to learn how to market and promote their experience. This programming would allow students an opportunity to reflect on their experience. Probing questions should be asked during this programming to assist with students' reflection experience. Students return from their high impact experience and are often ill-equipped to talk to employers about their experience. They often only hit the high points of what they had fun doing while they were on their internship or

study abroad and miss the main point of the experience. Many employers seem unsure about study abroad and research mentorships, and this is likely due to the students' inability to properly market the experience.

Universities should also work to educate employers on the value of these experiences and students should be encouraged to assist with this effort. Providing employers with webinars, written materials, or even open forum sessions would allow employers to learn more about high impact experiences. More job and funding opportunities could emerge from giving these employers and opportunity to increase their awareness of high impact experiences.

Learning outcomes should be developed and implemented for student organizations to ensure the experience is preparing students for their future professional work. Many employers mentioned the impact student organizations have on their new hires and the kind of student they recruit. Thus, it is important that student organizations are held to a high standard. While many student organizations do have learning outcomes, many do not. A level of consistency across all student organizations would help employers evaluate involvement more holistically. The impact student organizations have on students, the community, and the university would also improve from this change. Part-time work was also mentioned as considered to be a hiring criteria for employers. There is no present way to measure the impact of part-time work. Identifying learning outcomes or at least assisting students in marketing their part-time work would be beneficial.

Finally, entrance and exit exams should be implemented with all students. Students should be assessed based on their soft skills, technical skills, and high impact experience

knowledge as they begin their collegiate experience. This assessment should be conducted upon graduation to measure the growth and change in knowledge over time, not measure completion.

While many students have the skillsets that employers are looking for, but there are areas where improvement can be made. Overall, this research documented that Texas A&M University is effectively preparing students for the workforce. We must remain proactive and look for ways to be innovative as we continue to assist students in their career aspirations and transitions.

References

Andelt, L. L., Barrett, L. A., & Bosshamer, B. K. (1997). Employer assessment of the skill preparation of students from the college of agricultural sciences and natural resources university of Nebraska-Lincoln: Implications for teaching and curriculum. *NACTA Journal*, *41*(1), 47-53. Retrieved from https://www.nactateachers.org/attachments/article/673/Larry_Andelt_NACTA_Journal_Dec_1997-10.pdf

Doerfert, D. L., & Miller, R. P. (2006). What are agriculture industry professionals trying to tell us? Implications for university-level agricultural communications curricula. *Journal of Applied Communications, 90*(3), 17-31. doi: 10.4148/1051-0834.1273

Graham, D. L. (2001). Employer perceptions of the preparation of agricultural and extension education graduates. *Journal of Southern Agricultural Education, 51*. Retrieved from https://files.eric.ed.gov/fulltext/ED462281.pdf

Irlbeck, E. G., & Akers, C. W. (2009). Employers' perceptions of recent agricultural communications graduates' workplace habits and communication skills. *Journal of Agricultural Education, 50*(4), 63-71. doi: 10.5032/jae.2009.04063

Kuh, G. D. (2008). *High-impact educational practices: What they are, who has access to them, and why they matter.* Washington, D.C.: Association of American Colleges and Universities.

Kunkel, H. O., Maw, I. L., & Skaggs, C. L. (1996). *Revolutionizing higher education in agriculture*. Ames, Iowa: Iowa State University Press.

Litzenberg, K. K., & Schneider, V. E. (1989). A profile of tomorrow's agribusiness leaders: The US perspective. *Agribusiness, 5*(3), 249-258. doi: 10.1002/1520-6297

Roberts, T. G., Harder, A., & Brashears, M. T. (Eds). (2016). American Association for Agricultural Education national research agenda: 2016-2020. Gainesville, FL: Department of Agricultural Education and Communication.

Stoltzfus, M. (2017). *An oral demographic description of companies who hire ALEC students*. Texas A&M University, College Station.

APPENDIX A: INTERVIEW PROTOCOL

- How many students have you hired from Agricultural Leadership, Education, and Communications in the last 5 years?
- What skills and competencies encourage you to recruit these students?
- Do you seek to recruit students who have participated in High Impact Learning activities, such as internships, study abroad, or undergraduate research? Why or why not?
- Which high impact learning activities do you value most? Why?
- What makes a quality candidate in today's job market?
- How is Texas A&M University teaching competencies needed by the industry? How can we do better?
- How do you evaluate your entry-level hires' success?
- How long have you worked in your current role at your company?
- If number is different, how long have you worked at the company all together?
- Where do you currently live? (City, State)
- What would you consider your ethnicity?

