

Exploring the Influences on Secondary Students' Interest in Agricultural Careers

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Introduction

The need for skilled workers in the agricultural industry continues to grow. Within the United States, approximately 59,400 agricultural openings are expected annually from 2020 to 2025; about 40% will go unfulfilled (Fernandez et al., 2020). Boosting career interest is one way for the agricultural industry to recruit youth for future careers. Various factors impact career interests and decision-making, including past experiences and support from family and friends (Esters & Bowen, 2005; Fizer, 2013; Lent et al., 2000). Given the multiple factors that influence career interest and the lack of qualitative research on agriculture careers, this study aims to explore the agriculture career interests of secondary students through focus groups.

Theoretical Framework

This study utilized Social Cognitive Career Theory (SCCT) to explore secondary students' agricultural career interests. SCCT seeks to understand how contextual influences affect career behavior and how a person's career path can result from multiple elements (Lent et al., 2000). SCCT takes a three-pronged approach where self-efficacy, outcome expectations, and personal goals all influence career choice (Lent et al., 2000). According to Lent et al. (2000), factors affecting career choice include personal inputs, background influences, learning experiences, and interests.

Methodology

To explore students' career interests in agriculture, we conducted focus groups with secondary students who participated in a lesson through [STEM program] during spring 2024. [STEM program] provides training and curriculum for teachers in [State] focusing on agriculture in STEM. This study is part of a larger project to evaluate the impact of [STEM program] lessons on students' agricultural career interests. This specific study was guided by a central question: How do students become interested in agriculture careers?

All educators involved with [STEM program] programming and teaching one of two specific [STEM program] units during the 2023-2024 school year were invited to participate in the study. Three teachers agreed to participate. School A is a rural school with a mix of 7th and 8th graders participating in a middle school science class. School B is located in a rural area with specific lessons taught in a high school agriculture class. School C is a school within a small city. The participants from School C were in a junior-level biochemistry class.

Nine students participated in the focus groups after completing a [STEM program] lesson. Three focus groups were conducted, and students were asked questions about their perception of agriculture, agricultural experiences, sources of career interest, and skills and careers from the lesson. Four participants identified as male, five identified as female, and they were in 7th through 12th grades. We used pseudonyms to maintain participant confidentiality.

The focus groups were video and audio recorded and transcribed using Zoom. We followed Saldaña's (2013) three-step process for the coding. To maintain internal and external validity, we sought alternative explanations in the data, maintained a reflexive practice, and participated in peer debriefing (Lincoln & Guba, 1985; Merriam & Tisdell, 2016). The participants were limited to those students who chose to participate and completed the proper steps for permission and consent, thereby constraining the study's scope. We recognize that the experiences of students who did not participate in the focus groups might differ from those included in the study.

Findings

Within the focus groups, three themes emerged regarding students' career interests. The main three themes were: source of career interest sources, career decision-making, and source of agricultural knowledge.

Theme 1: Sources of Career Interest

Participants indicated several sources of career interest, including school, skills, family, life experiences, and the media. For example, Reed shared, "I watched a YouTube video about a guy playing a video game about civil engineering, and it was pretty interesting, and I liked it." Some students were exposed to career options through family members and hands-on experience, which galvanized their career decisions. For example, Iris shared, "When I started off welding at the age of 10, I started off just welding fencing together and help my dad weld pipes together... it's just strongly attached me to do welding as a career path."

Theme 2: Career Preferences

Students indicated several preferences that factored into their future career decision-making. One student highlighted how he considered his abilities and perceptions of science, sharing that "chemistry and science haven't necessarily been my favorite classes" and, therefore, wouldn't consider a career that included those aspects. Many students shared additional preferences they thought of when considering future careers, including salary, work environment, and required skills.

Theme 3: Sources of Agricultural Knowledge

All students had unique connections to agriculture. These experiences included living or working on a farm, participating in 4-H and FFA, or caring for a small home garden. A few students indicated they were not directly involved in production agriculture. Lily shared, "I've always been around [agriculture], but I've never personally been like close to or like understood stuff like that." Additionally, Juniper shared: "Most of my family works in communications or healthcare education. So, like, I'm really one of the first ones to, like, be going for a career in agriculture."

Conclusions, Implications & Recommendations

This study aimed to explore how secondary students became interested in agricultural careers. The three themes included *sources of career interest*, *career preferences*, and *sources of agricultural knowledge*. These findings suggest that the SCCT constructs of background and environmental influences impact a student's career interest in agriculture (Lent et al., 2002). Participants considered their strengths when discussing potential careers, which ties to the self-efficacy construct within the SCCT model (Lent et al., 2002). While there was no immediate change in participants' career interests after one agriculturally focused lesson, participants did cite secondary coursework as an influence on career interests. Likewise, Lent et al. (2002) posit SCCT is a process that doesn't exist within a single moment. These findings echo previous research highlighting the range of influences on career interests in and out of agriculture (Cannon & Broyles, 2006; Ester & Bowens, 2005; Lent et al., 2002). We recommend continued research on agricultural career interests, including the impact of several agricultural-focused lessons over an extended period, and broader research to understand predictors of agricultural career interests to ensure a quality agricultural workforce.

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