

8-2017

# The Influence of Visual Storytelling on the Occupational Aspirations of Non-Agricultural Undergraduate Students

Hanan Marie Southard  
*University of Arkansas, Fayetteville*

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The Influence of Visual Storytelling on the Occupational Aspirations of Non-Agricultural Undergraduate Students

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Master of Science in Agricultural and Extension Education

by

Hanan Southard  
University of Arkansas  
Bachelor of Science in Agricultural Business, 2015

August 2017  
University of Arkansas

This thesis is approved for recommendation to the Graduate Council.

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Dr. K. Jill Rucker  
Thesis Director

---

Dr. Jefferson Miller  
Committee Member

---

Dr. Andrew McKenzie  
Committee Member

---

Dr. Don Edgar  
Committee Member

## **Abstract**

The agricultural industry has been experiencing a shortage in qualified college graduates to fill its numerous open positions in recent years. The purpose of this study was to investigate the influence of visual storytelling on the occupational aspirations of non-agricultural undergraduate students. Social media channels, virtual storytelling and the higher education classroom provide a unique opportunity to convey information about and recruit students into the agricultural career field. The diffusion of innovation model provides the framework for the introduction of agricultural jobs in a non-agricultural business classroom while the social cognitive theory provides the understanding of the importance of self-efficacy in decision-making.

A posttest only, nonequivalent quasi-experimental study was conducted and used descriptive and independent sample *t*-tests for statistical analysis. Participants were randomly assigned to two groups, Group A and Group B, to determine who received treatment. Both groups were presented with written job descriptions. Job 1 described an entry-level grain merchandising position based out of a rural elevator. Job 2 described an entry-level analyst position in a grain division of an agricultural company located in an urban setting. Group B was presented with video presentations of job responsibilities for both positions. A total of 31 responses were collected, providing a 0.53% response rate.

Collected data showed students' confidence increased with job duties and responsibilities they had cultivated previous experience within class. However, data did not show a significant relationship between presentation methods of the job descriptions. It is recommended that human resources professionals continue to utilize written job descriptions, especially when recruiting

non-agricultural students. Faculty members should actively demonstrate to students how the coursework they complete directly translates into job skills and capabilities.

Keywords: agriculture, storytelling, occupational aspirations

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## **Acknowledgments**

The ability to take a question and foster its growth to the point of an all-encompassing research project is the direct result of the support and guidance from my committee chair, graduate advisor, mentor and friend, Dr. Jill Rucker. Your determination, flexibility, grace and enthusiasm made this process a joyful challenge. Thank you for always being the quintessential model of professionalism, integrity and honesty. I never doubted my decision to work with you.

I would also like to extend a special thank you to the other members of my committee, Dr. Miller, Dr. McKenzie, and Dr. Edgar. Your expertise and individual insight continuously made this project stronger. From my first day on campus six years ago until today, I am thankful to have had such outstanding faculty invest in my education and help me navigate and shape my educational experience into multiple lifelong passions.

Thank you to my graduate school cohort and fellow Team Rucker member, Emily Hawkins, for always having a word of encouragement, a smile or a meme to share on the challenging days of graduate school. Your cheer and positivity is contagious and I am thankful to have had the opportunity to go through this challenge together.

## **Dedication**

This thesis, never mind the entire graduate school experience, is truly the byproduct of a strong, unwavering support system. I am so incredibly thankful for the support of my family, my fiancé, and my best friend. Without their relentless encouragement, this would not have been possible.

To my parents, Rodney and Lisa - thank you for always keeping education a priority. Thank you for providing the example of never giving up or never losing faith. From preschool to graduate school, you always pushed me to try my hardest, to stand by my convictions, and to take responsibility for my educational experience. Thank you for the cheesy jokes in fourth grade science about needing a “rock solid foundation” and for the constant reminders that writing and communication skills are a great insurance policy regardless of what career you pursue.

To my sister, Karana – thank you for not sugar coating the joys and challenges of graduate school. Thank you for reminding me about the light at the end of the tunnel, even if I couldn’t always see it. Thank you for always being able to empathize with my thankfulness for Mrs. Shaver and the foundation that St. James gave us.

To my fiancé, William Blake – thank you for your support, your help, your encouragement and your patience throughout the last two years. Your listening ear, your dedication, your grace, and – did I mention – your patience made this challenge conquerable. I know I can be hard to handle on a good day, but I always knew I could count on you to help me through even the lowest of lows. You kept me laughing and kept me focused on the prize, and for that I am thankful.

To Micayla – thank you for your encouragement, your ability to cheer me up and calm me down (even from three states away), and your perspective as you helped me navigate the

process of graduate school. I am so thankful you were able to come back for my last year on campus and be my sounding board in person. I am forever grateful for your advice, guidance, and sisterhood.

Last, but certainly not least, a special thank you to Hoss – my best canine companion. Thank you for always coming to campus for my late night work marathons, being my cuddle buddy, and always being ready for a trip to Andy's. Your sass, your preference for bacon and naps, and your iconic looks made even the worst days a little bit better. You deserve your own honorary degree, Hossman.



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## **I. Introduction**

### *Background*

Perceptions of agriculture and its associated disciplines have become increasingly misconstrued within the general population (Beyl, Adams, & Smith, 2016). Most citizens within the United States are several generations removed from the farm and are exposed to depictions of modern agriculture that are inaccurate and serve only to scare the public (Beyl et al., 2016). As a communication channel with the ability to transfer information to vast audiences at the same time, social media provides the opportunity for audience members to engage with each other and foster various levels of engagement over topics such as agriculture (Alabi, Onifade, & Sokoya, 2013). “Social media has changed the way people from all over the world communicate, the ease of use increasing the amount of online interaction on both computers and smart phones” (Lofgren, Shultz, & Porr, 2015, p. 208).

However, with the increased networking between individuals and the ability to transfer negative marketing materials throughout the channel of social media, negative effects may be felt years later as individuals are tasked with pursuing a career. “These very negative depictions of farming can have an impact, both overt and subtle, on young viewers that persists when they are considering career options” (Beyl et al., 2016, p. 52). With a history of inaccurate representation, it is logical to find that students are “unaware of the wide range of career options available to graduates” in agriculture upon completion of an undergraduate degree (Beyl et al., 2016, p. 52). Researchers found youth in a focus group study lacked awareness regarding career prospects beyond traditional options (Holz-Clause & Jost, 1995). Furthermore, youth linked farming practices with the industry of agriculture but did not connect opportunities within banking, scientific research or marketing with agriculture (Holz-Clause & Jost, 1995).

For those within the industry, it is apparent agriculture is comprised of so much more than producers on the farm. According to the United States Department of Agriculture (USDA) (2015), agriculture is reported to have almost 60,000 high-skilled jobs open for college graduates with only 35,000 graduates entering the work place. Therefore, to fill these vacant positions, exploration into the motivations for career choice by students in non-agricultural programs must be conducted.

### *Need for the Study*

The agricultural industry in the United States serves as a top contributor to the nation's economy and, therefore, requires significant amounts of human capital. Current job prospects within the industry are promising; between the years of 2010 and 2015, researchers with the United States Department of Agriculture and Purdue University predicted a talent deficit to amount to 54,000 jobs (Doerfert, 2011, p. 19). To develop the human capital needed to fill these positions, institutions of higher learning must learn to educate with purpose in both agricultural and non-agricultural classrooms. Agricultural companies may also need to evaluate ways to educate and thus recruit students from non-agricultural disciplines to consciously engage and participate in the agriculture industry through employment. This study contributes to the effort called to action by the American Association for Agricultural Education's national research agenda 2016-2020, specifically *Priority 3: Sufficient Scientific and Professional Workforce That Addresses the Challenges of the 21<sup>st</sup> Century* (Roberts, Harder, & Brashears, 2016, p. 29). Research, like this study, that further investigates effective recruiting strategies for bringing individuals into agricultural careers clearly aligns to research priority three (Roberts, Harder, & Brashears, 2016, p. 31).

### *Purpose and Objectives*

In an effort to discover a solution to this problem, an evaluation and analysis of current undergraduate students and their occupational aspirations as well as the potential influencers on their occupations must be conducted. The purpose of this study was to determine the effect of visual storytelling on the career aspirations of undergraduate students in the non-agricultural classroom. Research objectives that guided this study included:

1. Evaluate the level of interest and occupational aspiration of non-agricultural undergraduate students based on the written presentation of job responsibilities.
2. Evaluate the level of interest and occupational aspiration of non-agricultural undergraduate students based on the visual presentation of job responsibilities.
3. Describe the differences in levels of interest and occupational aspirations of the two groups.

### *Definitions*

Aspiration: A person's orientation toward a goal. (Kuvlesky & Bealer, 1967)

Expectations: An individual's indication of his anticipated attainment. (Kuvlesky & Bealer, 1967)

Storytelling: Storytelling enables an emotional and cognitive transfer from the protagonist to the consumer. (Pera & Viglia, 2016)

### *Limitations and Assumptions*

The study is bound by a series of limitations. First, the study is dependent upon individuals who are solely affiliated with the University of Arkansas and its respective business college. Because of this, the study cannot be generalized beyond its respondents. The study was also completed entirely online with distribution relying on email service. No incentives, including but not limited to extra credit, prizes, or monetary gifts, were offered to students.



Students were also asked to self-identify when responding to a portion of questions on the instrument, which could incur an increased level of inaccuracy. As a posttest only, nonequivalent comparison group quasi-experimental study, the study is limited by its lack of a pretest and the inability to guarantee all respondents are of equal status and experience before participating.

This study assumed the following: (a) selected participants responded accurately to the survey; (b) the selected participants understood the questions and wording that was used to represent each job description; (c) that collected data measured the interest, confidence, and self-efficacy levels of participants; (d) the data was interpreted in a way that maintained an accurate reflection of the participants.

## II. Literature Review

For most students, the time spent at a university or college is the first step to a lifelong career and the ability to contribute to society. The decision to pursue a field of study in an undergraduate program is the first of many monumental decisions young adults make to shape their lives upon graduation.

### *Occupational Choice*

A pivotal moment in any young adult's life is the decision of which career to pursue. The process of occupational decisions requires an understanding of a person's aspirations and expectations towards their career. According to Kuvlesky and Bealer (1967), "an aspiration refers to a person's orientation toward a goal." On the other hand, expectations refer "to the individuals' indication of his anticipated attainment" (Kuvlesky & Bealer, 1967, p. 291). In terms of occupational decisions and career pursuits, occupational aspiration is the motivation of a person to attain a specific occupational status (Kuvlesky & Bealer, 1967). "Expectations should not be equated with aspirations, for the object involved with the former need not be desired and, therefore, need not be a goal" (Kuvlesky & Bealer, 1967, p. 291). When working towards a specific career, the student is both intrinsically and extrinsically motivated by the anticipated outcome expectations as derived from previously made choices and determined goals (Lent, Brown, & Hackett, 1994). A student's understanding and knowledge of the real world clearly impacts their ability to determine accurate occupational aspirations (Kerckhoff, 1976).

The summation of the work that a student puts in through college oftentimes directly reflects the experiences, and consequently the results, of their college experience. This can include a variety of traits; "such as their degree, grades, academic awards, internship experience, and less tangible attributes like their character, communication skills, and work ethic" (Norwood

& Henneberry, 2006, p. 484). Today's competitive job market and business world causes students to feel pressured to master their field of study and associated competencies to obtain employment (Suvedi, Ghimire, & Millenbah, 2016). According to Stone and Lewis (2012), employability is based on the qualities and work habits someone has. The pressure to obtain a job coupled with a person's expectations for certain occupational status can cause students to either surpass their initial aspirations or fail to achieve any aspect of their occupational aspiration (Kuvlesky & Bealer, 1967). When a student does not thoroughly evaluate their expectations for a career, they can be subject to frustration and the industry incidentally loses their talent through resignation from specific positions or departure from the industry as a whole (Das & Chowdhury, 2014; Hanson, 1994; Mote, 1982). Unless career decisions are made with a thorough knowledge of the industry and the direct and indirect repercussions of their decisions, individuals run the risk of pursuing employment that is either above or below the competencies of the person (Mote, 1982). Ultimately, written descriptions of employment must have some aspect of universality for individuals to properly interpret the requirements and desired characteristics of applicants (Norwood & Henneberry, 2006).