APPENDIX B: IRB CONSENT FORM

TEXAS A&M UNIVERSITY HUMAN SUBJECTS PROTECTION PROGRAM

CONSENT FORM

Project Title: An Examination of High Impact Learning Opportunities – Phase 5

You are invited to take part in a research study being conducted by Jennifer Ann Scasta and Theresa Murphrey, researchers from Texas A&M University. The information in this form is provided to help you decide whether or not to take part. If you decide to take part in the study, you will be asked to sign this consent form. If you decide you do not want to participate, there will be no penalty to you, and you will not lose any benefits you normally would have.

Why Is This Study Being Done?
To better identify the impact of student participation in high impact experiences on student career success.

Why Am I Being Asked To Be In This Study?
You are being asked to be in this study because you are an employer who hires Agricultural Leadership, Education and Communications students upon graduation.

How Many People Will Be Asked To Be In This Study?
Approximately 60 individuals will be invited to participate in this study.

What Are the Alternatives to being in this study?
The alternative to being in the study is not to participate.

What Will I Be Asked To Do In This Study?
You will be asked to complete an interview. Your participation in this study should not last more than 1 hour.

Will Photos, Video or Audio Recordings Be Made Of Me during the Study? The researchers will not audio or video record during the study.

Are There Any Risks To Me?
The things that you will be doing have no more risks than you would come across in everyday life. You do not have to answer anything you do not want to answer.

Will There Be Any Costs To Me?
Aside from your time, there are no costs for taking part in the study.

Will I Be Paid To Be In This Study?
You will not be paid for being in this study

Will Information From This Study Be Kept Private?
The records of this study will be kept private. No identifiers linking you to this study will be included in any sort of report that might be published. Research records will be stored securely and only Jennifer Ann Scasta and Theresa Murphrey will have access to the records. Information about you will be stored in locked file cabinet. Information about you will be kept confidential to the extent permitted or required by law. People who have access to your information include the Principal Investigator and research study personnel. Representatives of regulatory agencies such as the Office of Human Research Protections (OHRP) and entities such as the Texas A&M University Human Subjects Protection Program may access your records to make sure the study is being run correctly and that information is collected properly. Information about you and related to this study will be kept confidential to the extent permitted or required by law.

IRB NUMBER: IRB2013-0845D
IRB APPROVAL DATE: 05/09/2017
IRB EXPIRATION DATE: 03/15/2018

CONSENT FORM

Who may I Contact for More Information?
You may contact Jennifer Ann Scasta to tell her about a concern or complaint about this research at 979 845-5139; jas11@tamu.edu, or Theresa Murphrey at 979-458-2749; t-murphrey@tamu.edu.

For questions about your rights as a research participant; or if you have questions, complaints, or concerns about the research, you may call the Texas A&M University Human Subjects Protection Program office at (979) 458-4067 or irb@tamu.edu.
.

What if I Change My Mind About Participating?
This research is voluntary and you have the choice whether or not to be in this research study. You may decide to not begin or to stop participating at any time. If you choose not to be in this study or stop being in the study, there will be no effect.

STATEMENT OF CONSENT
I agree to be in this study and know that I am not giving up any legal rights by signing this form. The procedures, risks, and benefits have been explained to me, and my questions have been answered. I know that new information about this research study will be provided to me as it becomes available and that the researcher will tell me if I must be removed from the study. I can ask more questions if I want. A copy of this entire consent form will be given to me.

_____ _____
Participant's Signature Date

_____ _____
Printed Name Date

INVESTIGATOR'S AFFIDAVIT:
Either I have or my agent has carefully explained to the participant the nature of the above project. I hereby certify that to the best of my knowledge the person who signed this consent form was informed of the nature, demands, benefits, and risks involved in his/her participation.

_____ _____
Signature of Presenter Date

_____ _____
Printed Name Date

IRB NUMBER: IRB2013-0845D
IRB APPROVAL DATE: 05/09/2017
IRB EXPIRATION DATE: 03/15/2018

APPENDIX C: IRB APPROVAL FORM

DIVISION OF RESEARCH

TEXAS A&M UNIVERSITY

DATE: March 02, 2016

MEMORANDUM

TO: Theresa PESL Murphrey
ALRSRCH - Agrilife Research - Ag Leadership, Education & Communication

FROM: Dr. James Fluckey
Chair, TAMU IRB

SUBJECT: Expedited Approval

Study Number: IRB2013-0845D
Title: An Examination of High Impact Learning Opportunities
Date of Determination:
Approval Date: 12/20/2013
Continuing Review Due: 08/01/2016
Expiration Date: 09/01/2016

Documents Reviewed and Approved: Only IRB-stamped approved versions of study materials (e.g., consent forms, recruitment materials, and questionnaires) can be distributed to human participants. Please log into iRIS to download the stamped, approved version of all study materials. If you are unable to locate the stamped version in iRIS, please contact the iRIS Support Team at 979.845.4969 or the IRB liaison assigned to your area.

