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Employer Perceptions of Essential Skills Required of Postsecondary Agriculture Students

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EMPLOYER PERCEPTIONS OF ESSENTIAL SKILLS REQUIRED OF POSTSECONDARY AGRICULTURE STUDENTS

EMILY M. MCCLURE

68 Pages

This study examined agriculture employers' perceptions of what essential skills their recent hires possess and which skills they feel their recent hires need some additional guidance in before their companies hire them. The study also asked participants what activities postsecondary agriculture students should be involved in to help develop these essential skills. The study's participants were human resource representatives from companies that participated in the Illinois State University Department of Agriculture career fair. The sample consisted of 26 subjects.

The data analysis revealed significant results. Those who participated in the study came from across the United States. An overwhelming number of responses felt that recent hires in their career fields were not prepared in understanding their role within the company. Recent hires were least prepared to communicate concisely and accurately, followed with the recent hires ability to listen effectively and identify and analyze problems. Respondents felt that recent graduates should be involved in internships, hold leadership positions in career organizations, and they looked highly at their activity level in both 4-H and FFA organizations. The findings well aid those involved in agriculture education better prepare their students for career success.
KEYWORDS: soft skills, agriculture, graduates, employability, career readiness, postsecondary education

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CHAPTER I: INTRODUCTION

Each year, a new crop of graduates emerges from postsecondary institutions looking for employment within their field of study. These graduates have completed a curriculum within their chosen colleges and universities in preparation for their employment. Colleges and universities are recruiting students from across the country, stating their institution can best prepare students for future employment. Recruiting quality students is the biggest source of competition amongst the programs involved in postsecondary education. According to the National Center for Education Statistics, the job placement rate for those who attended college was 79% in 2018, which increased with each level of education completed (National Center for Education Statistics, 2020). To get young adults interested in pursuing higher education beyond the high school (or secondary) level, they need to see the financial and long-term benefits of this cost. Job attainment rate is one way they will select their industries and postsecondary path in the future.

Within Illinois, there are 206 postsecondary programs (Illinois Board of Higher Education, 2020). The Illinois General Assembly recognizes agriculture as an essential industry in the state. Senate Bill 255, signed in 1986, assures quality agriculture education will be available to all ages, including postsecondary education (Facilitating Coordination in Agricultural Education, 2019). In 2019, this bill allocated over $165,000 to 34 different postsecondary agriculture institutions within the state (Facilitating Coordination in Agricultural Education, 2019). In 1993, the Illinois Community College Board and the Illinois Board of Higher Education cooperated in establishing the Illinois Articulation Initiative (IAI). The IAI's purpose is assure equality in the curriculum amongst the programs allowing for ease of transferability for students. It also allows faculty members to develop and maintain articulated

courses by allowing institutions to work together and ensure a similar academic rigor amongst different programs. Based on the IAI, each college and university has agreed to a set curriculum and must prove this with the syllabi of their introductory courses (Illinois Articulation Initiative, 2017). This articulation allows students across Illinois schools to receive a high-quality education no matter which institution they attend.

According to the Illinois State Board of Education, there are eight different agriculture career pathways: agriculture science, agriculture business and management, agriculture machination and technology, horticulture and landscaping, agricultural and food products processing, animal science, environmental technology, and natural resources conservation management (Illinois State Board of Education, 2020). Each of these career clusters attracts a different type of student based on past experiences and passions. However, many of these students fall within the same department or college at their postsecondary institution. Finding out what essential skills are similar amongst these career clusters will assist in curriculum planning for postsecondary agriculture instructors.

With a similar curriculum established in agriculture programs and the state showing support for agriculture through different policies, the postsecondary institutions need to attract students into their programs. Agriculture programs are encouraged to produce more students to fulfill the expanding employment needs of the industry. In 2015, it was estimated there was a shortage of 22,500 graduates for agricultural jobs (AgWeb, 2020). Given this shortage of graduates within the field of agriculture, postsecondary programs need to provide extra preparation and guidance to set their graduates apart from others across the state. One way to set their students apart from other programs is to allow individual programs to build a strong set of workplace skills to accomplish this goal of career success.

Statement of the Problem

The purpose of this study is to identify essential skills agriculture businesses deem important for employment. Each year, a new crop of students emerge from postsecondary agriculture programs looking to start their careers. Employers are looking for essential skills that will differentiate these applicants from each other. To identify these skills, four objectives will be addressed. The first objective is to identify soft skills that employers might require from their employees. The second objective is to identify the essential soft skills required by agriculture companies. The third objective is to identify if these soft skills that are essential for career success in agriculture differ among the different agriculture career pathways. The fourth objective is to identify what activities employers look for on a candidate's resume as they feel they prepare students for success in their career fields.

This survey asked agriculture employers to rank the skills that have been identified through objective one. The survey results were then analyzed to identify which skills are similar across the different agriculture companies and career clusters in objective two. Once these results are analyzed, the skills were ranked by importance as selected by these employers in objective three. Objective four will look at 23 common activities postsecondary students are involved in and asked employers if the different activities are positively correlated with a strong candidate. After that question, employers were asked which of the 23 activities they look for on candidate resumes.

Significance of the Study

This study will allow postsecondary agriculture programs and their students to know which skills they should focus on developing. It will also showcase what skills graduates should highlight on their résumés to secure employment after graduation. Also, this study will give

insight to postsecondary agriculture programs on what skills need to be highlighted in their curriculum to ensure their students rise to the top of the job applicant pool each year. In addition, this study will allow insight into what skills should be evident in students as postsecondary programs recruit new students each year.

Statement of Purpose

The primary purpose of this study is to determine what essential skills employers desire of recent graduates of postsecondary agriculture programs. This will allow the institutions to properly prepare their students for long-term success in their career paths.

Research Questions

The four research questions that guide this study are:

1. Which essential skills are most valued by agriculture employers?
2. Which essential skills do agriculture employers feel recent hires do not possess?
3. Are preferences for specific skills different across the different agriculture career cluster areas?
4. What activities do employers feel prepare candidates for career success?

Research Hypotheses

The following hypotheses relating to research question one were outlined in the null form to facilitate significance testing.

H_{01}: There is no significant difference with participants perceptions of what essential skills are preferred with the age of the participant.

H_{02}: There is no significant difference with participants perceptions of what essential skills are preferred with the location of the business.

H_{03}: There is no significant difference with participants perceptions of what essential skills candidates are not prepared for with the age of the participant.

H_{04}: There is no significant difference with participants perceptions of what essential skills candidates are not prepared for with the location of the business.

H_{05}: There is no significant difference between the participant's agricultural background and the emphasis they placed on essential skills.

H_{06}: There is no significant difference between the participant's company's agriculture career cluster and the emphasis they placed on essential skills.

H_{07}: There is no significant difference between participant's preferred activities successful candidates are a part of in postsecondary education.

H_{08}: There is no significant difference between participant's required activities successful candidates are a part of in postsecondary education.

Scope of the Study

The study was sent out to the 81 email addresses the Department of Agriculture had available for human resource representatives of agriculture companies that were hiring at recent agriculture career fairs.

Assumptions

The study included the following assumptions:

1. Only human resource representatives completed the questionnaire.
2. The human resource representatives have recently hired individuals in the agriculture industry from postsecondary institutions.
3. The participants will answer the questionnaire honestly and candidly.

Limitations

This project did face some limitations while completing this project. First, there was a low number of responses from a small participant pool. This response rate made it impossible to generalize the results for an entire group of participants. Also, I limited participants to just past attendees of the agriculture career fair at one institution. If this had been sent to more companies and participants, it would have likely generated a greater array of answers and responses. A majority of our respondents came from the Midwest, but if it was sent out to a larger pool of participants, it would have a more accurate description of what companies are looking for in postsecondary agriculture graduates in their career fields.

CHAPTER II: LITERATURE REVIEW

A Definition of Essential Workplace Skills

Today's workplace is constantly evolving, and recent graduates from postsecondary institutions are most likely to feel the effects of these changing workplace dynamics (Subbu & Rajasekaran, 2018). According to a poll performed by Gallop in 2006, people report that understanding these dynamics, also known as workplace skills, is frustrating. Employees are resistant to play the game within the office but do not understand why they do not get promotions or the job itself (Gallup, 2006). However, highlighting you can play the game is important for job applicants, as only about 30% of the individuals who interview for job are hired within a company (Subbu & Rajasekaran, 2018). Gallup recommends acquiring essential skills in order to advance in ones chosen career field (Gallup, 2006).

When asked, most employers will say that it is important for new hires to not only have the content area knowledge of what their field requires but also have knowledge and skills across many different content areas (Hart, 2015). While some people consider these essential skills, others call these personal traits and soft skills and feel they should be developed within a student's path toward their chosen career fields (Subbu & Rajasekaran, 2018).

Each year, businesses hire individuals who have recently completed degrees in postsecondary education, but research has shown that the degree you hold does not matter as much as the skills you possess (Eisner, 2010). Research performed in 2015 supported this, and employers stated they care more about what essential skills the applicants have rather than what major they completed (Hart, 2015). However, some employers believe that some postsecondary institutions better equip graduates with the essential workplace skills they demand in employees (Eisner, 2010). This explains why graduates from Ivy League, or other prestigious universities,

tend to earn higher salaries than others with the same degree, building a reputation allowing their graduates to be set apart (Eisner, 2010). According to research done by Singh and Singh (2019), employers felt that universities were focused on recruiting and retaining students each year instead of building essential skills for their graduates.