An individual's understanding of an industry or career is not the only influence on their career aspirations or expectations. An individual's "value orientation" will contribute to their reaction to specific concepts, including individual security (Mote, 1982, p. 19). Consequently, Mote found "work value orientation is the tendency to react favorably or unfavorably to concepts about certain jobs and characteristics of certain jobs because of one's value orientation" (1982, p. 19). Current members of the Millennial Generation describe their career desires as focused more on making a difference instead of financial success, an indicator of their value orientation (Smith & Aaker, 2013, para. 6). Ultimately, the development of clear occupational aspirations and the

simultaneous development of personal values directly impact the occupational choices students and young adults make.

### *Education as Career Preparation*

Higher education is often used as a facilitator for career development and obtainment of employment for young adults. According to Goodlad (1984), education is meant to improve skills and knowledge, prepare students for entry into the work force, and simultaneously grow a person to contribute to society. “Throughout the educational process, important career and life skills have been gained as students learn to apply both academic and technical knowledge to transfer into the employability skills required to be career ready” (DiBenedetto & Myers, 2016, p. 31). To complete the transfer of skills from the classroom to the real world, information must be taught in a way students can successfully retain and take the information into later scenarios (DiBenedetto & Myers, 2016). Therefore, students must be engaged in the educational process of a classroom and “committed to active participation and interaction with the material” (Lofgren et al., 2015, p. 209).

### *Agricultural Students and Career Choice*

Historically agricultural institutions of higher learning have experienced a variety of growth and institutional changes throughout the years, including the diversity of degree programs and colleges on the campus. “The primary objective of establishing agricultural universities and college is to train and educated the students, so that they could engage in farm sector, carry out various activities in scientific manner and there by boost the production and productivity” (Das & Chowdhury, 2014, p. 463). The diversification of on-campus experiences and educational opportunities has required a progression towards the need to recruit students into the agricultural discipline based on its ability to satisfy their desires for an industry with a diverse

amount of career options (Beyl et al., 2016). For students already enrolled in the college of agriculture at one university, “the attitudes of...freshmen toward the field of agriculture were positive” (Dyer, Lacey, & Osborne, 1996, p. 35). Dyer, Lacey, and Osborne (1996) found students in the agricultural college “viewed the field of agriculture as both scientific and technical” (p. 35). Beyl, Adams, and Smith (2016) credited the interest in the agricultural industry “as a viable career option” because of “the recent growth in job opportunities and demand for agricultural graduates” (p. 53).

Historically, occupations in agriculture were viewed as being difficult to obtain because of the assumed prerequisites of access to agricultural inputs, pre-established operations, or agricultural backgrounds (Kuvlesky & Bealer, 1967). However, a previous study showed students in the agricultural field believe the pursuit of an agricultural career should be limited to those with a farm background (Dyer et al., 1996). In the same study completed by Dyer, et al., (1996), agricultural students felt non-agricultural students enrolled in the agricultural classes ran the risk of lessening the positive experiences in class because of negative attitudes toward agriculture.

#### *Non-Agricultural Students and Perceptions on Careers in Agriculture*

Thanks to scare tactic marketing campaigns of different national restaurants, such a Chipotle’s “Farmed and Dangerous” mini-series, in an attempt to persuade the general public certain production practices were safer or healthier than conventional agriculture, modern agriculture has been faced with a negative public image (Beyl et al., 2016, p. 52). Furthermore, the “...widespread access to this misinformation does not help to convey a sense of agriculture disciplines as a destination of choice for students struggling with career decisions” (Beyl et al., 2016). This misinformation coupled with the negative public image creates the opportunity for

students to be oblivious to the career options possible within the agricultural industry (Beyl et al., 2016).

When it comes to the recruitment of students into the agricultural discipline, one of the primary challenges lies within “the antiquated perception of agriculture as a modern profession” and the assumption by the public that while other industries can develop, agriculture has not (Beyl et al., 2016, p. 52). Agricultural careers are also subject to negative perceptions by the African American and Latino communities (Morgan, 2000; Romero, 2011). For example, Latino communities view agricultural work characterized by negative conditions, such as low pay and strenuous work (Romero, 2011). Additionally, “misleading online reports” from online sources the Daily Beast and a Yahoo blogger regarding the value of college majors have been discrediting the value of an agricultural degree (Beyl et al., 2016, p. 52). “These very negative depictions of farming can have an impact, both overt and subtle, on young viewers that persists when they are considering career options” (Beyl et al., 2016, p. 52).

This is further proven by a previous study of middle school students who associated the word “farmer” with a description of “an old man, dressed in overalls, smelling dirty, and chewing on a straw” (Holz-Clause & Jost, 1995, para. 9). These students also failed to identify the connections between agriculture and its “technical or research-intensive aspects,” such as “genetics, research, engineering, financial management, or international commodity markets” compared to traditional associations of “farming” (Holz-Clause & Jost, 1995, para. 8). Additionally, the students “had no interest in agriculture and seemed to view a career in agriculture with disdain or at least apathy” (Holz-Clause & Jost, 1995, para. 10). The awareness of students, both old and young, regarding the availability of agricultural career opportunities

seems to be minimal thanks to previous impressions and national scare-marketing campaigns that cover modern agriculture with a veil of fear and misunderstanding.

### *Social Media as a Communication Channel*

#### **Technology**

Cell phones have evolved and diversified in use beyond that of a typical, voice call phone (Rice & Katz, 2008). “The cell phone can, e.g., provide audio interpersonal communication, digital music, video content (personalized as well as mass-mediated), text (if not yet actual printing), locational information, support for consumer transactions, and computing capabilities” (Rice & Katz, 2008, p. 455). The ability to create and distribute video content from a cell phone creates a new possibility of communication through the use of this streaming technology. “These live streaming technologies, which allow smartphone users to broadcast real-time video directly to followers, break down the previous lag between information collection and information distribution, making potential privacy violations instantaneous and unavoidable” (Stewart & Littau, 2016, p. 312). The capabilities of cell phones today have led to the constant use by students as they are able to be continually connected to each other, including on a college campus (Gan, Menkhoff, & Smith, 2015).

#### **Social Media**

Beginning in the 1990s, social networking sites have evolved into “a global phenomenon” (Boyd & Ellison, 2008, p. 217). Social media allows its users to engage in “blogging, tagging, discussion, networking, and so on” (Alabi et al., 2013, p. 2). Osborne-Gowey (2014) defines social media as “a collection of websites and applications designed to build and enhance online communities for networking and sharing information” (para. 2). Example applications include Facebook, Twitter, Instagram, Snapchat and more.

Social media offers the ability to easily communicate between people not only in your community but also across the country and globe through the use of computers and smart phones (Lofgren et al., 2015). Thanks to its broad reach, social media “helps to transfer information to large audiences at the same time” (Alabi et al., 2013, p. 3). People flock to social media because of its ability to create groups for the purpose of information and idea exchanges online, regardless of physical location (Alabi et al., 2013). Social media “has broken down the physical barriers in reaching one another and extended the mileage of exposure from one-to-one person, one-to-many persons, and many-to-many-person instant dialogues online (Alabi et al., 2013, p. 3).

Social media provides the means for users to become engaged in the social community online. Rambe (2012) characterizes social presence as the “intentional communication and expression of a feeling of belonging to a given community that recruits interactants’ participation in knowledge of building processes” (p. 135). Akyol, Garrison, and Ozden (2009) outlined that social presence is characterized by “affected communication, open communication, and group cohesion” (p. 67). Ultimately, users of social media gain a sense of community through their exchange of ideas and information with others regardless of geographical locations.

### **Social Media in the Classroom**

Universities today are immersed in a society that revolves around communities of “high information,” making the need to adopt social media in the classroom essential (King, 2011). Knowledge is created at these universities, so the ability to effectively distribute this information through various channels ultimately creates meaningful interactions between participants (Rambe, 2012). Social media has become so impactful that it seems “to have changed students’ information-seeking behaviors” (Kim, Sin, & Yoo-Lee, 2014, p. 443). Social media’s use as an



information source continues to grow, making it “important to understand which social media platforms are being used to meet various kinds of information needs, and to understand what actions are being taken to evaluate the information from such sources” (Kim et al., 2014, p. 442). The use of technology in today’s classroom can create the opportunity to “supplement the contact time and make [the] experience together in the term something that is more enriching and thought provoking – which is especially important in leadership and human capital-related courses” (Gan et al., 2015, p. 655).

Technology in the classroom has the ability to minimize “learning time, while promoting the retention of a particular idea” and, therefore, increase effectiveness of the classroom instruction (Ahmad, Sritharan, & Nasir, 2015, p. 285). Previous studies regarding the inclusion of social media in the classroom found that students could engage in a stronger classroom community and, therefore, could capitalize on more opportunities to network with peers (Rambe, 2012). Furthermore, students’ use of social media includes a wide assortment of purposes, but can nonetheless result in “friendships and even possible employment opportunities” (Lofgren et al., 2015, p. 208; Porr et al., 2014). In a study by Alabi, Onifade, and Sokoya (2013), research found evidence “of the tremendous role social media and even mobile phones can play in establishing connections, facilitating dissemination of agricultural research findings and exchange of information.” The results of these connections via social media and the Internet has provided the means for easier networking “by people in every walk of life, including agriculture” (Alabi et al., 2013, p. 2).

### **Storytelling and Snapchat**

Social media users can determine the type of content and message they wish to share with complete control based on the social media outlet they choose (Spence, Sellnow-Richmond,

Sellnow, & Lachlan, 2016). When images are shared via video, they “are typically seen as direct copies of reality” (Messaris, 1997, p. vi). “Social media platforms have enabled new ways of communication, participation, and interaction, favoring relationships among consumers and encouraging them to share different aspects of their consumption experience in the form of stories” (Pera & Viglia, 2016, p. 1142). This selection of specific content is necessary because of the risk of digital communication signals being “misinterpreted due to the lack of face-to-face contact” (Gan et al., 2015, p. 653).

Social media as a means of conveying a specific message can be classified as a type of storytelling. “Storytelling enables an emotional and cognitive transfer from the protagonist to the consumer” (Pera & Viglia, 2016, p. 1143). Pera and Viglia (2016) describe storytelling as an exchange between a narrator and a listener, but on a large scale. “In this sense, video storytelling has a tremendous power compared to written storytelling as it favors the occurrence of the emotional dimension of consumer relationship experiences, transforming individual consumption experiences into collective ones” (Pera & Viglia, 2016, p. 1148). In a study completed by Ahmad, Sritharan, and Nasir (2015), respondents indicated that videos were more enjoyable to consume in comparison to pamphlets because of the “narration, background music, and a large amount of visuals which could not be incorporated into the pamphlet” (p. 289).

Snapchat is a social media platform “where friends could share photos that would disappear – forever – in a matter of seconds” (Colao, 2012, para. 1). Started in 2011 by three classmates at Stanford University, Snapchat entered the market toting its ability to send images to friends via a downloadable application to your iPhone (Nusca, 2017). With a myriad of features, Snapchat’s primary use is to take pictures through the camera on an individual’s phone (Roberts, 2017). Users can also send video footage, add filters to images or video and even text

to provide more context before the brief visual message disappears (Roberts, 2017). Young adults, ages 18-29 years old, are the age group with the highest amount of Snapchat users (Duggan, 2015). As a primarily social platform, it should be noted “young adults enrolled in college may use Snapchat differently in their interpersonal relationships than young adults who have different career or educational aspirations” (Vaterlaus, Barnett, Roche, & Young, 2016, p. 600).