Submission Components			
Study Document			
Title	Version Number	Version Date	Outcome
Initial_Letter_Phase_5	Version 1.0	02/19/2016	Approved
Interview_Protocol_Phase_5	Version 1.0	02/19/2016	Approved
Study Consent Form			
Title	Version Number	Version Date	Outcome
Consent Form - Phase 5	Version 1.0	02/29/2016	Approved

Document of Consent: Waiver approved under 45 CFR 46.117 (c) 1 or 2/ 21 CFR 56.109 (c)1
Waiver of Consent:

Comments:

- Research is to be conducted according to the study application approved by the IRB prior to implementation.
- Any future correspondence should include the IRB study number and the study title.

750 Agronomy Road, Suite 2701
1186 TAMU
College Station, TX 77843-1186
Tel. 979.458.1467 Fax. 979.862.3176
http://rcb.tamu.edu

Investigators assume the following responsibilities:

1. **Continuing Review:** The study must be renewed by the expiration date in order to continue with the research. A Continuing Review application along with required documents must be submitted by the continuing review deadline. Failure to do so may result in processing delays, study expiration, and/or loss of funding.
2. **Completion Report:** Upon completion of the research study (including data collection and analysis), a Completion Report must be submitted to the IRB.
3. **Unanticipated Problems and Adverse Events:** Unanticipated problems and adverse events must be reported to the IRB immediately.
4. **Reports of Potential Non-compliance:** Potential non-compliance, including deviations from protocol and violations, must be reported to the IRB office immediately.
5. **Amendments:** Changes to the protocol and/or study documents must be requested by submitting an Amendment to the IRB for review. The Amendment must be approved by the IRB before being implemented.
6. **Consent Forms:** When using a consent form or information sheet, the IRB stamped approved version must be used. Please log into iRIS to download the stamped approved version of the consenting instruments. If you are unable to locate the stamped version in iRIS, please contact the iRIS Support Team at 979.845.4969 or the IRB liaison assigned to your area. Human participants are to receive a copy of the consent document, if appropriate.
7. **Post Approval Monitoring:** Expedited and full board studies may be subject to post approval monitoring. During the life of the study, please review and document study progress using the PI self-assessment found on the RCB website as a method of preparation for the potential review. Investigators are responsible for maintaining complete and accurate study records and making them available for post approval monitoring. Investigators are encouraged to request a pre-initiation site visit with the Post Approval Monitor. These visits are designed to help ensure that all necessary documents are approved and in order prior to initiating the study and to help investigators maintain compliance.
8. **Recruitment**: All approved recruitment materials will be stamped electronically by the HRPP staff and available for download from iRIS. These IRB-stamped approved documents from iRIS must be used for recruitment. For materials that are distributed to potential participants electronically and for which you can only feasibly use the approved text rather than the stamped document, the study's IRB Study Number, approval date, and expiration dates must be included in the following format: TAMU IRB#20XX-XXXX Approved: XX/XX/XXXX Expiration Date: XX/XX/XXXX.
9. **FERPA and PPRA:** Investigators conducting research with students must have appropriate approvals from the FERPA administrator at the institution where the research will be conducted in accordance with the Family Education Rights and Privacy Act (FERPA). The Protection of Pupil Rights Amendment (PPRA) protects the rights of parents in students ensuring that written parental consent is required for participation in surveys, analysis, or evaluation that ask questions falling into categories of protected information.
10. **Food:** Any use of food in the conduct of human research must follow Texas A&M University Standard Administrative Procedure 24.01.01.M4.02.
11. **Payments:** Any use of payments to human research participants must follow Texas A&M University Standard Administrative Procedure 21.01.99.M0.03.
12. **Records Retention**: Federal Regulations require records be retained for at least 3 years. Records of a study that collects protected health information are required to be retained for at least 6 years. Some sponsors require extended records retention. Texas A&M University rule 15.99.03.M1.03 Responsible Stewardship of Research Data requires that research records be retained on Texas A&M property.

This electronic document provides notification of the review results by the Institutional Review Board.