In a recent study, 96% of employers felt that students should be taught how to solve problems with individuals who have different opinions than their own, while understanding democratic institutions and their values was important for 87% of the employers and 86% of the employers felt that a strong understanding of our civic society would be important for college students to grasp before graduation (Hart, 2015).

When employers were asked to rank which essential skills they deemed most important in new hires, over 80% agreed that five skills were very important in the long-term success of their new hires. Within these five skills, employers highly value candidates that: 1) can communicate; 2) work together as a team; 3) make ethical decisions; 4) think critically, and 5) apply knowledge and skills to the real world. Employers were found to prioritize these skills over a candidate's major when selecting from the applicant pool (Hart, 2015). When college students were asked to value and rank these same skills, they agreed with employers on which five skills were most important to be successful in their future careers but did not see the importance of experiencing cultures unlike their own or staying up to date on new scientific advancements (Hart, 2015).

With the Hart Research Associates (2015) survey that was completed, employers were not only asked what skills they felt were most important but if they felt recent graduates were equipped with these skills. Of the different skills that were identified, employers agreed that students were not prepared for career success in these broad skills. However, when recent

graduates were asked to rank themselves in these skill areas, they felt they were well prepared for their futures, showcasing an obvious disconnect between new hires and their employers (Hart, 2015).

A reoccurring theme was that employers felt that recent graduates needed to develop their ethical skill sets. They also felt that employees have a hard time trying to accept their place in the workplace with struggling to be on time, wear appropriate clothing, be self-starting, accept direction, know how their work impacts the business, being able to build appropriate relationships in the workplace, how to communicate with peers and knowing how to advance in the company. Employers felt these essential workplace skills (not content areas skills) were of utmost importance for recent graduates to succeed (Eisner, 2010).

Essential Skills that are Most Preferred by Agriculture Employers

Recent trends have shown that agriculture employers seek not only new employees that have content knowledge and skills but also higher-order thinking skills that can be applied across different disciplines (Hendrix & Morrison, 2018). A gap has been discovered between agriculture graduates' expectations of the skills and expectations and those their employers expect from them (Hendrix & Morrison, 2018). Seeing a need to help research these essential skills in agriculture, the Association of Public and Land-grant Universities (APLU) arranged for research to be performed in 2010 on the employability skills that were needed in the field of agriculture. The purpose of their research was to answer the question: "What soft skills are employers looking for in new graduates?". These college administrators saw a need for this research to be completed after multiple complaints from agricultural employers stating that students were not prepared to enter the workforce. The purpose of the survey was to determine how to help ease the transition from the completion of their degree to the agriculture workforce.

This research was performed by collecting the opinions of not only employers but also faculty, alumni, and current students to see if there were any differences (Crawford et al., 2011).

To develop this survey, over 80 written works from multiple countries were evaluated to see what research already existed on soft skills. They looked at the different key phrases that employers gave as to why they chose their new hires. From this analysis, they divided these key terms into seven important groups: experiences, team skills, communication skills, leadership skills, decision-making/problem-solving skills, self-management skills, and professionalism skills (Crawford et al., 2011).

The survey was given to students, alumni, faculty members, and employers, asking them to rank the seven different skill sets. Given the survey results, communication skills were placed as the highest ranked grouping, placing the applicants with strong communication skills over other applicants that may have had a strong internship experience (Crawford et al., 2011).

Respondents to the survey were asked to rank what they thought was more important, soft skills or technical skills. A gap was discovered when current students and faculty thought that their discipline knowledge was the most important part of career success, while alumni and employers viewed soft skills as more important to one's success in the workplace. However, employers reported that new graduates were most prepared with their technology skills (Crawford et al., 2011).

All the groups surveyed placed communication and problem-solving as the most important soft skills. Faculty, alumni, and employers each had similar rankings for their responses, while students viewed other soft skills as more important than the people who will be mentoring them. The most significant difference was that students felt their experiences should place them above their competition and ranked it 3rd, while many of the employers ranked these

skills as 6th or 7th (Crawford, et al., 2011). This also matched the research of Hendrix and Morrison (2018), as communication skills ranked high for employers, while the students ranked communications skills low on their order of importance of essential skills in the workplace.

Within the communication soft skill set, all groups agreed that listening effectively is the most important communication skill, followed by communicating accurately and efficiently and effective oral communication skills. It was also highlighted that being able to communicate in all forms was important, as job applicants need to be able to even use a telephone and talk to people effectively and not just rely on written expression (Crawford et al., 2011).

Within the area of decision-making, all groups agree that the most important skill for new employees is to be able to solve problems, followed by taking appropriate and effective actions. All groups agreed that being a life-long learner and being able to think abstractly are the least important decision-making skills for a new hire. These skills could be honed as an employee establishes themselves in a career, but they are not vital for their success as new employees (Crawford et al., 2011).

When asked who should be teaching the students these soft skills, half of the respondents agreed that these skills should be taught by both postsecondary institutions and employers. The respondents did feel that the university allowed for more structure for this to occur. However, this learning does not have to happen in the classroom. It can develop during internships, which are often required for degree completion, student organizations, or different mentoring abilities the institutions have at their disposal (Crawford et al., 2011). Hendrix and Morrison (2018) recommend that all postsecondary agriculture programs assess their student's perceptions of workplace readiness and modify their curriculum accordingly.

After the release of the APLU study in 2011, multiple postsecondary education institutions identified ways to implement the findings into their curriculum. In addition to recommended changes in curriculum, researchers explored these results to identify different gaps in students' preparedness for these needed skills (Crawford & Fink, 2019). Over time, this research has allowed the institutions to realize the importance of new, focused research.

Given the changing work environment, APLU encouraged new surveys to focus on areas of growing concern amongst employers such as new employees' ability to manage persistence, ambiguity, change, and conflict in the workplace. It was important for this national organization to showcase these skills across the nation, not just one geographical area, so they distributed their following survey in 2018 to 32 postsecondary institutions and utilized the website AgCareers to receive 10,533 responses (Crawford & Fink, 2019).

The 2018 survey by APLU looked at 11 skills that were targeted after analyzing the needs of employers in the 2011 survey. Agriculture postsecondary institutions sent this survey to a variety of employers, some outside of the traditional agriculture career field. The purpose of this study was to have the knowledge gained will positively impact all industries (Crawford & Fink, 2019).

When analyzing the results of the 2018 survey, it was discovered that the knowledge gaps of the 11 workplace skills identified were still applicable to the current workforce. Each group that received the survey agreed that these skill areas had the most significant discrepancies in preparing college students (Crawford & Fink, 2019). Even with the research that has been done, a reoccurring theme has developed: students need to be more prepared in these skill areas. This problem is not just a problem in Illinois or even the United States. Research done by agriculture professors at the University of Mauritius discovered their students also felt the curriculum did

not prepare them properly for management decisions, forming and researching innovative ideas, problem-solving, and properly communicating (Armoogum, et al., 2016).

Of the 11 skill areas highlighted by APLU in 2018, three emerged as the areas deemed most important by employers for their employees: 1) listen effectively; 2) communicate accurately and concisely, and 3) identify and analyze problems. Outside of these three being most important, three other skills were also identified as ones for which new employees were the least prepared. They were: 1) understand role and realistic career expectations; 2) recognize and deal constructively with conflict, and 3) accept critique and direction in the workplace (Crawford & Fink, 2019).

The biggest concern that arose from all groups that took the 2018 APLU survey was the recent hires' ability to deal with conflict. It was felt that this area was what the recent hires were least prepared for and one that is the hardest to define. Each person may have a different definition of conflict, but all groups agree that it is a skill recent graduates need to improve (Crawford & Fink, 2019).

While these groups all agreed on the area new employees needed the most preparation in; there was a difference of opinion on the most significant preparedness gap. New employees felt they struggled to build professional relationships is the biggest gap. At the same time, their employers feel that this gap is instead new employees understanding their role in the workplace (Crawford & Fink, 2019). Although these skill areas are different, there is a similar theme here: building workplace relationships with mentors would reach the need of both areas.

How new employees should develop this skill set has also been agreed upon in the 2018 survey amongst the different groups. Each group agreed that these skills should be developed by "work, internships, career or major-related student organization, volunteerism, research with a

mentor, international travel of any kind, and varsity and club or intermural sports" (Crawford & Fink, 2019). Postsecondary institutions can work with these organizations to ensure these skill areas are being addressed.

Preferences for Specific Skills Across Agricultural Career Clusters

In the APLU's 2018 study of essential employability skills of agriculture graduates, they asked all the groups associated with academia (current students, alumni, and faculty) to identify their career cluster area, except for businesses. The motivation was that certain businesses reach a wide area of agriculture degree areas, so having them choose just one would be counterintuitive to their survey results (Crawford & Fink, 2019).