### *Theories and Models*

Multiple theories and models were used to guide this study. The first driving model is the social cognitive theory followed by the diffusion of innovations.

#### **Social Cognitive Theory**

As people begin to interact with each other and communicate in the world they are immersed in, an understanding of what drives them is imperative. Bandura (1986,) explains “human functioning is explained in terms of a modal of triadic reciprocity in which behavior, cognitive and other personal factors, and environmental events all operate as interacting determinants of each other” (p. 18). While the symbolism found in communication is necessary for humans to create a plan of action in response to a stimulus, it is a person’s ability to leverage forethought and observation that is used to guide the decisions and actions they take (Bandura, 1986, pp. 19-20).

The influences on an individual’s ability to determine a course of action for themselves does not stop there. A person essentially internalizes “standards and self-evaluative reactions to their own actions” that guide their behavior from that point on (Bandura, 1986, p. 20). These internal standards coupled with an individual’s ability to reflect on their actions and experiences after a decision or behavior provide a distinct ability to determine whether or not they deem any

experience or interaction as a success or failure (Bandura, 1986, pp. 20-21). However, Bandura (1986) specifically notes that “among the types of thoughts that affect action, none is more central or pervasive than people’s judgments of their capabilities to deal effectively with different realities” (p. 21).

The thoughts individuals have regarding their ability to adapt effectively to different situations is supported by their perceived self-efficacy. “Perceived self-efficacy is defined as people’s judgments of their capabilities to organize and execute courses of action required to attain designated types of performances” (Bandura, 1986, p. 391). Perceived self-efficacy guides an individual based on previous experiences and, therefore, the internalized standards based upon those previous experiences and applies them to new situations placed before them. The individual does not necessarily have to complete these new actions before determining whether or not they believe they will be successful in their pursuit (Bandura, 1986). By applying this theory to an individual’s pursuit of a job or career upon graduation, an individual’s ability to interpret, internalize and reflect on their reactions, behaviors and decisions will lead them to believe in either their ability or inability to succeed in different scenarios.

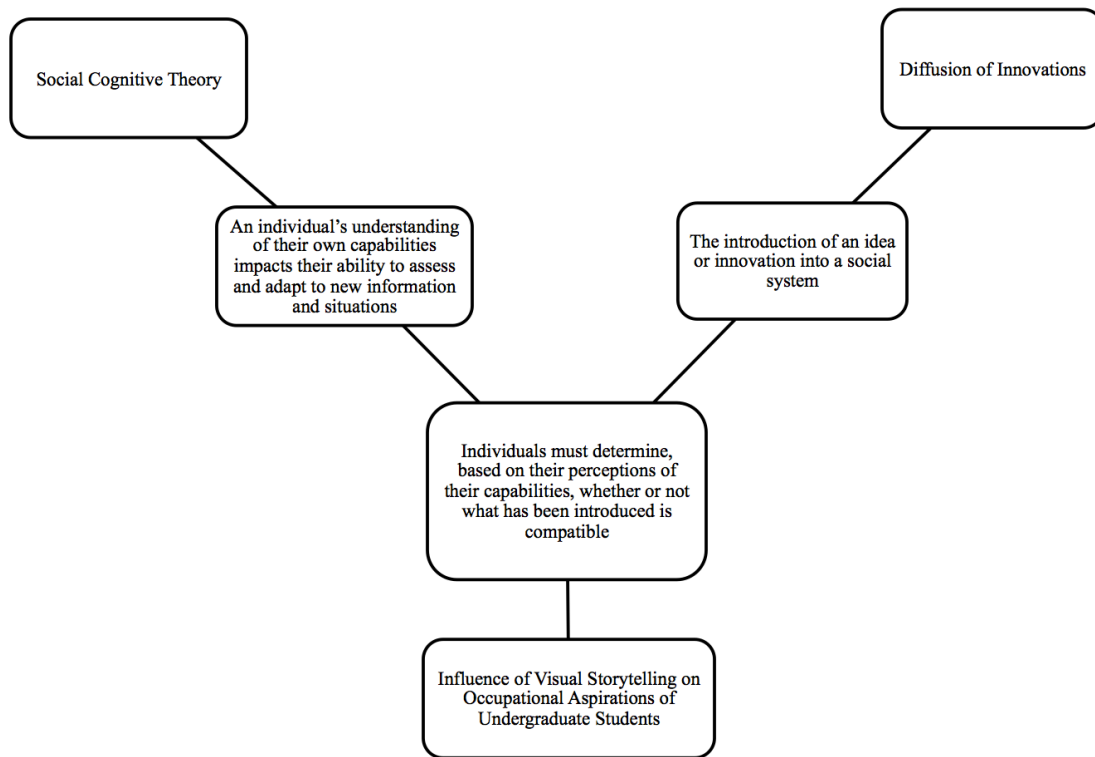
### **Diffusion of Innovation**

Rogers (2003) defines diffusion as “the process in which an innovation is communicated through certain channels over time among the members of a social system” (p. 5). The process of diffusion requires four main facets: an innovation, communication channel(s), time, and a social system (Rogers, 2003, p. 11). Rogers (2003) defines an innovation as “an idea, practice, or object that is perceived as new by an individual or other unit of adoption” (p. 12). The communication channel is the medium that the innovation is shared – this can be a myriad of things including mass media, interpersonal or even the Internet (Rogers, 2003). The social system in the diffusion

of innovations model is defined by Rogers (2003) as “a set of interrelated units that are engaged in joint problem solving to accomplish a common goal” (p. 23). These elements, when combined, create a linear system for the transfer of ideas through a social network; however, individuals are still subject to reject the process and, therefore, the innovation. “Compatibility is the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters” (Rogers, 2003, p. 15). Whether or not an individual finds an innovation to be compatible with their current understandings can determine whether or not the innovation is adopted.

### **Conceptual Framework of this Study**

In this study, the diffusion of innovation model provides the framework for the introduction of agricultural jobs in a non-agricultural business classroom in the attempt to understand the reactions of individuals towards an innovation based on compatibility. To further understand whether or not rejection of the innovation occurs, the study must acknowledge and understand the various levels of perceived self-efficacy of the non-agricultural students regarding their interpretation of agricultural jobs and careers. Figure 1 illustrates how the social cognitive theory and diffusion of innovation work together to provide the conceptual rationale for the study.



*Figure 1.* Guiding conceptual framework of the study.

*Summary*

This literature review provides the foundation of the argument that social media channels, virtual storytelling and the higher education classroom provide a unique opportunity to convey information about and recruit students into the agricultural career field. Students currently use social media as an information source and the use of social media in the classroom historically provides opportunities for professional networking. Visual storytelling is a powerful tool to provide accurate information to audiences watching, especially if the messages are short and concise. The social cognitive theory provides a basis for the understanding of students when they make decisions regarding their ability to succeed in a job. The diffusion of innovations justifies the study and its diffusion of job descriptions throughout the social system of the classroom.

### **III. Methodology**

#### *Introduction*

To satisfy the purpose and research questions previously stated, a study was conducted to evaluate the impact of visual storytelling on the occupational aspirations of undergraduate students. Because of a deficit in qualified agricultural graduates from four-year colleges in the country coupled with a surplus of agricultural jobs, this study strived to further the understanding of the perceptions of non-agricultural undergraduate students regarding the opportunities they qualify for within the agricultural industry. The study also sought to identify the key features that agricultural recruiters could focus on to expand their employee recruitment efforts. In order to do so, a quantitative, quasi-experimental study was completed with non-agricultural undergraduate students at the University of Arkansas. Quantitative research was deemed the most appropriate tool based on the variety of research collected regarding career aspirations and expectations of students both in and out of the agricultural classroom.

#### *Selection of Participants*

To further investigate the perceptions of agricultural careers by non-agricultural undergraduate students, a quasi-experimental quantitative study was completed. A quasi-experimental design was deemed the most appropriate as it is the design that utilizes both an experimental group and a control group of participants with the participants being randomly assigned to each group (Lunenberg & Irby, 2008). The participants for this study were selected based upon their enrollment in a business program at the University of Arkansas as well as their enrollment in a class that directly correlated with the selected jobs described in the study. Business programs included: accounting, economics, finance, general business, information systems, management, marketing, retail, supply chain management, and international business.

The specific courses that were used to determine participant eligibility were AGEC 3373: Futures and Options Markets, FINN 3623: Risk Management, and ECON 2023: Principles of Microeconomics. Students were asked to participate by mass email distribution via the researcher's university email at the University of Arkansas and self-identify their qualification for the survey by sharing their previous completion or current enrollment in selected undergraduate business courses. The undergraduate courses identified as qualifying classes in the survey specifically discuss risk management practices and strategies as well as common microeconomic principles as applied in the business world. Student emails were procured from the Office for Strategic Information and Effectiveness within the Sam M. Walton College of Business based on their classification as of the Spring 2017 semester.

### *Instrumentation*

The instrument (Appendix A) to complete the data collection was a researcher-developed survey. Following the informed consent section was a series of qualifying questions regarding student participants' educational enrollment. They were asked to validate whether or not they had taken a relative agricultural marketing course, a financial course and/or a basic economic course. While the agricultural marketing course is not necessary, students self-identified that they had completed or are currently enrolled in either the finance course or at least the economic course. If students had not completed either of these latter courses, they discontinued their participation in the study at that point. All those who qualified based on their educational histories were asked to self-identify their assigned group of participation before moving to the next section.

The third section of the instrument introduced two separate written job descriptions of entry-level positions within the grain merchandising and purchasing sector. These positions were



chosen based on their relevance to the students enrolled in the selected finance or economics class at the University of Arkansas as well as their entry-level classification by company recruiting websites. All students (Groups A and B) were asked to read each respective written job description and answer a series of questions regarding their level of confidence in response to specific job duties based on their experience obtained in the classroom as well as their level of interest in the position.

For the students who qualified (Group B), the fourth section revealed the video presentations of each proposed entry-level positions. The participants then proceeded to answer questions regarding their degree of confidence pertaining to specific job skills each position required. Participants were asked a series of questions regarding their interest levels in the scenes depicted by the videos as well as their likelihood to apply for the position. The survey concluded with the collection of demographic data from all participants, including whether or not the students graduated from a rural or urban high school and whether or not they anticipate returning to a rural or urban area. United States census definitions were used to define rural and urban for participants.

A panel of experts consisting of agricultural education, communications and economics experts reviewed the instrument to ensure validity. Reliability of the instrument was established through the use of Cronbach's alpha (1951). The reliability coefficient was 0.966. Initial survey responses were utilized to complete the establishment of reliability.

### *Collection of Data*

To accomplish the research questions and purpose, the data collection of this study occurred via email during the Summer 2017 semester at the University of Arkansas. The instrument was in a digital, online format offered by Qualtrics and was distributed via a specific

web address to all participants. Students were required to access the survey using personal devices (laptop, tablet, cellular phone, etc.). Before students completed the survey, half of the selected participants were randomly assigned to either Group A or Group B and were notified of their classification via the initial contact email. The researcher evenly divided the participants in these two groups to differentiate between which students would complete the instrument up until the point of the video presentation and which students would be exposed to the video presentation.

