An Interpretive Thematic Synthesis of Literature on the Implementation of Experiential Learning in Agricultural Education

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Introduction

Experiential learning has long been seen as an established and integrated practice in agricultural education. Still, there is an inadequate amount of evidence-based support for using experiential learning within agricultural education, as well as evidence that agricultural educators may not understand the experiential learning cycle (Baker et al., 2014; Baker & Robinson, 2016). Several researchers have studied agricultural educators' program implementation of supervised agricultural experiences (SAE) (Rank & Retallick, 2017), career development events (CDE) (Ewing, 2014), or the use of specific pedagogical strategies and methods (Mazurkewicz et al., 2012) as a focus to study agricultural educators use of experiential learning. Additionally, several authors have discussed models for implementation in agricultural education (Baker et al., 2012; Estepp & Norton, 2023; Knobloch, 2003; Roberts, 2006), but few authors have directly discussed agricultural educators current understanding and implementation of experiential learning (Shoulder & Myers, 2013; Smith & Rayfield, 2019). The purpose of this study was to synthesize current research findings regarding agricultural teachers' understanding and implementation of experiential learning within secondary and post-secondary institutions.

Research Questions

1. What does the literature from 2000-2023 state regarding agricultural educators' knowledge and understanding of the experiential learning model?
2. What does the literature currently state regarding agricultural educators' current implementation of the experiential learning model?

Conceptual Framework

Using a cognitive constructivist theoretical perspective, this study utilized Kolb's (1984) model of experiential learning, which specifically utilized the framework presented by Baker et al. (2012) (Roberts, 2006). The model makes it clear that embedded within each section of the three-circle model (Classroom/Laboratory Instruction, Leadership Development, and SAE) the experiential learning cycle is present and is purposefully planned to align with cognitive constructivist tenets. Kolb's (1984) model of experiential learning contains four distinct components of the experiential process that do not inherently follow a linear process: concrete experience (Direct Interaction: observed or through interaction), reflective observation (grasping information through apprehension), abstract conceptualization (grasping information through comprehension), and active experimentation (testing general rules or hypotheses through interaction with the phenomenon) (Roberts, 2006). Two processes were made clear in Kolb's (1984) model of experiential learning: grasping information via reflection and transforming information through intent and interaction (Roberts, 2006).

Methods

This study utilized a thematic synthesis of literature to gain an understanding of agricultural educators' knowledge of experiential learning and current practices so that recommendations for current and future agricultural educators may be made (Thomas & Harden, 2008). Thematic synthesis consists of three stages: line-by-line coding of the articles, iterative development of codes, and the development of analytical themes. Articles were found using Google Scholar, The Journal of Agricultural Education, The Journal of Agricultural Education and Extension, The Journal of Career and Technical Education, North American Colleges and Teachers of Agriculture (NACTA), conference proceedings from the American Association of Agricultural Educators (AAAE), and articles published within the Agricultural Education

Magazine (AEM). Search terms included experiential learning, reflection, SAE, experience, and hands-on. The inclusion criteria for the articles were a direct connection to school-based agricultural education (SBAE) and that the analysis or commentary must focus on experiential learning within SBAE. This allowed the use of articles focused on secondary or post-secondary samples to be included in the study, as well as incorporating articles that focused on any component of the three-circle model of agricultural education (classroom/laboratory instruction, SAEs, and The National FFA Organization/leadership development).

Results and Conclusions

Of the 29 articles identified in the search, several themes were established to inform researchers of current experiential learning practices found throughout the literature, which include both issues and recommendations. The most prevalent theme throughout the literature review was the fact that agricultural educators may not properly utilize the experiential learning model as defined by Kolb (1984) (Arnold et al., 2006; Shoulder & Myers, 2013). The implication that agricultural education has been seen as inherently hands-on is evident, yet the consistent echo that an activity that is hands-on or experience-based does not equate to experiential learning must be noted (Knobloch, 2003). Second, regarding the experiential learning cycle as defined by Kolb (1984), agriculture teachers' use of reflection seems to be a commonly underused component of the experiential learning cycle (Arnold et al., 2006; Mazurkewicz et al., 2012; Shoulder & Myers, 2013). It is clear from the literature that many agricultural educators use hands-on activities and lessons but do not purposefully design moments for reflection within the lessons (Ewing et al., 2014). This is surprising because much of the literature espouses designing moments of purposeful reflection (Baker et al., 2012; Rank & Retallick, 2017), the need for understanding reflection type (apprehension and comprehension), and its impact on the experiential learning cycle and the students overall understanding (Baker at el., 2014; DiBenedetto, 2017; Smith & Rayfield, 2019). Agricultural educators should understand the necessity to include purposefully designed moments of reflection, abstract conceptualization, and active experimentation in their lessons (Baker et al., 2012; Bradford et al., 2019). Third, the concrete experience stage is the most frequently used stage of the experiential learning cycle (Mazurkewicz et al., 2012; Shoulders and Myers, 2013). This means that agriculture teachers may adhere to the hands-on component of lesson design but are providing fewer opportunities for the other three stages.

Recommendations

In response to the themes developed above, agriculture teachers incorporate experiences into their programs but may not utilize the entire experiential learning cycle as defined by Kolb (1984). Research has shown that agriculture teachers feel high levels of stress regarding experiential learning within their programs and that the inclusion of SAEs in their programs has been declining (Rank & Retallick, 2017). There is a possible connection to a deficit in knowledge regarding experiential learning and its application within agricultural education programs (Arnold et al., 2006; DiBenedetto et al., 2017; Smith & Rayfield, 2019). Instructional practices within teacher-educator programs, experiential learning professional development opportunities that model experiential learning, and curricular materials that model proper experiential learning design should be developed.

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