Irlbeck and Akers (2009) at Texas Tech University surveyed student preparedness of employability skills in agriculture communications. This broad career field area would fall in the ISBE career clusters matrix as agriculture science and is within a skill area many agriculture employers feel recent graduates need improvement. Generally, the employers of these recent graduates felt the students were well prepared in the areas they selected (trustworthiness, easy to work with, reliability, trainability, self-motivation, maturity, work ethic, professionalism, organization, common sense, and creativity). However, employers were able to comment on areas outside of those selected where they felt students needed to improve. These comments matched similar research others had done that new graduates do not understand the workplace dynamic and do not understand needing to work through the ranks in their careers (Irlbeck & Akers, 2009).

The research was done within the horticulture career cluster during the 2005 Professional Landcare Network (PLANET) competition, employers were asked which professional skills and traits they would like to see in their postsecondary graduates within the field. The highest ranked

traits that employers wanted to see in their new employees were the ability to show initiative, accept responsibility, and verbally communicate. They also asked employees to rank the technical skills they saw as most important but then asked the employees to rank these skills together. What was discovered was that employees put a higher emphasis on these workplace essential skills than the technical skills within the horticulture industry (Berle, 2007).

In a 2011 study conducted in Oklahoma, employers in the animal science industry were asked which skills they thought were the most important qualities in their entry-level employees. It was discovered that of the top 10 skills the employees needed, five had nothing to do with animals. They included performing basic math, understanding farm safety, and both oral and written communication skills. These skills are not content-area skills that would be taught in an animal science classroom about animals, but they are skills that could be integrated into the curriculum (Slusher, Robinson, & Edwards, 2011).

CHAPTER III: METHODOLOGY

The purpose of this study is to identify essential skills agriculture businesses deem important for employment. With a consistent supply of new graduates each year from postsecondary institutions looking for agricultural career employment, these graduates are applying for similar jobs and need to set themselves apart from other applicants. Employers are looking for a set of essential skills that will differentiate these applicants from each other. This study addressed three objectives to better prepare postsecondary agriculture students for career success. It identified soft skills that employers might require from their employees. The survey was developed based on these skills to give to agriculture companies. Then the results were analyzed, helping postsecondary institutions better know what skills to help their students hone and craft during their courses of study.

Rationale

A survey was developed using a mixed methods design. The mixed methods research design was developed around 2000 and allows for a combination of the strengths and limitations of both quantitative and qualitative research to be done in the same study (Caruth, 2013). By combining these methods, this study will provide more insight into the research problem and questions.

For this study, a sequential explanatory mixed methods design was utilized as the quantitative results from the survey will be followed by interviews developed from the survey results for qualitative results (Pluye & Hong, 2014). However, this research design is more time consuming, as the two methods cannot be mixed in a single study (Caruth, 2013). By utilizing this research design, a more in-depth analysis will be completed of the results of the survey.

This survey was considered a surveying using convenience sampling. This sampling technique allowed the survey to only go to the participants who have recent experience with hiring postsecondary graduates of agriculture backgrounds. However, with this sampling technique, the results are limited to the participants of the survey and cannot be assumed to be correct for the general population base (Stratton, 2021).

Participants

The target audience for this study are recruiters and human resource managers representing companies attending the career fairs held by Illinois State University's Department of Agriculture. The career fair lists were compiled, formulating a master spreadsheet of recruiters and human resource representatives within these agriculture companies. These participants were asked for demographic data such as their age, their gender, and their education level along with information about the company including the number of employees and what career cluster they best associate with, modeled after Crawford and Fink's 2019 employability study (Crawford & Fink, 2019). Figure 1 shows the location of the company headquarters of the participants

Figure 1: Participant's Company Headquarters Map

in the study. The blue dots show the zip code location of where the company is headquartered, showing that the participants from the study come from a wide array of locations, and not just in Illinois. Participants were represented across Washington D.C. and 9 states. Table 1 highlights the demographic data that was found while completing this study.

Table 1

Participants Demographic Characteristics

Variable Name	Group	Questionnaire Response
Average Age		39.4 Years
Median Age		37 Years
Gender	Male	48%
	Female	52%
Highest Education Level Completed	Associates Degree/2 Year Degree	3.8%
	Bachelor's Degree/4 Year Degree	73.1%
	Some Graduate Coursework	3.8%
	Graduate Degree	19.2%
Years of Human Resource Experience	Average	3.5 Years
	Median	3.5 Years
Number of Employees in Company	Average	10,125
	Median	10,125
Company Type	Government Organization	10.53%
	Sole Proprietorship	0.00%
	Partnership	0.00%
	Corporation	47.37%
	S Corporation	10.53%
	Limited Liability Company (LLC)	21.05%
	Cooperative	0.00%
	Other: Non-for-Profit Corporation	5.26%
	Other: Checkoff & Membership Organization	5.26%

Instrumentation

Data was collected utilizing a cross-sectional survey that was researcher developed and modeled after similar studies completed by Crawford and Fink in 2011 and 2019 with similar

research problems. The research was developed in accordance with the Illinois State University's Institutional Review Board (IRB) and was reviewed and approved with approval number IRB-2021-310.

The first section of the survey included demographic questions about the respondent's personal backgrounds. The second section of the survey highlighted the business information, including employee characteristics and the career cluster they best defined. The third section asked questions about essential skills employers see as important in their workplace, using skills identified from previous research. The last section asked questions about growth areas in essential skills the respondents believe are important in their recent hires. At the end of the survey, participants were asked if they had any additional comments for qualitative data. This research was compiled into a summative report to highlight common themes highlighted by employers for their perceptions of these essential skills.

The validity of the content of this survey instrument was reviewed by a panel of experts of four university experts who have experience with designing survey instruments.

Data Collection for Quantitative Data Questionnaire

Illinois State University's Institution Review Board (IRB) approval was obtained before data collection (Appendix A). The cover letter, consent form and survey are presented in Appendix B, C, and D respectively.

Data for this study was collected using the following steps:

1. Email addresses were collected for the participants from the database that is used to ask companies to attend the Department of Agriculture's Career Fair.

2. The cover letter, along with a link to the survey, was emailed to every participant. This email was sent by the faculty member who coordinated the career fair due to the confidentiality of the list and attendees for the researcher.
3. The survey was closed so research could be compiled after 94 days of the survey being active.

Data Analysis

The data was evaluated using the procedures listed below:

1. Which essential skills are most valued by agriculture employers?
    a. A one-way ANOVA test was used to determine a significant difference between the participant's background in agriculture and their perceptions of a candidates' preparedness for agricultural careers.
2. Which essential skills do agriculture employers feel recent hires do not possess?
    a. A one-way ANOVA test was used to determine a significant difference between the participant's educational background with their perceptions of candidates' preparedness for agricultural careers.
3. Are preferences for specific skills different across the different agriculture career cluster areas?
    a. A one-way ANOVA test was used to determine a significant difference between the participant's age with their perceptions of candidates' preparedness for agricultural careers.
4. What activities do employers believe prepare candidates for career success?

a. A one-way ANOVA test was used to determine a significant difference between the activities participants like to see on a candidate's resume with activities they believe prepare students for career success.

Statistical Analysis

The data was analyzed with the statistics function in Microsoft Excel using the Kruskal-Wallis H one-way ANOVA. The small sample size of this set did not allow for the use of multi-way variance analysis. Using one-way ANOVA or t-tests to determine statistical analysis is also the industry standard in the field of Career and Technical Education and is being highly encouraged for researchers to use one of these two tests and is considered a necessity in the research done in this career field (Rojewski et al., 2012).

The independent variables of this research included the participants' age, gender, years of experience in human resources, their previous agriculture experience, their company's agriculture career field, company business structure, company size, and geographical area their company represents. The dependent variables included the participants' perception of if some postsecondary institutions better prepare candidates than others, the essential skills that were necessary for success in their business, the essential skills candidates were not prepared for in their businesses, activities job candidates should have on their resumes, and what activities help prepare candidates for career success.

CHAPTER IV: RESULTS

The purpose of this study is to determine what essential skills employers desire of recent graduates of postsecondary agriculture programs. By determining these essential skills, instructors of postsecondary agriculture students are better able to prepare their students for career success. This chapter describes the results of the study using quantitative and qualitative data. Learning more about what essential skills are considered important for career success in agriculture will allow postsecondary instructors and students to set themselves on top of the candidate pool once they complete their postsecondary training.

There were 27 respondents out of 81 emails who completed the questionnaire, but 26 of them were considered valid. The other response was not filled out completely. Three emails bounced back while sending out the batch email. This resulted in a response rate of 32.1%. According to the Encyclopedia of Survey Research Methods, the response rate has dipped in recent years, and it is not uncommon to see response rates of 10%. The response rate will grow if there are incentives to fill out the survey, like gift cards. The lower response rate is still a good sample size compared to other surveys (Lavarakas, 2008). The nature of this survey made incentives not plausible, and as such, there was still an acceptable response rate attained for no incentives offered.

The following research questions were posed:

1. Which essential skills are most valued by agriculture employers?
2. Which essential skills do agriculture employers feel recent hires do not possess?
3. Are preferences for specific skills different across the different agriculture career cluster areas?
4. What activities do employers believe prepare candidates for career success?