Once the students had been assigned to either of the two groups, all students accessed the digital instrument using the provided web address. The students in Group A completed the instrument sections pertaining to their course history, the written job descriptions, and the demographics, thus concluding their participation in the study. The students in Group B completed all sections of the instrument in order to be exposed to not only the written job descriptions but also the video presentation of the jobs. The qualifying students (Group B) watched 60 seconds of video highlighting the key job tasks of Job 1. Once the video for Job 1 was completed, students answered a second set of questions regarding their perceived self-efficacy levels and current interest level of the job. The students proceeded to watch 60 seconds of video highlighting the key job tasks of Job 2. Once the video for Job 2 concluded, students answered another set of questions regarding their level of interest and perceived ability to thrive in this second position. Upon the completion of the video screenings, students in Group B had concluded their participation and the researcher concluded the data collection period.

The data collection period lasted 12 days. Emails were sent in a series of waves due to email server volume limitations requiring active accounts to send no more than approximately

2,000 emails in a day. Participants were not reminded to participate during the data collection period because of the email limitation amounts.

Because of the complete online nature of the data collection, the risk of student interaction and therefore bias of student survey response was limited. The data collection also occurred during the summer semester when some students may not have been enrolled in summer courses but may still have been an active student in the university system. Selected students were contacted based on their enrollment at the University of Arkansas during the Spring 2017 semester.

### *Treatments*

With a quasi-experimental design, this study was based on the separate treatment of participants to determine the level of impact that visual storytelling had on the occupational aspirations of undergraduate students. Because of the nature of the participant selection, the design lent itself specifically to being a nonequivalent group, posttest only quasi-experimental design. “The nonequivalent, posttest only design consists of administering an outcome measure to two groups or to a program/treatment group and a comparison” (Gibbons & Herman, 1997, p. 2).

The treatment of this study is whether or not the student-participants were subject to social media styled video that portrays what was otherwise conveyed on the written job descriptions. The topics in the videos the students watched covered four main aspects of each respective job: the location of the office, the office environment, primary software used, and one general comment about the primary contributing role of the selected position. The location of the office refers to the outside environment of the job location; for example, Job 1 was located at an elevator and Job 2 was located at a corporate office. The office environment refers to the indoor

characteristics of the office; for example, Job 1 shared a space with fellow employees, overlooking the facility, and Job 2 shared a space with fellow employees, overlooking parking spaces. The primary software used referred to the interface of each respective company's primary software application that allows them to complete transactions. The general comment made by the videographer described one of the primary contributions an employee in this position would typically make on a day-to-day basis. This treatment was justified by the notion that while written job descriptions are thorough, the students of today's classroom respond best to visual presentations of information. This treatment hypothetically could impact the interest levels and perceived self-efficacy levels of students regarding their willingness to engage in an industry they may have previously disregarded or knew nothing about.

#### *Analysis of Data*

The data collected were evaluated through the use of Statistical Package for the Social Sciences (v. 23) software. Descriptive and independent sample *t*-tests were utilized to analyze the collected data. Descriptive statistics were employed on the demographic data to describe frequency. Other questions were analyzed based on frequency and mean. This study also employed independent sample *t*-tests to analyze the data from both samples while keeping in consideration the treatment that had been employed.

#### *Summary*

The study was designed to satisfy the previously stated purpose and objectives. The study employed a quantitative, quasi-experimental format to collect data. The participants were selected based on their enrollment in the business college at the University of Arkansas as well as their enrollment in AGE 3373, FINN 3623, or ECON 2023 that directly related with the selected entry-level agricultural jobs. All participants read job descriptions of Job 1 (Appendix

B), a grain merchandising position located at a rural elevator, and Job 2 (Appendix C), an analyst position within the grain division of a company located in an urban setting. Students assigned to Group B proceeded to view video footage portraying job responsibilities and duties of each job. With an instrument that utilized United States census definitions for clarification, the study procured data regarding basic demographic information, perceived self-efficacy and interest levels regarding particular written jobs as well as visual presentation of the same jobs. The study was submitted for Institutional Review Board (IRB) approval as part of the University of Arkansas protocol. IRB approved the study (IRB #17-06-745) and a copy of the official memorandum can be found in Appendix D. Through the employment of basic descriptive statistics and independent sample t-tests, the collected data was thoroughly analyzed.

#### **IV. Results**

Upon completion of data collection, a total of 31 completed instruments were collected. Of the submitted surveys, a total of 25 instruments were completed in full and used for the data analysis. Group A had 12 usable responses and Group B had 13 usable responses. Completed participants were grouped based on their involvement in the treatment; Group A was exposed to only written presentation of job responsibilities and Group B was exposed to both written and visual presentations of job responsibilities.

##### *Response Rate*

The sample size of the study equaled 4200 participants based on their enrollment and year in school at the University of Arkansas in the Spring 2017 semester. The total number of participants' emails were randomized and divided evenly into the two separate testing groups: Group A and Group B. Group A received no video treatment and Group B received video treatment. When the data collection period was concluded, the study resulted with a 0.53% response rate. Because of the low response rate, it should be noted that the results of this study should not be generalized beyond these respondents because of the risk for non-response bias.

##### *Demographics*

Participants were asked to answer a series of demographics questions to help the researcher characterize and further understand the participants of the study. Participants were specifically asked about gender, classification as of the Spring 2017 semester, whether or not they were an honors student, if they graduated from a rural or urban high school, and whether or not they had plans to return to a rural or urban area upon graduation. Table 1 provides frequencies for each demographic question.

Table 1

*Demographic Characteristics of Participants (N = 25)*

	<i>n</i>	%
Gender		
Male	12	48.00
Female	13	52.00
Classification		
Freshman	1	4.00
Sophomore	9	36.00
Junior	5	20.00
Senior	8	32.00
Graduate	2	8.00
Honors Classification		
Yes	9	36.00
No	16	64.00
Graduation from a Rural or Urban High School		
Rural	6	24.00
Urban	19	76.00
Plans to Return to a Rural or Urban Area Post-Graduation		
Rural	4	16.00
Urban	21	84.00

Participants included, 48.00% male ( $n = 12$ ), 52.00% female ( $n = 13$ ). All participants were students of the University of Arkansas and included the following: 4.00% freshman ( $n = 1$ ), 36.00% sophomores ( $n = 9$ ), 20.00% juniors ( $n = 5$ ), 32.00% seniors ( $n = 8$ ), and 8.00% graduate status ( $n = 2$ ). Participants who were classified as honors students amounted to 36.00% ( $n = 9$ ) and 64.00% ( $n = 16$ ) who were not classified as honors students. Participants graduating from urban high schools included 76.00% ( $n = 19$ ) and rural high schools 24.00% ( $n = 6$ ).

While it was clear all participants were students in the Sam M. Walton College of Business, further understanding regarding their specific majors was requested from the students. Participants were asked to manually type in their current declared major. Table 2 provides frequencies for this question.

Table 2

*Declared Major of Participants (N = 25)*

	<i>n</i>	%
Accounting	3	12.00
Accounting/Finance	3	12.00
Accounting/Organizational Leadership	1	4.00
Business Management/Psychology	1	4.00
Finance	5	20.00
General Business	1	4.00
Information Systems	1	4.00
International Business	1	4.00
Management	2	8.00
Marketing	5	20.00
Supply Chain Management	2	8.00

Participants primarily consisted of 11 major classifications within the Sam M. Walton College of Business. Of the 11 majors declared, 20.00% ( $n = 5$ ) were finance majors and another 20.00% ( $n = 5$ ) consisted of marketing majors.

To order to qualify for participation in the study, participants were qualified through three courses (AGEC 3373, FINN 3623, or ECON 2023) that would be used to either allow or disqualify students. If students had taken at least one of the presented courses, they were cleared to proceed with the survey. With non-agricultural undergraduate students sampled for this study, it was decided to continue to ask whether or not they had taken an agricultural economics course (AGEC 3373) to determine if they had utilized other business courses across the campus to fulfill a degree requirement or not. Table 3 outlines the frequencies for each class.

Table 3

*Participant Enrollment or Completion of Selected Courses (N = 31)*

	<i>n</i>	%
AGEC 3373		
Yes	0	0.00
Table 3 (Cont.)		
No	0	0.00
FINN 3623		
Yes	3	9.68



*Participant Enrollment or Completion of Selected Courses (Cont.)*

No	27	87.10
Missing	1	3.23
ECON 2023		
Yes	22	70.97
Table 3 (Cont.)		
No	6	19.35
Missing	3	9.68

The majority of participants qualified for the study based on their completion of ECON 2023. When asked if they had taken the course, 70.97% of respondents ( $n = 22$ ) had taken ECON 2023 while 19.35% of respondents ( $n = 6$ ) had not taken the course. Only three students, or 9.68% ( $n = 3$ ) of respondents had taken FINN 3623. No students had taken AGEC 3373.

*Objective 1: Participants' Level of Interest and Occupational Aspirations Based on Written Job Descriptions*

Participants were presented with written job descriptions (Appendix B and Appendix C) of two entry-level positions. Once they had read the job descriptions, students were asked questions regarding their interest in the position. Data was gathered on a nominal scale to determine the interest level of the participants regarding the presented jobs. Values of one (1) were considered to be least interested and values of five (5) were considered to be the most interested. Table 4 outlines the results of the interest levels of the students. Job 1 represented the grain merchandiser position located at a rural facility. Job 2 represented the commodity research analyst located at an office in an urban area.

Table 4

*Group A Level of Interest in Job 1 and Job 2 (N = 12)*

	<i>M</i>	<i>SD</i>
Job 1	2.75	0.97
Job 2	3.25	0.75

The mean of Group A, denoted as  $M$ , regarding Job 1 was 2.75 ( $SD = 0.97$ ). The mean of Group A regarding Job 2 was 3.25 ( $SD = 0.75$ ). Based on the means shown by Group A, slight preference was given for Job 2 over Job 1.

Participants were also asked about their confidence in their qualifications for Job 1 and Job 2. The participants' level of confidence was used to reflect their occupational aspiration level for the presented jobs. Table 5 displays the mean and standard deviation of the level of confidence students experienced regarding their qualification for each position.

Table 5

*Group A Level of Confidence in Qualification for Job 1 and Job 2 (N = 12)*

	$M$	$SD$
Job 1	2.67	0.99
Job 2	3.58	0.90

The mean of Group A regarding Job 1 was 2.67 ( $SD = 0.99$ ). The mean of Group A regarding Job 2 was 3.58 ( $SD = 0.90$ ). According to the results, slight preference was given towards Job 2 over Job 1 in regards to participants' level of confidence towards their qualification.

Further analysis was conducted regarding the students' confidence in completing the job tasks specifically mentioned in the written job description. Participants responded on a nominal scale with zero (0) meaning absolutely no confidence in their ability and 10 meaning the highest level of confidence in their ability to complete the specific task. Table 6 displays the mean and standard deviation of each job task for Job 1.

Table 6

*Group A Confidence in Ability to Complete Job 1 Job Tasks (N = 12)*

	$M$	$SD$
Act as a team player	8.75	1.06

*Group A Confidence in Ability to Complete Job 1 Job Tasks (Cont.)*

Be organized on the job	8.92	1.44
Effectively communicate between people	8.75	1.14
Negotiate with those I do business with	8.42	1.31
Successfully sell goods and services	7.83	2.08
Manage conflict	7.42	1.68
Accurately communicate via written word	9.33	0.65
<i>Group A Confidence in Ability to Complete Job 1 Job Tasks (Cont.)</i>		
Accurately communicate verbally	8.75	1.14
Effectively use a computer to accomplish my tasks	9.00	1.95

Overall, students felt fairly confident with their ability to complete the tasks mentioned for Job 1, with means ranging from 7.42 to 9.33. Students felt least confident in their ability to manage conflict with  $M = 7.42$  ( $SD = 1.68$ ). However, participants felt most confident in their ability to communicate via written word with  $M = 9.33$  ( $SD = 0.65$ )

Table 7 displays the mean and standard deviation of each job task for Job 2. Students responded to the job tasks by ranking their confidence on the same scale as Job 1.

