Defining the Employability Skills of Agricultural Educators: A Quantitative Look into the Confidence Levels of Agricultural Educators on Their Personal Employability Skills

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Introduction, Purpose, and Objectives

According to the National Council for Agricultural Education, the mission of agricultural education is to "prepare students for successful careers and a lifetime of informed choices in the global agriculture, food, fiber and natural resources systems" (The Council, 2022, para. 3). With this mission, educators are expected to teach content in the agriculture, food and natural resources (AFNR) areas as well as instill employability skills into students to ensure they are prepared for the workforce. The responsibility to ensure a prepared workforce has largely fallen on CTE and agricultural education (Fristoe, 2017; Martinez, 2007; Symonds et al., 2011). Even with the importance of this longstanding goal, industry has reported that students exiting secondary education programs are not prepared for most entry-level positions (Casner-Lotto et al., 2006; Jaschick, 2015; McNamara, 2009; Robinson & Garton, 2008). In order to fulfill these expectations, teachers must first possess these skills themselves. Much of the published literature has assessed the traits and qualities of effective agricultural educators but none were found to have considered an agriculture teachers' personal employability skills thoroughly. The purpose of this study was to assess the perceptions of agricultural educators on their degree of confidence in which they possess certain employability skills. The following research objectives were assessed:

1.) Describe the degree of confidence that participating agricultural educators have in their personal employability skills using central tendencies.

Theoretical Framework

For the purpose of this study, we selected the Social Cognitive Career Theory (SCCT) for the underlying theoretical framework. The SCCT has been developed from Bandura's social cognitive theory, and adapted to "the processes of interest information, career selection, and performance" (Lent et al., 2002, p. 258). Relative to agricultural education, this theory does not solely consider the self-efficacy in pedagogical content knowledge but focuses on "four primary sources of information (or types of learning experience): (1) personal performance accomplishments, (2) vicarious learning, (3) social persuasion, and (4) physiological and affective states" (Lent et al., 2002, p. 262). These four sources of information are closely related to both student and educator standards upheld within agricultural education.

Methods

The research study conducted utilized Qualtrics to administer a demographics and self-efficacy assessment to agricultural science teachers across Alabama, Georgia, and Florida regarding their own personal employability skills. Each participant was asked to rank their confidence levels on their personal employability skills using a Likert-type scale, ranging from 1 = "Not Confident at All" to 5 = "Extremely Confident".

The instrument was developed using the Perkins Collaborative Resource Network Employability Skills Framework. The instrument reliability was assessed post hoc using Cronbach's alpha and no reliability issues were found. Overall, a list of 99 viable emails in Alabama, 185 viable emails in Georgia, and 115 viable emails in Florida was compiled (N = 399). We received a response rate of 18.30% (n = 73) with (n = 10) partial responses. This meets the 10% minimum for quality descriptive research (Gay & Diehl, 1992). Furthermore, a MANOVA was used to ascertain any statistical differences among early/late respondents and no differences were found (Lindner et al., 2001).

Results, Conclusions, and Recommendations

With regards to utilizing systems and technologies, agriculture teachers ranked their confidence levels relatively low, with only 50-70% feeling very confident or extremely confident in understanding, using, monitoring, and improving systems and technology. With an increased demand for content knowledge and technology in both the classroom and the industry, these numbers can be concerning.

At least 70% of respondents expressed that they were either very confident or extremely confident in area of general academic skills, which included reading, writing, math, and science. Agriculture teachers expressed the greatest amount of confidence in reading skills for this category with 93.1% stating they were very confident or extremely confident. The same teachers ranked themselves even higher in thought processes such as critical thinking, making sound decisions, and problem solving, where none of the respondents indicated no confidence. Published literature can be found regarding desirable traits for agricultural educators including good community relations, effective management, personal and student motivation (Roberts & Dyer, 2004). Organizational and managerial skills assessed teacher confidence in planning, organizing and managing time, money, and personnel. The overall confidence teachers indicated in these areas had a much wider range than the other categories of the survey with managing materials having the highest confidence levels at 86.6% of respondents stating that they were very confident or extremely confident in doing so. Their lowest confidence levels for this section of the survey can be found in time management skills at 63%.

Agriculture teacher competency in information processing, ranged in marked confidence, with 86.3% of respondents feeling very confident or extremely confident in using information but only 73.9% of the group feeling the same way about communicating the information. Other verbal and written communication skills were studied, and respondents indicated that they felt more comfortable (78.1%) in conveying information in writing than they did communicating information verbally. Other communication skills were marked above 75% for very confident or extreme confidence levels, indicating that teachers are less confident in communicating their content than they are in understanding their content, which could contribute to gaps in the classroom. Other Questions asked agricultural educators to rate responsibility, self-discipline, flexibility, working independently or with a team, their willingness to learn, personal integrity, professionalism, taking initiative, workplace attitude, sense of self-worth, professional growth, responding to customer needs, exercising leadership, negotiating resolve conflicts, and respecting individual differences. In this area, teachers felt a great deal of confidence in all areas, except for negotiating resolve conflicts where less than 70% of respondents felt very or extremely confident.

In conclusion, teachers need more continuous training on classroom and industry technology and communications for their classroom, FFA chapter, and community. More research should be done to first identify if the teachers that felt less confidence in these areas were traditionally or alternatively certified. Furthermore, information regarding industry-level training for teachers should be compiled in order to identify the source of this instructional gap.

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