Research Question One

Which essential skills are preferred by agriculture employers?

A one-way ANOVA was used to address the first research question with regard to the two null hypotheses that were associated with the question.

Null Hypothesis 1

There is no significant association between participants' perceptions of preferred essential skills and the age of the participant.

Table 2

Null Hypothesis 1 Results: Does Age Effect Participant's Opinions About Essential Skills?

ANOVA: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Accept and apply critique and direction in the workplace	25	149	5.96	7.87
Ask good questions	25	125	5	7.33
Build professional relationships	25	146	5.84	8.39
Communicate accurately and concisely	25	65	2.6	4.08
Identify and analyze problems	25	121	4.84	7.72
Listen effectively	25	118	4.72	8.29
Navigate change and ambiguity	25	163	6.52	7.09
Realize the effect of decisions	25	186	7.44	6.01
Recognize and deal constructively with conflict	25	208	8.32	5.56
Transfer knowledge from one situation to another	25	210	8.4	6.25
Understand the role in the workplace and have realistic expectations	25	159	6.36	15.57

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	
Between Groups	729.68	10	72.968	9.534901	1.55E-13	*F crit*
Within Groups	2020.32	264	7.652727			1.866673
Total	2750	274				

A one-way ANOVA was conducted to evaluate the differences between the age of the participant (independent variable) and the perceptions of what essential skills were preferred by the participant. The test showed that the results were significant, as the p value was <.05 (Table 2). The researcher thus fails to reject the null hypothesis. The participants' age does affect their perceptions of essential skills necessary in the recent hires' career.

Table 3

Null Hypothesis 2 Results: Does the participant's location impact their opinion of what essential skills are important?

ANOVA: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
Accept and apply critique and direction in the workplace	26	158	6.08	7.91
Ask good questions	26	133	5.12	7.39
Build professional relationships	26	156	6.00	8.72
Communicate accurately and concisely	26	66	2.54	4.02
Identify and analyze problems	26	123	4.73	7.72
Listen effectively	26	122	4.69	7.98
Navigate change and ambiguity	26	168	6.46	6.90
Realize the effect of decisions	26	189	7.27	6.52
Recognize and deal constructively with conflict	26	214	8.23	5.54
Transfer knowledge from one situation to another	26	217	8.35	6.08
Understand the role in the workplace and have realistic expectations	26	170	6.54	15.78

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	745.85	10	74.58	9.70	P<0.001	1.87
Within Groups	2114.15	275	7.69			
Total	2860	285				

Null Hypothesis 2

There is no significant correlation between participants' perceptions of what essential skills are preferred with the location of the business.

A one-way ANOVA test was conducted to evaluate the correlation between preferred essential skills and the location of the business. Table 3 shows the results of the test, which the researcher interprets as failing to reject the null hypothesis. We conclude the location of the business did have a significant impact on their opinion of what skills are essential, as the p value was less than 0.0001.

Table 4

Importance of Selected Skills in the Workplace

Essential Skill	**Weighted Average (Ranked 1-11)**
Communicate accurately and concisely	2.5
Listen effectively	4.7
Identify and analyze problems	4.7
Ask good questions	5.1
Build professional relationships	6.0
Accept and apply critique and direction in the workplace	6.1
Navigate change and ambiguity	6.5
Understand the role in the workplace and have realistic expectations	6.5
Realize the effect of decisions	7.3
Recognize and deal constructively with conflict	8.2
Transfer knowledge from one situation to another	8.3

Results evaluating the overall essential skills that agriculture employers felt were important for success in their workplace, are given in Table 4. Employers were asked to rank the 11 essential skills with 1 being must important for success in their company and 11 being least likely to lead to success in their company. The results were then put into an average and ranked in order from lowest score to highest, with the lowest score being the most important. The skill

employers felt was most important for success in their workplace was the ability to communicate accurately and concisely, followed by a candidate being able to listen effectively and identify and analyze problems. This matched with previous research.

Research Question Two

Which essential skills do agriculture employers feel recent hires do not possess?

Table 5

Null Hypothesis 3: Correlation Between Participants' Perceptions of Inadequate Essential Skills and the Age of the Participant

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Accept and Apply Critique and Direction in the Workplace	24	47	1.95833	0.30254
Ask Good Questions	24	40	1.66667	0.4058
Build Professional Relationships	24	43	1.79167	0.25906
Communicate Accurately and Concisely	24	44	1.83333	0.23188
Identify and Analyze Problems	24	49	2.04167	0.38949
Listen Effectively	24	41	1.70833	0.21558
Navigate Change and Ambiguity	24	50	2.08333	0.51449
Realize the Effect of Decisions	24	49	2.04167	0.30254
Recognize and Deal Constructively with Conflict	24	53	2.20833	0.25906
Transfer Knowledge from One Situation to Another	24	44	1.83333	0.4058
Understand the Role in the Workplace and Have Realistic Expectations	24	53	2.20833	0.43297

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	8.60606	10	0.86061	2.54535	0.006088749	1.86825
Within Groups	85.5417	253	0.33811			
Total	94.1477	263				

There is no significant correlation between participants' perceptions of inadequate essential skills and the location of the business.

A one-way ANOVA test was used to address the second research question and the two null hypotheses that were associated with the question.

Null Hypothesis 3

There is no significant correlation between participants' perceptions of inadequate essential skills and the age of the participant.

A one-way ANOVA test was conducted to evaluate the correlation between the age of the participant and the perceptions of essential skills. Table 5 shows the results. The researcher failed to reject the hypothesis. There is a significant difference between the participants' age and their perceptions of where recent hires are inadequately prepared for success in their business.

Null Hypothesis 4

There is no significant correlation between participants' perception of inadequate essential skills and the location of the business.

A one-way ANOVA test was conducted to evaluate the correlation between location of the participant's business and their perceptions of inadequate essential skills of the candidates. The results are found on Table 6, and the researcher failed to reject the null hypothesis. The location of the business does impact the participants' perception of what skills recent hires are not prepared for success in their business.

The data for this research question resulted from survey participant's responses regarding the degree to which recent postsecondary graduates possessed 11 essential skills. These results are shown in Table 7, including the average results. Previous research has shown that recent hires fail to understand their place in the workforce (Crawford & Fink, 2019).

Table 6

Null Hypothesis 4: Participant's Location Impact on Essential Skill Preparedness

ANOVA: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Accept and apply critique and direction in the workplace	26	158	6.08	7.91
Ask good questions	26	133	5.12	7.39
Build professional relationships	26	156	6.00	8.72
Communicate accurately and concisely	26	66	2.54	4.02
Identify and analyze problems	26	123	4.73	7.72
Listen effectively	26	122	4.69	7.98
Navigate change and ambiguity	26	168	6.46	6.90
Realize the effect of decisions	26	189	7.27	6.52
Recognize and deal constructively with conflict	26	214	8.23	5.54
Transfer knowledge from one situation to another	26	217	8.35	6.08
Understand the role in the workplace and have realistic expectations	26	170	6.54	15.78

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	745.85	10	74.58	9.70	7.27082E-14	1.87
Within Groups	2114.15	275	7.69			
Total	2860	285				

The present study is consistent with this finding in that the essential skill they felt most candidates were not prepared for was understanding their role in the workplace and having realistic expectations. Research has also shown that a growing number of candidates cannot deal with change and ambiguity along with being able to deal with conflict in the work force. This

study's response matched previous research also with a growing disconnect with the ability to deal with conflict (Crawford & Fink, 2019).

Table 7

Preparedness of Essential Skills

	Prepared	Somewhat prepared	Not prepared
Accept and Apply Critique and Direction in the Workplace	16%	72%	12%
Ask Good Questions	40%	48%	12%
Build Professional Relationships	24%	72%	4%
Communicate Accurately and Concisely	20%	76%	4%
Identify and Analyze Problems	16%	60%	24%
Listen Effectively	28%	72%	0%
Navigate Change and Ambiguity	20%	52%	28%
Realize the Effect of Decisions	12%	68%	20%
Recognize and Deal Constructively with Conflict	4%	68%	28%
Transfer Knowledge from One Situation to Another	28%	56%	16%
Understand the Role in the Workplace and Have Realistic Expectations	12%	52%	36%

Research Question Three

Are preferences for specific skills different across the different agriculture career cluster areas?

Weighted averages were used for these research questions for comparison. Once all data was collected and analyzed, the participants were grouped by their career cluster areas.

Null Hypothesis 5

There is no significant correlation between the participant's agricultural previous experience background and the emphasis they placed on essential skills.

To analyze this section, each candidate was asked to choose their personal career cluster. Once the results were divided into sections, then there was a weighted average test ran on each content area. There were some career cluster areas that were lacking representation, and others only had one respondent. Table 8 shows these averages. There were no respondents who stated that their background was in the areas of: biotechnology, environmental science, or food processing so those career cluster areas are left off the table. There were 6 respondents who had no previous agricultural experience meanwhile. The results show a significant difference, so the null hypothesis is rejected.