Table 7

*Group A Confidence in Ability to Complete Job 2 Job Tasks (N = 12)*

	<i>M</i>	<i>SD</i>
Use deductive reasoning to solve problems	7.92	1.24
Be highly motivated and a self-starter	8.17	1.40
Be organized on the job	8.08	2.54
Be detail-oriented and analytical	8.58	2.28
Accurately communicate via written word	9.25	0.87
Accurately communicate verbally	8.58	1.51
Work on my own or with a team	9.00	0.85
Effectively use a computer to accomplish my tasks	9.00	1.95
Facilitate discussion among my peers	8.00	1.76

Participants were confident in their ability to accomplish the job duties of Job 2. The students felt the most confident with their ability to communicate via written word with an  $M = 9.25$  ( $SD = 0.87$ ). Students felt the least confident in their ability to use deductive reasoning to solve problems with  $M = 7.92$  ( $SD = 1.24$ ).

To investigate further into why students felt confident regarding certain job tasks, students were asked to disclose the level of preparedness they felt towards job responsibilities mentioned in the job description based on their academic experiences in the courses that were used as qualifiers to the study. Participants responded on a nominal scale with zero (0) meaning absolutely no confidence in their ability and 10 meaning the highest level of confidence in their ability to complete the specific responsibility. With no participants taking AGEC 3373, participants showed previous or current enrollment in only FINN 3623 and ECON 2023. Table 8 shows the means and standard deviations of both classes for Job 1.

Table 8

*Group A Level of Confidence in Ability to Complete Job 1 Job Responsibilities  
Based on Course History*

	<i>M</i>	<i>SD</i>
FINN 3623 ( <i>N</i> = 2)		
Manage rail logistics and transportation	4.50	0.71
Maximize on opportunities to address market risks	5.00	0.00
Provide customers with advice regarding risk management	4.50	3.54
Generate profits	4.50	2.12
Analyze current markets	3.50	2.12
Manage Profit/Loss	4.00	2.82
Visit customers on location	6.50	2.12
Seek opportunities to expand draw area	3.50	3.53
Develop strategic relationships within industry	7.00	4.24
ECON 2023 ( <i>N</i> = 10)		
Manage rail logistics and transportation	3.60	2.76
Maximize on opportunities to address market risks	5.60	1.35
Provide customers with advice regarding risk management	5.10	2.28
Generate profits	6.50	2.32
Analyze current markets	7.20	2.01
Manage Profit/Loss	6.50	1.72
Visit customers on location	7.20	1.34
Seek opportunities to expand draw area	6.50	2.01
Develop strategic relationships within industry	6.80	2.15

Participants who had taken FINN 3623 experienced the highest level of confidence regarding their ability to develop strategic relationships within industry with  $M = 7.00$  ( $SD =$

4.24). The same participants experienced the least amount of confidence in their ability to both analyze current markets,  $M = 3.50$  ( $SD = 2.12$ ), and seek opportunities to expand draw area,  $M = 3.50$  ( $SD = 3.53$ ). However, participants who had taken ECON 2023 experienced the most confidence in their ability to analyze current markets,  $M = 7.20$  ( $SD = 2.01$ ), and visit customers on location,  $M = 7.20$  ( $SD = 1.34$ ).

Further evaluation was also conducted for Job 2. Participants indicated their confidence level pertaining to the listed job responsibility as directly sourced from the original written job description. Table 9 displays the means and standard deviations of the responses.

Table 9

*Group A Level of Confidence in Ability to Complete Job 2 Job Responsibilities Based on Course History*

	<i>M</i>	<i>SD</i>
FINN 3623 ( $N = 2$ )		
Maintaining products and demand database	6.00	4.24
Assist with data collection, modeling and analysis of industry progress and production	6.00	5.66
Maintain database with macroeconomic data	2.50	0.71
Lead product line and risk meetings	6.00	2.83
Work with other company groups to determine supply and demand needs for the organization	5.50	2.12
ECON 2023 ( $N = 10$ )		
Maintaining products and demand database	6.80	1.93
Assist with data collection, modeling and analysis of industry progress and production	7.40	1.58
Maintain database with macroeconomic data	7.40	1.51
Lead product line and risk meetings	5.90	2.47
Work with other company groups to determine supply and demand needs for the organization	7.30	1.95

Participants who had taken FINN 3623 experienced the most confidence when faced with the possibility of maintaining products and demand database,  $M = 6.00$  ( $SD = 4.24$ ), assisting with data collection, modeling and analysis of industry progress and production,  $M = 6.00$  ( $SD = 5.66$ ), and leading product line and risk meetings,  $M = 6.00$  ( $SD = 2.83$ ). Participants felt least

confident with maintaining database with macroeconomic data,  $M = 2.50$  ( $SD = 0.71$ ). For individuals who had taken ECON 2023, the highest levels of confidence were felt with the prospect of assisting with data collection, modeling and analysis of industry progress and production,  $M = 7.40$  ( $SD = 1.58$ ), and maintaining database with macroeconomic data,  $M = 7.40$  ( $SD = 1.51$ ). Students felt least confident when faced with the prospect of leading product line and risk meetings,  $M = 5.90$  ( $SD = 2.47$ ).

*Objective 2: Participants' Level of Interest and Occupational Aspirations Based on the Visual Presentation of Job Responsibilities*

Participants in Group B were presented with a visual presentation of job responsibilities of two entry-level positions. Once they watched each of the job presentation videos, students were asked questions regarding their interest in the position. Data was gathered on a nominal scale to determine the interest level of the participants regarding the presented jobs. Values of one (1) were considered to be least interested and values of five (5) were considered to be the most interested. Table 10 outlines the results of the interest levels of the students. Job 1 represented the grain merchandiser position located at a rural facility. Job 2 represented the commodity research analyst located at an office in an urban area.

Table 10

*Group B Level of Interest in Job 1 and Job 2 (N = 13)*

	<i>M</i>	<i>SD</i>
Job 1	2.62	0.77
Job 2	2.69	1.11

Students found both Job 1 and Job 2 similar in interest level. Participants responded to Job 1 with  $M = 2.62$  ( $SD = 0.77$ ). Students responded to Job 2 with  $M = 2.69$  ( $SD = 1.11$ ).

Participants were then asked about confidence levels regarding the positions that were presented to them. Job tasks were copied directly from the position's corresponding written job

description as presented in the previous section. Students' responses for both Job 1 and Job 2 can be found in Tables 11 and 12.

Table 11

*Group B Confidence in Ability to Complete Job 1 Job Tasks (N = 13)*

	<i>M</i>	<i>SD</i>
Act as a team player	9.08	1.19
Be organized on the job	9.31	0.95
Effectively communicate between people	9.15	1.35
Negotiate with those I do business with	8.46	1.71
Successfully sell goods and services	8.23	1.74
Manage conflict	8.77	2.00
Accurately communicate via written word	8.77	1.48
Accurately communicate verbally	8.77	1.42
Effectively use a computer to accomplish my tasks	8.46	2.44

Participants in Group B felt the most confident in their ability to be organized on the Job 1 after viewing the video for Job 1,  $M = 9.31$  ( $SD = 0.95$ ). Participants felt the least confident in their ability to successfully sell goods and services with  $M = 8.23$  ( $SD = 1.74$ ).

Table 12

*Group B Confidence in Ability to Complete Job 2 Job Tasks (N = 13)*

	<i>M</i>	<i>SD</i>
Use deductive reasoning to solve problems	8.00	1.53
Be highly motivated and a self-starter	8.08	2.75
Be organized on the job	8.46	2.07
Be detail-oriented and analytical	8.23	2.09
Accurately communicate via written word	8.15	1.99
Accurately communicate verbally	8.46	1.76
Work on my own or with a team	8.15	2.11
Effectively use a computer to accomplish my tasks	7.54	2.63
Facilitate discussion among my peers	8.08	2.14

Participants in Group B felt the most confident in their ability to be organized on the job,  $M = 8.46$  ( $SD = 2.07$ ), and to accurately communicate verbally,  $M = 8.46$  ( $SD = 1.76$ ). Students felt the least confident in their ability to effectively use a computer to accomplish their tasks,  $M = 7.54$  ( $SD = 2.63$ ).

To further understand participants in Group B and their confidence in completing job tasks presented to them, participants were asked to describe their confidence in completing job responsibilities based on the qualifying course they took to participate in this survey. Table 13 depicts the data for Group B relative to Job 1.

Table 13

*Group B Level of Confidence in Ability to Complete Job 1 Job Responsibilities  
Based on Course History*

	<i>M</i>	<i>SD</i>
FINN 3623 ( <i>N</i> = 1)		
Manage rail logistics and transportation	3.00	-
Maximize on opportunities to address market risks	8.00	-
Provide customers with advice regarding risk management	10.00	-
Generate profits	10.00	-
Analyze current markets	5.00	-
Manage Profit/Loss	7.00	-
Visit customers on location	10.00	-
Seek opportunities to expand draw area	10.00	-
Table 13 (Cont.)		
Develop strategic relationships within industry	5.00	-
ECON 2023 ( <i>N</i> = 12)		
Manage rail logistics and transportation	4.25	2.22
Maximize on opportunities to address market risks	6.92	1.31
Provide customers with advice regarding risk management	5.92	1.73
Generate profits	7.33	1.61
Analyze current markets	8.00	1.48
Manage Profit/Loss	7.25	1.60
Visit customers on location	8.67	1.56
Seek opportunities to expand draw area	7.57	2.78
Develop strategic relationships within industry	8.42	1.78

One participant had taken FINN 3623, offering less information than the 12 participants who had taken ECON 2023. With singular results for FINN 3623, the participant felt the most confident in their ability to provide customers with risk management advice, generate profits, visit customers on location, and seek opportunities to expand draw area, all  $M = 10.00$ .

Participants who had taken ECON 2023 felt most confident in their ability to develop strategic relationships within industry with  $M = 8.42$ ,  $SD = 1.78$ . Participants who had taken ECON 2023



as well as the participants who had taken FINN 3623 felt the least confident in their ability to manage rail logistics and transportation with  $M = 4.25$ ,  $SD = 2.22$ ,  $M = 3.00$ , respectively.

Further analysis regarding Group B participants' confidence towards job responsibilities was collected for Job 2. Table 14 outlines the confidence levels of Group B participants regarding Job 2 responsibilities.

Table 14

*Group B Level of Confidence in Ability to Complete Job 2 Job Responsibilities  
Based on Course History*

	<i>M</i>	<i>SD</i>
FINN 3623 ( $N = 1$ )		
Maintaining products and demand database	6.00	-
Assist with data collection, modeling and analysis of industry progress and production	6.00	-
Maintain database with macroeconomic data	6.00	-
Lead product line and risk meetings	10.00	-
Work with other company groups to determine supply and demand needs for the organization	10.00	-
Table 14 (Cont.)		
ECON 2023 ( $N = 12$ )		
Maintaining products and demand database	6.67	1.61
Assist with data collection, modeling and analysis of industry progress and production	6.42	2.19
Maintain database with macroeconomic data	6.42	2.28
Lead product line and risk meetings	7.08	2.39
Work with other company groups to determine supply and demand needs for the organization	8.00	1.86

The participant who had taken FINN 3623 felt the most confident in their ability to lead product line and risk meetings as well as work with other company groups to determine supply and demand needs,  $M = 10.00$ . The lone participant felt the least confident in the remaining job responsibilities with  $M = 6.00$ . The remaining participants in Group B felt the most confident in their ability to work with other company groups to determine supply and demand needs,  $M = 8.00$ ,  $SD = 1.86$ . However, the participants in Group B felt the least confident in their ability to assist with data collection, modeling and analysis of industry progress and production as well as

their ability to maintain a macroeconomic database,  $M = 6.42$ ,  $SD = 2.19$  and  $SD = 2.28$ , respectively.

Based on the video presentation of job responsibilities, Group B was asked to rank their interest in the position based on the characteristics that they saw through the video: location, office environment, computer application most heavily used, and the primary method of communication. Data was gathered on a nominal scale to determine the interest level of the participants regarding the presented job conditions. Values of one (1) were considered to be least interested and values of five (5) were considered to be the most interested. Table 15 outlines the perceptions of Group B in response to each set of job characteristics for Job 1 and B.

Table 15

*Group B Perceptions of Job Conditions for Job 1 and 2 (N = 13)*

	<i>M</i>	<i>SD</i>
Job 1		
Location (Outdoor Environment)	2.58	1.24
Office Environment (Indoor Environment)	2.75	0.87
Computer Application Most Heavily Used	3.15	0.99
Primary Method of Communication Used	2.92	1.12
Job 2		
Location (Outdoor Environment)	3.31	0.95
Office Location (Indoor Environment)	2.69	1.03
Computer Application Most Heavily Used	2.92	1.26
Primary Method of Communication Used	3.31	0.86

Participants were the most interested in applying for Job 1 based on the computer application most heavily used,  $M = 3.15$ ,  $SD = 0.99$ . Group B participants felt the least interested in the location of Job 1,  $M = 2.58$ ,  $SD = 1.24$ . Participants were the most interested in both the location and the primary method of communication used in Job 2 with  $M = 3.31$ ,  $SD = 0.95$  and  $SD = 0.86$ , respectively. Participants in Group B were the least interested in the office location of Job 2,  $M = 2.69$ ,  $SD = 1.03$ .

*Objective 3: Describe the differences in levels of interest and occupational aspirations of the two groups.*

In an effort to satisfy the third objective of the study, further investigation into the levels of interest and occupational aspirations was conducted. Interest levels and occupational aspirations of each group (Group A and Group B) were compared regarding each position that was presented (Job 1 and Job 2). Job 1 represented the grain merchandiser position located at a rural facility. Job 2 represented the commodity research analyst located at an office in an urban area. Researchers sought to identify whether or not differences in levels of interest and occupational aspiration existed between the group that had been exposed to written presentations of the positions only and the group that had been exposed to written and visual presentations of the positions. Table 16 shows the results of the independent sample *t* test for Group A and Group B regarding Job 1 interest and Job 2 interest.

Table 16

*Differences Between Groups for Interest Levels*

		Job		<i>df</i>	<i>t</i>	<i>p</i>	<i>d</i>
		<i>M</i>	<i>SD</i>				
Group A	Job 1	2.75	0.97	23	0.39	0.70	0.15
Group B		2.62	0.77				
Group A	Job 2	3.25	0.75	23	1.46	0.16	0.59
Group B		2.69	1.11				

When investigating the relationship between Group A and Group B regarding the level of interest in Job 1, it was found  $t(23) = 0.39, p = 0.70$  was found. Based on the *t* value, this relationship was not significant. Furthermore, investigation of the relationship between Group A and Group B regarding the level of interest in Job 2, it was found  $t(23) = 1.46, p = 0.16$ . Based on the *t* value, this relationship was not significant. Table 17 shows the results of the independent

sample  $t$  test for Group A and Group B regarding Job 1 occupational aspiration and Job 2 occupational aspiration.

Table 17

*Differences Between Groups for Occupational Aspiration Levels*

		Job		<i>df</i>	<i>t</i>	<i>p</i>	<i>d</i>
		<i>M</i>	<i>SD</i>				
Group A	Job 1	9.27	1.05	23	1.02	0.48	0.42
Group B		8.77	1.33				
Group A	Job 2	8.51	0.97	23	0.67	0.57	0.27
Group B		8.13	1.73				

Investigation into the relationship between Group A and Group B regarding the level of occupation aspiration of Job 1 resulted in a  $t(23) = 1.02, p = 0.48$ . This relationship offered no evidence of significance. Finally, investigation into the relationship between Group A and Group B regarding the level of occupational aspiration of Job 2 resulted in a  $t(23) = 0.67, p = 0.57$ . This relationship also offered no evidence of significance.

## **V. Conclusions and Recommendations**

The purpose of this study was to determine the effect of visual storytelling on the career aspirations of undergraduate students in the non-agricultural classroom. The study was guided by the following objectives: evaluate the level of interest and occupational aspiration of non-agricultural undergraduate students based on the written presentation of job responsibilities; evaluate the level of interest and occupational aspiration of non-agricultural undergraduate students based on the visual presentation of job responsibilities; and to describe the differences in levels of interest and occupational aspirations of the two groups. The following conclusions are representative of the respondents in the study.

### *Objective One: Level of Interest and Occupational Aspiration Based on the Written Presentation of Job Responsibilities*

According to Bandura (1986), a person's ability to take into consideration their previous experiences and emotions and apply them to a current situation is essential for their ability to navigate new decisions and scenarios. When presented with new information in the form of a job description, participants leveraged their previous academic experiences to guide them in their interest in apply for one position over another. Overall, participants were most confident in their ability to succeed in either position based on their confidence in their written communication abilities. However, when asked about which of the courses they had taken and their direct influence on their ability to perform select job responsibilities, participants who had taken both FINN 3623 and ECON 2023 felt they would be more successful in Job 2's data collection, modeling and maintenance-heavy position. The response by participants further supports the argument proposed by Bandura (1986) that perceived self-efficacy guides individuals based on their previous experiences.

*Objective Two: Level of Interest and Occupational Aspiration Based on the Visual Presentation of Job Responsibilities*

Sharing images and scenes via video are typically received and understood by viewers as “direct copies of reality” (Messaris, 1997, p. vi). When presented with visual presentations of job responsibilities for both Job 1 and Job 2, participants in Group B responded with similar responses when presented with job duties. Participants felt they would be able to be organized on the job for both Job 1 and Job 2. However, participants felt least confident in their ability to sell goods at Job 1. This lack of confidence is supported by the idea of compatibility serving as guide for adopting a new idea or innovation, according to Rogers (2003). Participants also noted that they felt least confident with their ability to effectively utilize a computer to accomplish their tasks for Job 2. Taking the lack of confidence regarding computer skills into consideration, when participants were asked how their perception of the video that they had been shown influenced their likelihood to apply for either position, participants showed the highest amount of interest due to the computer application used in both Job 1 and Job 2.

Participants in Group B also showed increased interest in Job 2 based on the location and outdoor environment of the job while simultaneously showing low interest in Job 1 for its location and outdoor environment. While the positions are similar in needed education and facet of the agricultural industry, it should be noted that students felt more inclined to apply for the position based in an urban area with a large volume of offices (Job 2) instead of the rural elevator (Job 1). This is supported by the participants’ desire to remain in urban areas after graduation. This attitude is consistent with previous attitudes found in other studies. Beyl et. al. (2016) noted that misinformation regarding the agricultural industry and an outdated view of the industry as a whole provides the opportunity for students to be oblivious to the career possibilities within the

industry. Holz-Clause & Jost (1995) also found that students had declared “no interest in agriculture” (para. 10) when asked about careers in the industry.

Students’ preference toward Job 2 over Job 1 is further supported by the social cognitive theory presented by Bandura (1986). Bandura (1986) explains that previous experiences help guide the decisions of an individual as they proceed through life. With only 24.00% of students coming from a rural high school background, the understanding of what working in a rural elevator or area may be nonexistent for the other respondents.

### *Objective Three: Differences in Levels of Interest and Occupational Aspirations*

The guiding conceptual framework around this study capitalizes on the individual’s ability to reflect on previous experiences and knowledge to make decisions in new situations (Bandura, 1986) and the individual’s ability to respond to a new innovation presented in a social system and determine compatibility based on needs and past experiences (Rogers, 2003). Upon analysis of both groups, no significant relationship was found between the two job presentation methods. This finding is inconsistent with previous studies who found respondents preferred videos because of their ability to incorporate more information than written materials (Ahmad, Sritharan, & Nasir, 2015). Under the premise of the guiding conceptual framework, students’ were able to successfully determine through each presentation method the appropriate responses regarding compatibility of the job and their occupational aspirations.

### *Limitations*

This study had several limitations that must be taken in consideration when evaluating and interpreting the results. First, the study focused on responses from individuals within the business college at the University of Arkansas and therefore should not be generalized beyond those respondents. The study also had a low response rate, which supports the argument that it

should not be generalized beyond the respondents of the study. The study also occurred during the summer semester, which can notoriously be a time when student attentiveness to their university email accounts, unless actively enrolled in courses, is minimal. With the study's online format and lack of incentives (extra credit, prizes, or monetary gifts) for participation, the ability to influence student participation in-person was nonexistent. Considering the study was not done in conjunction with specific courses that were being actively taught, the ability to influence student participation through current instructors was also nonexistent.

### *Recommendations and Implications*

Additional studies should be conducted to evaluate the impact of various presentation methods or combination of methods on the interest levels of non-agricultural undergraduate students from various departments at the University of Arkansas within the college of business. Future studies could also evaluate the implications of long-term exposure or education regarding agricultural careers in the non-agricultural classroom in an effort to include these career possibilities for longer durations of time. Further studies could evaluate interest levels of participants based on the length of time spent in a specific job. Further investigation could also evaluate whether or not previous experience, like an internship, impacts interest levels. Future studies could also explore the differences between agricultural students and non-agricultural students.

If the study were to be repeated, it is recommended to increase the data collection period or collect data during a different part of the academic calendar. Fall or spring semesters would make ideal collection periods, especially if the instrument could be dispersed during a class period or as part of a specific course, such as the courses identified as qualifying classes in the survey. Additional material should be added to the survey instrument to further investigate the



original occupational aspirations and career motivations of the non-agricultural students at the time of the study participation. Examples of this could include the participants' ranking of job characteristics, such as compensation, benefit packages, retirement plans, location, travel time, etc. The survey instrument could also include questions asking participants to identify the various influences on their decisions; specifically, if personal experiences were drawn upon as they reflected and responded to the survey questions. Participants could also be asked to identify which career field they wished to go into after graduation. Investigating this further would provide more insight into the motivation behind students to pursue certain careers or professions over another.

The implications of this study are directed towards members of the human resources profession as well as members of college faculty. The study was intended to provide human resources professionals within the agricultural industry insight into the recruitment of non-agricultural students. Furthering the understanding of the interest levels and occupational aspirations of non-agricultural students regarding agricultural careers coupled with an understanding of how presentation methods impact those levels is beneficial for recruiters as they seek to fill positions within their respective agricultural companies. It is recommended that human resources professionals continue to utilize written job descriptions, especially when recruiting non-agricultural students. The same applies to college faculty as they seek to understand ways to ensure job placement upon graduation. Faculty members should actively demonstrate to students how the coursework they complete directly translates into job skills and capabilities. Faculty should also encourage students to seek opportunities in industries that are experiencing shortages in qualified graduates.

## *Conclusions*

This study strived to evaluate the implications of different presentation methods of job responsibilities of agricultural jobs on the interest level and occupational aspirations of non-agricultural undergraduate students. A total of 31 responses were collected. Collected data showed students' confidence increased with job duties and responsibilities they had cultivated previous experience with in class. However, data did not show a significant relationship between presentation methods of the job descriptions. The conceptual framework of the study supports the results by confirming students' use of previous experiences, academic or otherwise, to guide decisions and determine compatibility levels. Future studies should investigate the other influences on job interest levels and occupational aspirations of non-agricultural undergraduate students.