Table 8

Null Hypothesis 5: Participant's Previous Agricultural Background and Emphasis on Essential Skills

	Agribusiness (11)	Animal Science (1)	Natural Resource (2)	Agronomy (4)	Horticulture	Ag Mechanics (1)	No Previous Experience (6)
Accept and Apply Critique and Direction in the Workplace	6.18	7.00	8.00	7.25	4.00	2.00	4.33
Ask Good Questions	5.36	10.00	6.50	7.25	2.00	4.00	4.17
Build Professional Relationships	5.36	11.00	9.00	6.25	11.00	11.00	3.67
Communicate Accurately and Concisely	2.45	2.00	1.50	3.25	3.00	8.00	3.00
Identify and Analyze Problems	5.55	1.00	1.50	3.75	6.00	7.00	5.67
Listen Effectively	4.27	9.00	4.00	7.00	1.00	5.00	5.67
Navigate Change and Ambiguity	6.09	6.00	8.50	5.75	8.00	6.00	6.33
Realize the Effect of Decisions	8.64	5.00	5.00	6.00	7.00	9.00	7.50
Recognize and Deal Constructively with Conflict	7.91	8.00	6.50	8.75	9.00	3.00	9.00
Transfer Knowledge from One Situation to Another	8.45	4.00	9.00	5.75	5.00	10.00	9.00
Understand the Role in the Workplace and Have	5.73	3.00	6.50	5.00	10.00	1.00	7.67

Null Hypothesis 6

There is no significant correlation between the participants' company's agriculture career cluster and the on essential skills they emphasized.

A comparison of weighted averages was used to test this hypothesis. Participants were allowed to chose multiple career cluster areas to describe their company. The results of this null hypothesis can be found in Table 9.

Research Question Four

What activities do employers feel prepare candidates for career success?

A one-way ANOVA test was used to address the fourth research question and the two null hypotheses that were associated with the question.

Table 9

Null Hypothesis 6: Correlation Between the Participants' Company's Agriculture Career Cluster and Essential Skills They Emphasized

	Agribusiness (17)	Animal Systems (2)	Biotechnology (2)	Environmental Service Systems (3)	Food Products and Processing (4)	Natural Resource (2)	Agronomy (10)	Horticulture (6)	Ag Mechanics (5)
Accept and Apply Critique and Direction in the Workplace	2.00	2.50	2.00	1.67	1.75	1.50	2.10	1.67	2.00
sk Good Questions	1.76	1.50	2.50	1.67	2.00	1.00	1.90	2.00	1.80
uild Professional Relationships	1.82	1.50	2.00	1.33	1.50	1.00	1.90	1.83	1.60
Communicate Accurately and Concisely	1.88	2.00	2.00	1.67	2.00	1.50	2.00	1.83	1.80
lentify and Analyze Problems	2.12	2.50	2.00	1.67	2.00	2.00	2.10	2.00	2.40
isten Effectively	1.71	1.50	1.00	1.00	1.25	1.00	1.70	1.50	1.80
Navigate Change and Ambiguity	2.12	2.50	2.00	1.67	2.00	2.00	2.10	2.33	2.20
ealize the Effect of Decisions	2.12	2.00	2.50	2.33	2.00	2.00	2.10	2.00	1.80
Recognize and Deal Constructively with Conflict	2.35	2.50	2.50	2.67	2.75	2.50	2.40	2.33	2.40
Transfer Knowledge from One Situation to Another	1.94	2.50	1.50	1.33	1.50	1.50	1.80	1.33	2.00
Understand the Role in the Workplace and Have Realistic Expectations	2.24	2.50	2.00	1.67	2.00	1.50	2.40	2.00	2.60

Null Hypothesis 7

There is no significant correlation between participant's preferred activities successful candidates are a part of in postsecondary education.

A one-way ANOVA test (Table 10) was conducted to evaluate the differences between the activities the candidates feel help to prepare postsecondary students with their essential skills. As the p-value is less than 0.0001, there is a significant difference between which activities employers feel prepare students for success in the workplace, so the null hypothesis is rejected. Employers do have preferred activities they like to see candidates that apply for jobs be involved in when applying for jobs within their company.

Table 10

Null Hypothesis 7: Preferred Activities for Postsecondary Graduates

Anova: Single Factor						
SUMMARY						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Yes	24	13.10	0.55	0.08		
No	24	3.41	0.14	0.01		
Can't Judge	24	7.49	0.31	0.04		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	1.97	2	0.99	22.75	p<0.0001	3.13
Within Groups	2.99	69	0.04			
Total	4.97	71				

Table 11 shows the different activities employers feel help prepare postsecondary students with essential skills that are necessary to be successful in their workplace. When looking at the results of Table 11, !00% of respondants felt that internships prepare students for the essential skills they need to be successful in the workplace. The other high ranking responses were (in order of yes votes): leadership in career organizations, FFA, and work experience. A very low number of respondents (4%) felt that activist groups prepared postsecondary students for the essential skills they need in the workplace.

Null Hypothesis 8

There is no significant correlation between participant's required activities successful candidates are a part of in postsecondary education.

Table 12 shows the results of asking the participants which activities they would like to see a recent graduate from postsecondary agriculture education be involved in. The participants stressed the importance of internships for this research question. Just as the participants did not feel activist groups prepared students with essential skills, 92% of participants said that being involved in activitist groups is not important on a resume.

Table 11

Activities that Prepare Postsecondary Agriculture Students for Success

Do These Activities Prepare Essential Skills?	Yes	No	Can't Judge
4-H	84%	0%	16%
Activist Groups	4%	42%	54%
Agriculture Future of America (AFA)	84%	4%	12%
Collegiate FFA/PAS	76%	0%	24%
FFA	96%	0%	4%
Greek Life	38%	25%	38%
International Travel - Study Abroad	48%	24%	28%
International Travel - Personal	28%	24%	48%
Internship	100%	0%	0%
Judging or Competitive Events	63%	17%	21%
Leadership in Career Organizations	96%	0%	4%
Membership in Career Organization	81%	4%	15%
Minorities in Agriculture Natural Resources and Related Sciences (MANRRS)	32%	4%	64%
National Agri-Marketing Association (NAMA)	44%	4%	52%
Performing Arts	17%	29%	54%
Philanthropic Organization	38%	25%	38%
Religious Organizations	17%	25%	58%
Research	36%	24%	40%
Sports - Varsity	35%	23%	42%
Student Government	46%	13%	42%
Volunteerism	65%	15%	19%
Work Experience	92%	0%	8%

A one-way ANOVA test (Table 13) was conducted to evaluate the differences between what activities employers want to see a postsecondary student be involved in. The p value was less than 0.001, signifying there was a significant correlation between the participant's required activities successful candidates are a part of postsecondary education. The null hypothesis therefore fails to be rejected.

Table 12

Activities Preferred by Employers

	Must Have	Nice to Have	Not Important
Internship	64%	36%	0%
Work Experience	58%	35%	8%
Leadership in Career Organizations	28%	72%	0%
Membership in Career Organization	24%	68%	8%
FFA	12%	84%	4%
ROTC/Reserves/Military	9%	43%	48%
Agriculture Future of America (AFA)	8%	76%	16%
Volunteerism	8%	68%	24%
Judging or Competitive Events	4%	70%	26%
Research	4%	57%	39%
Student Government	4%	48%	48%
4-H	4%	92%	4%
Sports – Varsity	4%	42%	54%
Collegiate FFA/PAS	4%	84%	12%
International Travel - Study Abroad	4%	60%	36%
National Agrimarketing Association (NAMA)	0%	67%	33%
Minorities in Agriculture Natural Resources and Related Sciences (MANRRS)	0%	54%	46%
Greek Life	0%	48%	52%
Philanthropic Organization	0%	48%	52%
Sports – Intramural	0%	42%	58%
Religious Organizations	0%	39%	61%
Performing Arts	0%	26%	74%
International Travel – Personal	0%	25%	75%
Activist Groups	0%	8%	92%

Table 13

Activities that Prepare Postsecondary Graduates

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Must Have	24	2.40	0.10	0.03
Nice to Have	24	12.90	0.54	0.04
Not Important	24	8.70	0.36	0.07

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	2.32889	2	1.16	24.55	$p < 0.0001$	3.13
Within Groups	3.27306	69	0.05			
Total	5.60195	71				

Qualitative Data Analysis

In the middle of the questionnaire, participants were asked if there were postsecondary institutions that they felt better-prepared individuals to be successful at their workplace. Given this was a survey that utilized convenience sampling, there was a bias of responses as the respondents have had interactions with the Illinois State University Department of Agriculture (Stratton, 2021). However, with this bias in mind, seventeen participants gave qualitative answers to this question (e.g., 'smaller enrollment colleges, land grant institutions, universities, ag colleges). Some of the individuals did say that it depended on the job they were hiring for. The other responses were developed into a word cloud you can see in Figure 2 below. In the answers, though, Participant 12 also said it depends on the role of the position, as land grant institutions will prepare for agriculture jobs more than most ivy league schools.

Figure 2: Word Cloud of Postsecondary Institutions Preferred

At the end of the questionnaire, participants were asked if there were any additional comments they would like to share. Participant 9 said, "*There is a hard disconnect at the student level when they need to start an internship. At the university level, many students I have met think they do not need to find an internship until their 2-4th year in school. This could not be further from the truth. Students need to experience several different types of work environments and career paths to narrow down the type of career path they do not want to start*." Participant 18 also stressed the importance of internships. Participant 26 also stressed the importance of workplace experience and internships and also said, "*The course work was great and help me refine my knowledge but learning how to work was most important and the course work helped me excel over the top*" from their experience as an employee themselves. Participant 11 stated there seems to be a lack of commitment from recent hires, as they are struggling to hire and keep employees.

CHAPTER V: DISCUSSION AND RECOMMENDATION

The purpose of this study was to determine what essential skills employers desire of recent graduates of postsecondary agriculture programs. The study will allow institutions to properly prepare their students for long-term success in their chosen career paths. This chapter will describe the discussions and recommendations of research problems by applying the quantitative and qualitative data found from the results. By learning more about what industry representatives are emphasizing while hiring new employees, agriculture educators will be better able to use this knowledge and advise their students on how to rise to the top of a candidate pool.

Discussion

Based on the findings of this study, research questions one, two, three, and four can be addressed by interpreting the data discovered from the survey.

Research Question 1

The first research question for this study was: Which essential skills are most valued by agriculture employers? The null hypotheses with this research question were: (1) there is no significant difference between with participants perceptions of what essential skills are preferred with the age of the participant and (2) there is no significant difference with participants perceptions of what essential skills preferred with the location of the business.

Both null hypotheses were rejected to the researcher’s expectations, and the participant's age and location impacted their attitudes towards what essential skills were important in their career fields. The previous research showed that no matter where the individuals were located throughout the country and the age of their superiors, they still struggled with the same essential skills (Crawford & Fink, 2019).

When ranking the essential skills most important for success at the 'participants' agricultural companies, those results stayed consistent with previous research (Crawford & Fink, 2019). The ability to communicate with other stakeholders in their jobs, along with listening to what they have to say in response, is a skill that research has proven is important no matter what content field the individuals are in. Also, the ability to identify and analyze problems on their own is a skill that many employers place emphasis on. Yet, candidates do not realize the importance of this skill.

Research Question 2

The second research question for this study was: Identify which essential skills agriculture employers state recent hires are not adequately prepared for. The null hypotheses with this research question were: (1) there is no significant difference with participants perceptions of what essential skills candidates are not prepared for with the age of the participant and (2) there is no significant difference with participants perceptions of what essential skills candidates are not prepared for with the location of the business.

When participants rated 'the candidates' preparedness for essential skills of their recent hires, they matched a lot of the previous research that had been completed in this field. A growing number of candidates are not prepared to understand their place in their workplace (Crawford, et. al, 2011). Candidates frequently do not realize that they must start at entry-level positions before being promoted to upper-level positions, as the people that came before did. Also, a growing number of candidates across different career fields are not prepared to manage conflict in the workplace, and the researcher in this study found for this to be true of the questionnaire's participants. However, on the positive side, candidates knew how to ask good questions, something they had been prepared for in postsecondary education.

Research Question 3

The third research question for this study was: Are preferences for specific skills different across the different agriculture career cluster areas? The null hypotheses with this research question were: (1) there is no significant difference between the participant's agricultural background and the emphasis they placed on essential skills and (2) there is no significant difference between the participant's company's agriculture career cluster and the emphasis they placed on essential skills.

Across the different career fields, the answers are the same. Candidates need to have the same essential skill set to be successful in their careers, and they all believe that candidates need to grow in the same areas. It does not matter if candidates are involved with animals or plants or must communicate with other humans. They all can grow in the same essential skill set to have them outstanding in their fields.

Research Question 4

The last research question for this study was: What activities do employers believe prepare candidates for career success? The null hypotheses with this research question were: (1) There is no significant difference between participant's preferred activities successful candidates are a part of in postsecondary education and (2) there is no significant difference between participant's required activities successful candidates are a part of in postsecondary education.

Respondents overwhelmingly felt that candidates needed to be involved in internships while they are in postsecondary education. It is so important that 100% of the respondents said it was a must-have or nice to have on their résumé. It was surprising, however, that 94% of the respondents felt that both 4-H and FFA were important in a candidate's background, especially as these activities happen before a candidate enters postsecondary education.

Recommendations

The following recommendations are offered for practice and further research as related to the findings of this study.

Recommendations for Developing Essential Skills in Postsecondary Agriculture Students

Recommendation 1. The results indicate that postsecondary students have an internship before they enter the workforce. Past practice has pushed internships, but respondents also commented that students need to start getting internships after their first year of college. This will allow students to get a feel for the career fields they have chosen and understand if this is their best career path. Also, by starting internships early, students can begin working on improving their essential skills. Since one of the essential skills that was selected that student are lacking in their preparedness was understanding their role in the workplace, having multiple internships will help them understand the importance of working through the ranks in today's industry.

Recommendation 2. The participants placed a high emphasis on both 4-H and FFA experience. As both organizations reach younger children and teenagers, working with those adult individuals involved will allow students to start their career preparedness before they even enter postsecondary education. Illinois 4-H has membership for children ages 5-18 and is run by extension offices across the state (Illinois Extension, 2022). To be a member of the FFA Organization, students must be enrolled in an agriculture class. In Illinois, the Department of Agriculture pays the FFA dues for all middle and high school students that are enrolled in agriculture education. Because of this affiliated membership, we need to reach out to the Illinois Association of Vocational Agricultural Teachers (IAVAT) to discuss the essential skills that

postsecondary students are not prepared for and have workshops in helping students to have a base of these essential skills before they enter postsecondary education.

Recommendation 3. It is recommended that agriculture faculty meet and discuss ways to add conflict resolution, communication skills, and listening skills into their curriculum. If the college or department starts building a reputation for preparing students with these essential skills, businesses will emphasize hiring students from the institution over others. Once students realize students from one institution are getting their ideal jobs, they will follow in their friends' and peers' footsteps and choose that institution for their postsecondary education.

Recommendation 4. It is recommended that the academic advisors of postsecondary agriculture institutions help guide students to career organizations that match their future interests and encourage them to be involved in leadership positions within these organizations. As the participants placed a higher emphasis on individuals' membership in career organizations and a higher emphasis on those with students in leadership positions, advisors are the most likely source of contact with postsecondary students to encourage them to get involved. By helping students understand that this involvement will help them attain jobs in career fields and keep them, postsecondary institutions will be setting their students up for a greater success once they leave the walls of their institution.

Recommendations for Future Research

It is suggested that this survey repeated in a similar fashion, but with some modifications. Due to the low response rate, this survey, or a similar one, should be given out to not just the companies that attended the Illinois State University Career Fair, but also to the companies that attended other career fairs for the postsecondary agriculture institutions in Illinois. Improvements to this research are listed below.

Future research needs to look at a larger number of companies. Distributing this survey to more businesses and sending more reminder emails to the other companies that were contacted will allow for a larger pool of information and data to analyze. This will allow for a larger data pool to fully look at the differences across the agriculture industry. Also, by sending out to more companies, this data could be represented across the continental United States also, not just in limited states and geographical areas.

Future research should also look at a variety of degree types. When sending out the survey, lists from local community colleges could also be gathered to represent a wider range of businesses. Also, when setting up the questionnaire, the question asking what percentage of new employees hold which type of postsecondary degree should be a sliding scale and limiting the answers to a total of 100%, as this questionnaire had to throw out that question due to responses that did not make sense.

Future research does need to be done in the summer. As summer is the least busy time for employers as they are not in hiring mode as much as at the beginning of each college semester. The representatives involved in human resources will have the time to reflect and really think about the questionnaire. Any future questionnaire needs to also be short and concise, so the participants can finish.

When sending out the questionnaire, consideration should be given to sending it out to small business owners along with human resource managers. This will give a wider range of answers as some businesses may not be large enough to hire human resource managers.

REFERENCES

AgWeb. (2020, February 10). *What A Job? Major in Agriculture.* Retrieved from AgWeb: https://www.agweb.com/article/want-a-job-major-in-agriculture-NAA-alison-rice

Armoogum, N. Y., Ramasawmy, B., & Driver, B. M. (2016). The need to enhance the employability competences (knowledge, skills, autonomy, and attitudes) of undergraduates in Agriculture. Evidence from students' perceptions and employers' expectations. *Tuning Journal for Higher Education*, 169-219.

Berle, D. (2007). Employer Preferences in Landscape Horticulture Gradutes: Implications for College Programs. (N. A. Agriculture, Ed.) *NACTA Journal, 51*(1), 21-25.

Caruth, G. D. (2013, August 1). Demystifying Mixed Methods Research Design: A Review of the Literature. *Mevlana International Journal of Education (MIJE), 3*, 112-122.

Crawford, P., & Fink, W. (2019). *From Academia to the Workforce: Critical Growth Areas for Students Today.* Washington D.C.: Association of Public and Land-grant Universities.

Crawford, P., Lang, S., Fink, W., Dalton, R., & Fielitz, L. (2011). *Comparitive Analysis of of Soft Skills: What is Important for New Graduates.* Washington D.C.: Association of Public and Land-grant Universities.

Eisner, S. (2010). Grave New World? Workplace Skills for Today's College Graduates. *American Journal of Business Education, 3*(9), 27-50.