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## **Appendix A: Instrument**

**Because of your choice in academic major at the University of Arkansas – Fayetteville, you are being asked to participate in this study. Your participation in this study is voluntary. The estimated time to complete this survey is 15- 20 minutes. You may decide not to participate or to withdraw from the study at any time without damage to your current or future relations with researchers or the University of Arkansas. This study is confidential to the extent allowed by law and University policy. All data will be reported as group data. No identifying information is being collected. Research records will be stored securely.**

**If you have questions regarding this study, you may contact Dr. Jill Rucker at [kjrucker@uark.edu](mailto:kjrucker@uark.edu). The Institutional Review Board at the University of Arkansas has reviewed this research study. For research-related problems or questions regarding your rights as a research participant, you can contact Ro Windwalker, the University's Compliance Coordinator, at (479) 575-2208 or email at [irb@uark.edu](mailto:irb@uark.edu). Please indicate below your consent to participate in this study by checking a box below.**

- **Yes (1)**
- **No (2)**

**Thank you for your participation in this important research project.**

**Your responses are confidential. Only the research team will have access to your individual responses.**

**Please read and follow the directions for each section of the questionnaire.**

I. Section 1 – Qualifying Questions

1. Have you completed or are currently enrolled in AGEC 3373: Futures and Options Markets?

Yes<sup>1</sup>                  No

2. Have you completed or are currently enrolled in Finance 3623: Risk Management?

Yes<sup>2</sup>                  No\*

3. \*Have you completed or are currently enrolled in ECON 2023: Principles of Microeconomics?

Yes<sup>3</sup>                  No\*\*

*\*If the participant answers No to Finance 3626: Risk Management, they will be prompted to answer Question 3 regarding their enrollment or completion of ECON 2023.*

*\*\*If the participant answers No to ECON 2023: Principles of Microeconomics, the participant will not complete the remaining parts of the survey and will be thanked for their participation.*

*<sup>1</sup>If the participant answers Yes to AGEC 3373: Futures and Options Markets, they will answer Section 2, Part 1, Question i and Section 2 Part 2, Question i. If they answer No, they will not be exposed to those questions.*

*<sup>2</sup>If the participant answers Yes to FINN 3623: Risk Management, they will answer Section 2, Part 1, Question iii and Section 2 Part 2, Question iii. If they answer No, they will not be exposed to those questions.*

*<sup>3</sup>If the participant answers Yes to ECON 2023: Principles of Microeconomics, they will answer Section 2, Part 1, Question ii and Section 2 Part 2, Question ii. If they answer No, they will not be exposed to those questions.*



## II. Section 2 – Written Job Descriptions

You are about to be presented with two (2) written job descriptions for entry-level positions. You are qualified for these positions based on your completion of associated coursework that will have taught you about the fundamental basics of the job requirements for each job. Assume that each position is of equal pay. Please read the entire job description carefully; you will then be asked a series of questions.

## 1. Grain Merchandiser (Job 1)

This position is responsible for merchandising functions including, origination, risk management, profit/loss results, business development, and customer service. Assist in rail freight trading and capital asset recommendations. Must be a confident team player with excellent organizational, interpersonal skills, and ability to capitalize on win/win opportunities.

### Primary Duties Include:

- \* Assist in managing a trading position, rail freight/fob trucking logistics, and collaborating with Joint Venture Regional Traders to maximize opportunities and address market risks.
- \* Advise customers/producers on risk management, while utilizing a proactive approach with the intent to secure stable returns in the commodities market.
- \* Generate profits, conduct market analysis, manage the profit/loss, manage logistics, and maintain efficiency from an operational standpoint.
- \* Participate in customer farm visits to provide solution alternatives to customers.
- \* Originate bushels while continually seeking opportunities to expand our origination draw area and market presence.
- \* Manage the risk and execution of sales/deliveries into outside markets.
- \* Seek, find, capture and maintain strategic relationships within the joint venture.
- \* Effectively communicate daily operational plans with in-house partners.

### Qualifications:

- \*Strong sales and negotiation skills
- \*Good computer skills with a working knowledge of Microsoft Office
- \*Conflict management skills
- \*Interpersonal skills
- \*Strong written and verbal communication skills
- \*Travel Required: 5-10%

- i. Applicants to this entry-level position must have a collegiate level education in a business-related field.  
Please rate in each of the blanks in the column how certain you are you can complete the correlating job responsibility based on your education obtained through AGEC 3373.

Rate your degree of confidence by recording a number from 0 to 10 using the scale below:

0	1	2	3	4	5	6	7	8	9	10
Cannot do at all					Moderately can do					Highly certain can do

Manage rail logistics and transportation	_____
Maximize on opportunities to address market risks	_____
Provide customers with advice regarding risk management	_____
Generate profits	_____
Analyze current markets	_____
Manage Profit/Loss	_____
Visit customers on location	_____
Seek opportunities to expand draw area	_____
Develop strategic relationships within industry	_____

- ii. Applicants to this entry-level position must have a collegiate level education in a business-related field.  
Please rate in each of the blanks in the column how certain you are you can complete the correlating job responsibility based on your education obtained through ECON 2023.

Rate your degree of confidence by recording a number from 0 to 10 using the scale below:

0	1	2	3	4	5	6	7	8	9	10
Cannot do at all					Moderately can do					Highly certain can do

Manage rail logistics and transportation	_____
Maximize on opportunities to address market risks	_____
Provide customers with advice regarding risk management	_____
Generate profits	_____
Analyze current markets	_____
Manage Profit/Loss	_____
Visit customers on location	_____
Seek opportunities to expand draw area	_____

Develop strategic relationships within industry \_\_\_\_\_

- iii. Applicants to this entry-level position must have a collegiate level education in a business-related field.  
Please rate in each of the blanks in the column how certain you are you can complete the correlating job responsibility based on your education obtained through FINN 3623.

Rate your degree of confidence by recording a number from 0 to 10 using the scale below:

0	1	2	3	4	5	6	7	8	9	10
Cannot do at all					Moderately can do					Highly certain can do

Manage rail logistics and transportation	_____
Maximize on opportunities to address market risks	_____
Provide customers with advice regarding risk management	_____
Generate profits	_____
Analyze current markets	_____
Manage Profit/Loss	_____
Visit customers on location	_____
Seek opportunities to expand draw area	_____
Develop strategic relationships within industry	_____

- iv. Please rate in each of the blanks in the column how certain you are you can exercise or develop the needed skills to accomplish the tasks of the job.

Rate your degree of confidence by recording a number from 0 to 10 using the scale below:

0	1	2	3	4	5	6	7	8	9	10
Cannot do at all					Moderately can do					Highly certain can do

I believe I can:

Act as a team player	_____
Be organized on the job	_____
Effectively communicate between people	_____
Negotiate with those I do business with	_____
Successfully sell goods and services	_____
Manage conflict	_____
Accurately communicate via written word	_____
Accurately communicate verbally	_____

Effectively use a computer to accomplish my tasks \_\_\_\_\_

- v. Based on the job description above, how likely are you to apply for this position? *One (1) being extremely unlikely and five (5) being extremely likely.*

1      2      3      4      5

- vi. Based on your current education level, how qualified do you feel to apply for this job? *One (1) being highly unqualified and five (5) being highly qualified.*

1      2      3      4      5

## 2. Commodity Research Analyst (Job 2)

Individual involved in extensive data collection and research, quantitative analysis and deductive reasoning skills while working on a variety of agricultural supply and demand issues. Candidate must be highly motivated, self-starter, reliable, organized and detail oriented. They will be the main link between commercial personnel and creating/maintaining balance sheets. The individual must have excellent communication skills as this role is visible throughout the organization and will be communicating information both written and verbally amongst all [company] Commercial groups, [company] Research Team and Risk Management.

### Primary Duties Include:

- \*Learn the [company] Research methodology and interconnectedness with the Global Research process and Commercial/Risk Management Groups
- \*Responsible for maintaining U.S. grain, oilseed and oilseed products and demand database
- \*Involvement on the crop production team and assist with data collection, modeling, analysis, maintaining and reporting the results of crop progress and production
- \*Responsible for maintaining database for various macro-economic data
- \*Being able to pull data from various sources and create a comprehensive package to present to a wider audience
- \*Create and lead product line and risk meetings. Facilitate discussion during the meetings, challenge opinions and summarize results
- \*Create and edit various [company] Research reports to internal commercial and risk groups
- \*Make supply/demand presentations to internal and external commercial personnel as well as senior management on an as-needed basis
- \*Participate in various projects as needed by [company] management
- \*Perform other duties as assigned

### Qualifications:

- \*Strong verbal and written communication skills and the ability to develop rapport and credibility with relevant trading, research, and management groups in a complex international organization
- \*Strong problem-solving skills, ability to think analytically and learn quickly
- \*Highly motivated and can work individually or in a team environment under tight deadlines
- \*Experience in achieving results in a matrix environment
- \*Detail-oriented and have the ability to multi-task
- \*Highly developed computer skills with Microsoft Office
- \*Strong written communication skills presenting results to a wide audience

- i. Applicants to this entry-level position must have a collegiate level education in a business-related field.  
Please rate in each of the blanks in the column how certain you are you can complete the correlating job responsibility based on your education obtained through AGEC 3373.

Rate your degree of confidence by recording a number from 0 to 10 using the scale below:

0	1	2	3	4	5	6	7	8	9	10
Cannot do at all					Moderately can do					Highly certain can do

Maintaining products and demand database	_____
Assist with data collection, modeling and analysis of industry progress and production	_____
Maintain database with macroeconomic data	_____
Lead product line and risk meetings	_____
Work with other company groups to determine supply and demand needs for the organization	_____

- ii. Applicants to this entry-level position must have a collegiate level education in a business-related field.  
Please rate in each of the blanks in the column how certain you are you can complete the correlating job responsibility based on your education obtained through ECON 2023.

Rate your degree of confidence by recording a number from 0 to 10 using the scale below:

0	1	2	3	4	5	6	7	8	9	10
Cannot do at all					Moderately can do					Highly certain can do

Maintaining products and demand database	_____
Assist with data collection, modeling and analysis of industry progress and production	_____
Maintain database with macroeconomic data	_____
Lead product line and risk meetings	_____
Work with other company groups to determine supply and demand needs for the organization	_____

- iii. Applicants to this entry-level position must have a collegiate level education in a business-related field.

Please rate in each of the blanks in the column how certain you are you can complete the correlating job responsibility based on your education obtained through FINN 3623.

Rate your degree of confidence by recording a number from 0 to 10 using the scale below:

0	1	2	3	4	5	6	7	8	9	10
Cannot do at all					Moderately can do					Highly certain can do

Maintaining products and demand database	_____
Assist with data collection, modeling and analysis of industry progress and production	_____
Maintain database with macroeconomic data	_____
Lead product line and risk meetings	_____
Work with other company groups to determine supply and demand needs for the organization	_____

- iv. Please rate in each of the blanks in the column how confident you are in your ability to exercise or develop the needed skills to accomplish the tasks of the job.

Rate your degree of confidence by recording a number from 0 to 10 using the scale below:

0	1	2	3	4	5	6	7	8	9	10
Cannot do at all					Moderately can do					Highly certain can do

I believe I can:

Use deductive reasoning to solve problems	_____
Be highly motivated and a self-starter	_____
Be organized on the job	_____
Be detail-oriented and analytical	_____
Accurately communicate via written word	_____
Accurately communicate verbally	_____
Work on my own or with a team	_____
Effectively use a computer to accomplish my tasks	_____
Facilitate discussion among my peers	_____

- v. Based on the job description above, how likely are you to apply for this position? *One (1) being extremely unlikely and five (5) being extremely likely.*



1      2      3      4      5

- vi. Based on your current education level, how qualified do you feel to apply for this job? *One (1) being highly unqualified and five (5) being highly qualified.*

1      2      3      4      5

### III. Section 3 - Video

*At this point, individuals assigned to Group A will proceed to Section 4. Individuals assigned to Group B will complete Section 3 before proceeding to Section 4.*

You are about to be presented with a visual job description for two (2) entry-level positions. You are qualified for these positions based on your completion of associated coursework that will have taught you about the fundamental basics of the job requirements. Please watch each visual job description carefully; you will then be asked a series of questions.

1. Grain Merchandiser (Job 1)

*Video will now play. The first scene (“snap”) will show a panoramic shot of the outdoor area of the facility. The person filming will verbally highlight the truck entrance, the elevator, and the office building. There will be a written caption as well. The second snap will show a panoramic shot of the indoor area of the office. The person filming will verbally highlight the desk arrangement of other merchandisers, the facility manager and the accounting area. There will be a written caption as well. The third snap will show the desk of a grain merchandiser and highlight the primary computer application used. There will be a written caption as well. The fourth snap will describe and show the primary communication method used to accomplish job tasks (the phone). The person filming will describe using the phone to sell goods, complete contracts and otherwise build relationships with peers and customers. The snap will have a caption to accompany it. The fifth and final snap will highlight the final steps of sending a contract out to a producer, highlighting printing it off, signing it and placing it in the mail. This snap will have a caption as well. This will conclude the video.*

- i. Please rate in each of the blanks in the column how confident you are in your ability to exercise or develop the needed skills to accomplish the tasks of the job.

Rate your degree of confidence by recording a number from 0 to 10 using the scale below:

0	1	2	3	4	5	6	7	8	9	10
Cannot do at all					Moderately can do					Highly certain can do

I believe I can:

- Act as a team player \_\_\_\_\_
- Be organized on the job \_\_\_\_\_
- Effectively communicate between people \_\_\_\_\_
- Negotiate with those I do business with \_\_\_\_\_
- Successfully sell goods and services \_\_\_\_\_
- Manage conflict \_\_\_\_\_
- Accurately communicate via written word \_\_\_\_\_
- Accurately communicate verbally \_\_\_\_\_
- Effectively use a computer to accomplish my tasks \_\_\_\_\_

- ii. Based on your perception of the location (outdoor environment) of the position, how would you rank your level of interest in the position? *One (1) being extremely uninterested and five (5) being extremely interested.*

1      2      3      4      5

- iii. Based on your perception of the office environment (indoor environment) of the position, how would you rank your level of interest in the position?  
*One (1) being extremely uninterested and five (5) being extremely interested.*

1      2      3      4      5

- iv. Based on your perception of the computer application most heavily used by position, how would you rank your level of interest in the position?  
*One (1) being extremely uninterested and five (5) being extremely interested.*

1      2      3      4      5

- v. Based on your perception of the primary methods of communication used by the position, how would you rank your level of interest in the position?  
*One (1) being extremely uninterested and five (5) being extremely interested.*

1      2      3      4      5

- vi. Based on the entire video presentation you watched, how likely are you to apply for this position?  
*One (1) being extremely unlikely and five (5) being extremely likely.*

1      2      3      4      5

2. Commodity Research Analyst (Job 2)

*Video will now play. The first scene (“snap”) will show a panoramic shot of the outdoor area of the office. The person filming will verbally highlight the employee parking, the urban environment and the office buildings. There will be a written caption as well. The second snap will show a panoramic shot of the indoor area of the office. The person filming will verbally highlight the desk arrangement of other merchandisers and the manager/VP. There will be a written caption as well. The third snap will show the desk of a commodity analyst and highlight the primary computer application used. There will be a written caption as well. The fourth snap will describe and show the primary communication method used to accomplish job tasks (email). The person filming will describe using email to communicate with other company groups, distribute reports and collect data. The snap will have a caption to accompany it. The fifth and final snap will highlight the final steps of running a daily report including the computer application used, the distribution list and the time of day this is done. This snap will have a caption as well. This will conclude the video.*

- i. Please rate in each of the blanks in the column how confident you are in your ability to exercise or develop the needed skills to accomplish the tasks of the job.

Rate your degree of confidence by recording a number from 0 to 10 using the scale below:

0	1	2	3	4	5	6	7	8	9	10
Cannot do at all					Moderately can do					Highly certain can do

I believe I can:

Use deductive reasoning to solve problems	_____
Be highly motivated and a self-starter	_____
Be organized on the job	_____
Be detail-oriented and analytical	_____
Accurately communicate via written word	_____
Accurately communicate verbally	_____
Work on my own or with a team	_____
Effectively use a computer to accomplish my tasks	_____
Facilitate discussion among my peers	_____

- ii. Based on your perception of the location (outdoor environment) of the position, how would you rank your level of interest in the position? *One (1) being extremely uninterested and five (5) being extremely interested.*

1      2      3      4      5

iii. Based on your perception of the office environment (indoor environment) of the position, how would you rank your level of interest in the position?  
*One (1) being extremely uninterested and five (5) being extremely interested.*

1      2      3      4      5

iv. Based on your perception of the computer application most heavily used by position, how would you rank your level of interest in the position?  
*One (1) being extremely uninterested and five (5) being extremely interested.*

1      2      3      4      5

v. Based on your perception of the primary methods of communication used by the position, how would you rank your level of interest in the position?  
*One (1) being extremely uninterested and five (5) being extremely interested.*

1      2      3      4      5

vi. Based on the entire video presentation you watched, how likely are you to apply for this position?  
*One (1) being extremely unlikely and five (5) being extremely likely.*

1      2      3      4      5

IV. Section 4 – Demographics

1. What is your gender?

Male                  Female

2. What was your classification as of the end of Spring 2017 semester?

Freshman                  Sophomore                  Junior                  Senior  
  
Graduate

3. What college are you enrolled in?

Dale Bumpers College of Agricultural, Food and Life Sciences  
Fay Jones School of Architecture and Design  
J. William Fulbright College of Arts and Sciences  
Sam M. Walton College of Business  
College of Education and Health Professions  
College of Engineering  
Global Campus  
Graduate School and International Education  
School of Law

4. What is your current declared major?

\_\_\_\_\_

5. Are you an honors student?

Yes                  No

6. Did you graduate from a rural or urban high school?

*Urban as defined by the U.S. Census Bureau of areas of 50,000 or more people (Urbanized Areas) as well as areas with at least 2,500 and less than 50,000 people (Urbanized Clusters). All areas outside of the urban defined regions are considered rural.*

Rural                  Urban

7. Upon graduation, do you anticipate moving to a rural or urban area?

*Urban as defined by the U.S. Census Bureau of areas of 50,000 or more people (Urbanized Areas) as well as areas with at least 2,500 and less than 50,000 people (Urbanized Clusters). All areas outside of the urban defined regions are considered rural.*

Rural      Urban

**That concludes the survey. Thank you, again, for your participation in this research project.**



## Appendix B: Job Description of Job 1

### Grain Merchandiser (Job 1)

This position is responsible for merchandising functions including, origination, risk management, profit/loss results, business development, and customer service. Assist in rail freight trading and capital asset recommendations. Must be a confident team player with excellent organizational, interpersonal skills, and ability to capitalize on win/win opportunities.

#### Primary Duties Include:

- \* Assist in managing a trading position, rail freight/fob trucking logistics, and collaborating with Joint Venture Regional Traders to maximize opportunities and address market risks.
- \* Advise customers/producers on risk management, while utilizing a proactive approach with the intent to secure stable returns in the commodities market.
- \* Generate profits, conduct market analysis, manage the profit/loss, manage logistics, and maintain efficiency from an operational standpoint.
- \* Participate in customer farm visits to provide solution alternatives to customers.
- \* Originate bushels while continually seeking opportunities to expand our origination draw area and market presence.
- \* Manage the risk and execution of sales/deliveries into outside markets.
- \* Seek, find, capture and maintain strategic relationships within the joint venture.
- \* Effectively communicate daily operational plans with in-house partners.

#### Qualifications:

- \*Strong sales and negotiation skills
  - \*Good computer skills with a working knowledge of Microsoft Office
  - \*Conflict management skills
  - \*Interpersonal skills
  - \*Strong written and verbal communication skills
- \*Travel Required: 5-10%

## Appendix C: Job Description of Job 2

### Commodity Research Analyst (Job 2)

Individual involved in extensive data collection and research, quantitative analysis and deductive reasoning skills while working on a variety of agricultural supply and demand issues. Candidate must be highly motivated, self-starter, reliable, organized and detail oriented. They will be the main link between commercial personnel and creating/maintaining balance sheets. The individual must have excellent communication skills as this role is visible throughout the organization and will be communicating information both written and verbally amongst all [company] Commercial groups, [company] Research Team and Risk Management.

#### Primary Duties Include:

- \*Learn the [company] Research methodology and interconnectedness with the Global Research process and Commercial/Risk Management Groups
- \*Responsible for maintaining U.S. grain, oilseed and oilseed products and demand database
- \*Involvement on the crop production team and assist with data collection, modeling, analysis, maintaining and reporting the results of crop progress and production
- \*Responsible for maintaining database for various macro-economic data
- \*Being able to pull data from various sources and create a comprehensive package to present to a wider audience
- \*Create and lead product line and risk meetings. Facilitate discussion during the meetings, challenge opinions and summarize results
- \*Create and edit various [company] Research reports to internal commercial and risk groups
- \*Make supply/demand presentations to internal and external commercial personnel as well as senior management on an as-needed basis
- \*Participate in various projects as needed by [company] management
- \*Perform other duties as assigned

#### Qualifications:

- \*Strong verbal and written communication skills and the ability to develop rapport and credibility with relevant trading, research, and management groups in a complex international organization
- \*Strong problem-solving skills, ability to think analytically and learn quickly
- \*Highly motivated and can work individually or in a team environment under tight deadlines
- \*Experience in achieving results in a matrix environment
- \*Detail-oriented and have the ability to multi-task
- \*Highly developed computer skills with Microsoft Office
- \*Strong written communication skills presenting results to a wide audience

## Appendix D: Research Compliance Protocol Approval Letter



Office of Research Compliance  
Institutional Review Board

July 11, 2017

### MEMORANDUM

TO: Hanan Southard  
Jill Rucker

FROM: Ro Windwalker  
IRB Coordinator

RE: PROJECT MODIFICATION

IRB Protocol #: 17-06-745

Protocol Title: *The Influence of Visual Storytelling on the Occupational Aspirations of Non-Agricultural Undergraduate Students*

Review Type:  EXEMPT  EXPEDITED  FULL IRB

Approved Project Period: Start Date: 07/07/2017 Expiration Date: 06/22/2018

Your request to modify the referenced protocol has been approved by the IRB. **This protocol is currently approved for 6,150 total participants.** If you wish to make any further modifications in the approved protocol, including enrolling more than this number, you must seek approval *prior to* implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

Please note that this approval does not extend the Approved Project Period. Should you wish to extend your project beyond the current expiration date, you must submit a request for continuation using the UAF IRB form "Continuing Review for IRB Approved Projects." The request should be sent to the IRB Coordinator, 109 MLKG Building.

For protocols requiring FULL IRB review, please submit your request at least one month prior to the current expiration date. (High-risk protocols may require even more time for approval.) For protocols requiring an EXPEDITED or EXEMPT review, submit your request at least two weeks prior to the current expiration date. Failure to obtain approval for a continuation *on or prior to* the currently approved expiration date will result in termination of the protocol and you will be required to submit a new protocol to the IRB before continuing the project. Data collected past the protocol expiration date may need to be eliminated from the dataset should you wish to publish. Only data collected under a currently approved protocol can be certified by the IRB for any purpose.

If you have questions or need any assistance from the IRB, please contact me at 109 MLKG Building, 5-2208, or [irb@uark.edu](mailto:irb@uark.edu).