Facilitating Coordination in Agricultural Education. (2019). *Envision the Future.* Annual Report, Springfield.

Gallup. (2006, January 12). *Business Journal.* Retrieved from Gallup: https://news.gallup.com/businessjournal/20722/mastering-art-office-politics.aspx

Hart. (2015). *Falling Short? College Learning and Career Success.* Washington D.C.: Hart Research Associates.

Hendrix, R., & Morrison, C. C. (2018). Student Perceptions of Workplace Readiness in Agriculture. *Journal of Agriculture Education, 59*(3), 213-228.

Illinois Articulation Initiative. (2017). *Policies and Procedures Manual for the Illinois Articulation Inituative.* Springfield, Illinois. Retrieved from https://itransfer.org/downloads/IAIPoliciesandProceduresManual.pdf

Illinois Board of Higher Education. (2020, February 15). *Institution Profiles: IBHE*. Retrieved from Illinois Board of Higher Education Website: http://ibheprofiles.ibhe.org/

Illinois Extension. (2022, October 23). *Why 4-H?* Retrieved from Illinois 4-H Website: https://4h.extension.illinois.edu/about-4-h/why-4-h

Illinois State Board of Education. (2020). Career Programs in Agriculture, Food, and Natural Resources Matrix.

Irlbeck, E. G., & Akers, C. (2009). Employers' Perceptions Of Recent Agricultural Communications Graduates' Workplace Habits and Communication Skills. *Journal of Agricultural Education, 50*(4), 63-71.

Lavarakas, P. (2008). *Enclyclopedia of Survey Research Methods* (Vol. 1). SAGE Publications, Inc. Retrieved October 23, 2022, from https://dx.doi.org/10.4135/9781412963947.n339

National Center for Education Statistics. (2020, February 21). *Fast Facts: Employment Rates of College Graduates*. Retrieved from National Center for Education Statistics: https://nces.ed.gov/fastfacts/display.asp?id=561

Pluye, P., & Hong, Q. N. (2014). Combining the Power of Stories and the Power of Numbers: Mixed Methods Research and Mixed Studies Reviews. *The Annual Review of Public Health*, 29-45.

Rojewski, J. W., Lee, I. H., & Gemici, S. (2012). Use of t-test and ANOVA in Career-Technical Education Research. *Journal of Career and Technical Education Research*, 263-275.

Singh, A., & Singh, S. (2019, September). Employability Skills for Sustainable Development: The Role of Higher Education Insitutions. *IUP Journal of Soft Skills, 13*(3), 32-41.

Slusher, W. L., Robinson, J. S., & Edwards, M. C. (2011). Assessing the Animal Science Technical Skills Needed. *Journal of Agricultural Education, 52*(2), 95-106.

Stratton, S. J. (2021). Population Research: Convenience Sampling Strategies. *Cambridge University Press*, 373-374.

Subbu, N. M., & Rajasekaran, V. (2018, March 1). Employability Skills: A Review. *IUP Journal of Soft Skills*, 29-37.

APPENDIX A: IRB APPROVAL

Aug 4, 2021 8:51:32 AM CDT

Robert Rhykerd
Agriculture

Re: Exempt - Initial - IRB-2021-310 Employer perceptions of essential skills required of postsecondary agriculture students.

Dear Dr. Robert Rhykerd:

Illinois State University Institutional Review Board has rendered the decision that your study meets the criteria for an exempt determination and you can begin the study covered under this protocol.

Your study qualified for: Category 2.(ii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).
Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation.

The Exempt Status does not relieve the investigator of any responsibilities relating to the research participants or university policy. Research should be conducted in accordance with the ethical principles, (1) Respect for Persons, (ii) Beneficence, and (iii) Justice, as outlined in the Belmont Report. Any change to the protocol or study materials that might affect the Exempt Status must be submitted in Cayuse Human Ethics. Depending on the changes, you may be required to apply for either Expedited or Full Review.

Please contact the Human Subjects Research Specialist to determine if your modifications meet these criteria at 309-438-5527 or tjdeeri@ilstu.edu.

Additional Notes:
Please ensure that any COVID related guidelines provided by the university are followed. For the most up-to-date information and guidance regarding research and how it has been impacted by COVID-19, please review the following links:

- Redbirds Keep Researching: https://research.illinoisstate.edu/coronavirus/.
- IRB Guidance: https://research.illinoisstate.edu/ethics/human/coronavirus/.

For the duration of Illinois' Stay at Home Order, Human Subjects Research may continue remotely and/or use technology to avoid face-to-face interactions. Only face to face research deemed essential can take place on campus, with the permission of your unit Chair/Director, and while observing all State guidelines for social distancing and PPE that is a requirement due to the hazards of your research. Please either reach out or review the following link for additional information: (Coronavirus (COVID-19): IRB Guidance)

Sincerely,

Illinois State University Institutional Review Board

APPENDIX B: COVER LETTER

Hello,
One of our graduate students is working on her thesis research. I am sending the following message on behalf of her. We appreciate if you respond to her request.

Thank you.

Aslihan Spaulding

I am Emily McClure, a graduate student at Illinois State University. I am working on my M.S. research project under the guidance of Dr. Rob Rhykerd. We are asking for your help in conducting a study on employer perceptions of essential skills required of postsecondary agriculture. Your participation in this study consists of completing an online survey asking questions regarding this topic.

Your participation is greatly appreciated and will take approximately 10 minutes. Please go to https://illinoisstate.az1.qualtrics.com/jfe/form/SV_aaWHhXlUvpM76v4 to participate in this study.

If you have any questions about this request, please let me know. Thank you for your time.

Best Regards,

Emily McClure
Graduate Student
Illinois State University
Department of Agriculture
emmccl1@ilstu.edu

DEPARTMENT OF AGRICULTURE
Illinois State University

Participant Consent Form

You are being asked to participate in a research study conducted by Emily McClure a graduate student under the supervision of Dr. Rob Rhykerd of the Department of Agriculture at Illinois State University. The purpose of this study is to investigate employer perceptions of essential skills required of postsecondary agriculture students.

You are ineligible to participate if you are under the age of 18. Your participation in this study is voluntary. You will not be penalized if you choose to skip parts of the study, not participate, or withdraw from the study at any time.

If you choose to participate in this study, please fill out and submit the online survey. Section 1 of the survey focuses on personal demographics. Section 2 focuses on your respective business's demographics, and Section 3 asks questions regarding essential skills for recent hires. Your involvement in this study will take approximately 10 minutes.

We do not anticipate any risks beyond those that would occur in everyday life. We will use all reasonable efforts to keep any provided personal information confidential. All data is saved on a password protected computer. After your data has been deidentified, your data may be used in other research projects. Information that may identify you or potentially lead to reidentification will not be released to individuals that are not on the research team. However, when required by law or university policy, identifying information may be seen or copied by authorized individuals. We will not use any identifiable information from you in future research, but your deidentified information could be used for future research without additional consent from you. An identification number has been assigned to each survey solely for the purpose of tracking responses and eliminating follow-ups.

While there are no direct benefits to you as a participant of this study, your responses will help build upon previous research regarding employer perceptions of essential skills required of postsecondary agriculture students. Results of this survey will be made available to you upon request.

If you have any questions about the research or wish to withdraw from the study, contact Emily McClure at emmccl1@ilstu.edu or Dr. Rob Rhykerd at rrhyker@ilstu.edu.

If you have any questions about your rights as a participant, or if you feel you have been placed at risk, contact the Illinois State University Research Ethics & Compliance Office at (309) 438-5527 or IRB@ilstu.edu.

Emily McClure
Graduate Student
Department of Agriculture
Illinois State University

Dr. Rob Rhykerd
Professor of Agriculture
Department of Agriculture
Illinois State University

Check the box below if you are 18 or older and willing to participate in this survey.

- ☐ I am 18 or older and willing to participate in this study.
- ☐ I am not interested in participating in this study.
- ☐ I completed the survey online.

You may print this form for your records.

Employer Perceptions of Essential Skills Required of Postsecondary Agriculture Students

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Start of Block: Personal Demographic Questions

Q1 You are being asked to participate in a research study conducted by Emily McClure a graduate student under the supervision of Dr. Rob Rhykerd of the Department of Agriculture at Illinois State University. The purpose of this study is to investigate employer perceptions of essential skills required of postsecondary agriculture students.

You are ineligible to participate if you are under the age of 18. Your participation in this study is voluntary. You will not be penalized if you choose to skip parts of the study, not participate, or withdraw from the study at any time.

If you choose to participate in this study, please fill out and submit the online survey. Section 1 of the survey focuses on personal demographics. Section 2 focuses on your respective business's demographics, and Section 3 asks questions regarding essential skills for recent hires. Your involvement in this study will take approximately 10 minutes.

We do not anticipate any risks beyond those that would occur in everyday life. We will use all reasonable efforts to keep any provided personal information confidential. All data is saved on a password protected computer. After your data has been deidentified, your data may be used in other research projects. Information that may identify you or potentially lead to reidentification will not be released to individuals that are not on the research team. However, when required by law or university policy, identifying information may be seen or copied by authorized individuals. We will not use any identifiable information from you in future research, but your deidentified information could be used for future research without additional consent from you. An identification number has been assigned to each survey solely for the purpose of tracking responses and eliminating follow-ups.

While there are no direct benefits to you as a participant of this study, your responses will help build upon previous research regarding employer perceptions of essential skills required of postsecondary agriculture students. Results of this survey will be made available to you upon request.

If you have any questions about the research or wish to withdraw from the study, contact Emily McClure at emmccl1@ilstu.edu or Dr. Rob Rhykerd at rrhyker@ilstu.edu.

If you have any questions about your rights as a participant, or if you feel you have been placed at risk, contact the Illinois State University Research Ethics & Compliance Office at (309) 438-5527 or IRB@ilstu.edu.

Emily McClure
Graduate Student
Department of Agriculture
Illinois State University

Dr. Rob Rhykerd
Professor of Agriculture
Department of Agriculture
Illinois State University

Check the box below if you are 18 or older and willing to participate in this survey.

- ○ I am 18 or older and willing to participate in this study
- ○ I am not interested in participating in this study
- ○ I completed the survey online

Skip To: End of Survey If You are being asked to participate in a research study conducted by Emily McClure a graduate stud... = I am not interested in participating in this study

Skip To: End of Survey If You are being asked to participate in a research study conducted by Emily McClure a graduate stud... = I completed the survey online

Skip To: Q2 If You are being asked to participate in a research study conducted by Emily McClure a graduate stud... = I am 18 or older and willing to participate in this study

Page Break

Q2 What segment (or career cluster) of agriculture is your personal and/or educational background in? Also, which career cluster would you consider your employer to be involved the most in. (You can click all that apply.)

	Personal Career Cluster	Your Employer's Career Cluster
Agribusiness Systems	☐	☐
Animal Systems	☐	☐
Biotechnology Systems	☐	☐
Environmental Service Systems	☐	☐
Food Products and Processing Systems	☐	☐
Natural Resource Systems	☐	☐
Plant Systems - Agronomy	☐	☐
Plant Systems - Horticulture	☐	☐
Power/Structural/Technical Systems (Ag Mechanics)	☐	☐
No Previous Agricultural Experience	☐	☐
Other: (Please Describe)	☐	☐

Q3 What segment (or career cluster) of agriculture is your personal and/or educational background in? Also, which career cluster would you consider your employer to be involved the most in. (You can click all that apply.)

	Personal Career Cluster	Your Employer's Career Cluster
Agribusiness Systems	☐	☐
Animal Systems	☐	☐
Biotechnology Systems	☐	☐
Environmental Service Systems	☐	☐
Food Products and Processing Systems	☐	☐
Natural Resource Systems	☐	☐
Plant Systems - Agronomy	☐	☐
Plant Systems - Horticulture	☐	☐
Power/Structural/Technical Systems (Ag Mechanics)	☐	☐
No Previous Agricultural Experience	☐	☐
Other: (Please Describe)	☐	☐

Q4 What is the highest level of education you have completed?

- ○ No Formal Education
- ○ Some High School
- ○ High School Diploma/GED
- ○ Training Certificate
- ○ Some College Coursework
- ○ Associates Degree/2 Year Degree
- ○ Bachelors Degree/4 Year Degree
- ○ Some Graduate Coursework
- ○ Graduate Degree

Q5 Which gender identity do you most identify?

- Male
- Female
- Non-binary / third gender
- Prefer not to share
- Prefer to self-describe (below)

_____

Q6 What year were you born?

_____

Q7 How many years of Human Resource experience do you have?

_____

End of Block: Personal Demographic Questions

Start of Block: Business Information

Q8 What percentage of positions within your company require these education levels below?

0 10 20 30 40 50 60 70 80 90 100

No Educational Requirement	
High School Diploma or GED	
Training Certificate	
Associate's Degree	
Bachelor's Degree	
Master's Degree	

Q9 How many employees are currently employed at your company?

_____

Q10 What best describes the organizational structure of your employer?

- ○ Government Agency
- ○ Sole Proprietorship
- ○ Partnership
- ○ Corporation
- ○ S Corporation
- ○ Limited Liability Company (LLC)
- ○ Cooperative
- ○ Other _____
- ○ Not Sure

Q11 What is the 5-digit zipcode for your company's headquarters?

_____

End of Block: Business Information

Start of Block: Essential Skills Needed for Recent Hires

Q12 Please rank the following skills from most important to be a successful employee in your business, to least important. (1 being the most important, 11 being the least important)

_____ Accept and apply critique and direction in the workplace
_____ Ask good questions
_____ Build professional relationships
_____ Communicate accurately and concisely
_____ Identify and analyze problems
_____ Listen effectively
_____ Navigate change and ambiguity
_____ Realize the effect of decisions
_____ Recognize and deal constructively with conflict
_____ Transfer knowledge from one situation to another
_____ Understand the role in the workplace and have realistic expectations

Q13 Are there any other essential skills to be successful in your workplace that are not listed in the previous question?

_____

Q14 When hiring a recent college graduate, how important is the college or university the candidate received their degree from in your decision process?

- ○ Not at all important
- ○ Slightly important
- ○ Moderately important
- ○ Very important
- ○ Extremely important

Q15 When hiring a recent college graduate, do you place higher emphasis on some colleges or universities than others?

- ○ Definitely yes
- ○ Probably yes
- ○ Might or might not
- ○ Probably not
- ○ Definitely not

Q16 Do you feel some institutions better prepare recent graduates to be members of the workforce?

- ○ Yes
- ○ No

Display This Question:

If Do you feel some institutions better prepare recent graduates to be members of the workforce? = Yes

Q17 What institutions come to your mind that better prepare students for the workforce?

_____

Q18 Are the following experiences positively correlated with a strong candidate?

	Yes	No	Can't Judge
4-H	○	○	○
Activist Groups	○	○	○
Agriculture Future of America (AFA)	○	○	○
Collegiate FFA/PAS	○	○	○
FFA	○	○	○
Greek Life	○	○	○
International Travel - Study Abroad	○	○	○
International Travel - Personal	○	○	○
Internship	○	○	○
Judging or Competitive Events	○	○	○
Leadership in Career Organizations	○	○	○
Membership in Career Organization	○	○	○
Minorities in Agriculture Natural Resources and Related Sciences (MANRRS)	○	○	○
National Agri-Marketing Association (NAMA)	○	○	○
Performing Arts	○	○	○
Philanthropic Organization	○	○	○

Religious Organizations	○	○	○
Research	○	○	○
ROTC/Reserves/Military	○	○	○
Sports - Intramural	○	○	○
Sports - Varsity	○	○	○
Student Government	○	○	○
Volunteerism	○	○	○
Work Experience	○	○	○
Other: (Please List)	○	○	○

Q19 Which of the following experiences do you consider as "Must Have", "Nice to Have", or "Not Important" on a resume?

	Must Have	Nice to Have	Not Important
4-H	○	○	○
Activist Groups	○	○	○
Agriculture Future of America (AFA)	○	○	○
Collegiate FFA/PAS	○	○	○
FFA	○	○	○
Greek Life	○	○	○
International Travel - Study Abroad	○	○	○
International Travel - Personal	○	○	○
Internship	○	○	○
Judging or Competitive Events	○	○	○
Leadership in Career Organizations	○	○	○
Membership in Career Organization	○	○	○
Minorities in Agriculture Natural Resources and Related Sciences (MANRRS)	○	○	○
National Agrimarketing Association (NAMA)	○	○	○
Performing Arts	○	○	○
Philanthropic Organization	○	○	○

Religious Organizations	○	○	○
Research	○	○	○
ROTC/Reserves/Military	○	○	○
Sports - Intramural	○	○	○
Sports - Varsity	○	○	○
Student Government	○	○	○
Volunteerism	○	○	○
Work Experience	○	○	○
Other: (Please List)	○	○	○

End of Block: Essential Skills Needed for Recent Hires

Start of Block: Essential Skill Preparedness Gaps

Q20 How well are the recent college graduates you have hired prepared with the following essential skills when they first entered the workforce with their college degree?

	Prepared	Somewhat Prepared	Not Prepared
Accept and Apply Critique and Direction in the Workplace	○	○	○
Ask Good Questions	○	○	○
Build Professional Relationships	○	○	○
Communicate Accurately and Concisely	○	○	○
Identify and Analyze Problems	○	○	○
Listen Effectively	○	○	○
Navigate Change and Ambiguity	○	○	○
Realize the Effect of Decisions	○	○	○
Recognize and Deal Constructively with Conflict	○	○	○
Transfer Knowledge from One Situation to Another	○	○	○
Understand the Role in the Workplace and Have Realistic Expectations	○	○	○
Other: Please Describe	○	○	○

Q21 How essential are the following in developing strong employability skills?

	Very Essential	Somewhat Essential	Non-essential
Curriculum in College/University Coursework	○	○	○
Leadership Experiences on College/University Campus	○	○	○
Internships	○	○	○
Work Experience	○	○	○
Foreign Language	○	○	○
Other (please specify)	○	○	○

Q22 Are there any additional comments you thought of while taking this survey that you would like to share?

_____

End of Block: Essential Skill Preparedness Gaps