Does It Take a Village? – An Examination of the Experiential Roles Played by Educators in Supporting Agriscience Fair Participants in Oklahoma

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Introduction

Agricultural education and academic content are naturally connected. "Agriculture provides meaningful context for hands-on, object-based, and other experiential learning that connects traditional academic subjects" (Stubbs & Myers, 2016). Integration of academic content into the agricultural education classroom, though challenging, is called for today. One of the most common solutions to overcoming the barriers of integration is collaboration (Roberts & Ball, 2009; Warnick & Thompson, 2007; Parr, Edwards, & Leising, 2009). Using project-based learning strategies, teachers may answer the call of heightened integration of core concepts into agricultural education as project-based learning may serve as "an application of concepts in agriculture education courses, and as the vehicle through which people learn" (Smith & Rayfield, 2016). One manifestation of project-based learning that has long been adopted for the science classroom is the science fair. Agricultural education has its own version of the time-tested science fair model called the National FFA Agriscience Fair. Keys to success include the investigation of a relevant issue, teacher supervision, and collaboration between "student researchers, teachers, and specialists in the field of study" (National FFA, 2016).

Conceptual and Theoretical Framework

The theoretical framework of this study is Experiential Learning Theory (Kolb, 2015), described as the creation of knowledge as being a result of experiences that have been grasped and transformed. According to Kolb (2015), this process occurs through four modes: concrete experience, reflective observation, abstract conceptualization, and active experimentation. The framework guiding how educators should direct and engage with students through experiential learning is the Educator Role Profile (ERP) which provides a dynamic, relational, and holistic approach to being an exceptional educator (Kolb, Kolb, Passarelli, & Sharma, 2014).

Purpose and Objectives

The purpose of this study is to describe what collaboration exists as agricultural education students prepare an agriscience fair project in Oklahoma, and to determine what experiential educator roles are filled by various collaborators during the experience. Four research questions guided this study including: *How many collaborators support each student participating in the Oklahoma FFA Agriscience Fair? What was the extent of collaboration by each individual educator or stakeholder? What experiential educator roles do collaborators and educators play in the student's agriscience fair project experience? What was the extent of student engagement with individuals serving in each of the educator roles during the development of the student project for the Oklahoma FFA Agriscience Fair?*

Methodology

This descriptive, survey design, study utilized a population of 201 secondary based agricultural education students participating in the Oklahoma FFA Agriscience Fair in April 2017. A census approach was used due to the small population size as recommended by Krejcie and Morgan (1970). Of the population, 186 students responded consistently for a response rate of 93% of the population. The instrument was researcher developed and was embedded in an evaluative questionnaire to be utilized for Oklahoma FFA program purposes.

Results/Findings

Addressing the first research question, the average number of collaborators assisting each agriscience fair student, including the agricultural educator, was 3.65 (*SD = 3.35).* In response to research question two, students reported that a total of ten unique collaborator types assisted them overall reporting a range of zero to ten collaborators. Of those collaborators, the agricultural educator *(M* = 47.68)*, parent and/or guardian *(M* = 17.65)*, and core science teacher *(M* = 12.42)* played the largest roles in guiding their agriscience fair experience where the mean represents the average percentage of assistance each collaborator provided. Surprisingly, collaborators such as professor at local university *(M* = 3.45)* and grandparent *(M* = .38)* were also identified as sources of assistance for some students.

Students identified the agricultural educator as the primary collaborator serving in all four roles: facilitator *(78.2%)*, expert *(51.1%)*, evaluator *(63.9%)*, and coach *(70.3%)*. A large percentage of students also noted an industry professional as the collaborator serving in the primary expert role *(17.0%)*. Parent and/or guardian *(10.3%)* and core teacher (*8.0%)* were also found to be critical collaborators meeting the evaluator role. These findings support research question three.

Research question four relates to the frequencies of students' self-reported engagement with each individual educator role throughout the agriscience fair experience. Students reported somewhat engaging with a collaborator who served in the facilitator role responding with neutral *(33.5%)* and agree *(42.1%)*. Students reported active engagement with a collaborator serving in the expert role responding agree *(33.5%)* and strongly agree *(30.5%)*. The evaluator role was strongly utilized with students responding agree *(34.5%)* and strongly agree *(45.4%)*. Finally, students actively engaged with collaborators in the role of coach responding agree *(34.2%)* and strongly agree *(43.4%)*.

Conclusions and Discussion

First, the agricultural educator was found to be the primary collaborator. Many students sought out specific, non-traditional collaborators, like agriculture industry professionals and core teachers, to fill certain educator roles. Students engaged with each of the educator roles during the project, but collaborators were more likely to emphasize the subject and action foci via support through the evaluator and coach roles. The learner and meaning foci are less evident as facilitator and expert roles were underutilized, demonstrating an imbalance similar to that found in Baker and Twenter (2016). Overall, the benefits of collaboration impact both student and teacher, and students are recognizing the importance of these partnerships.

Recommendations

Recommendations for research are centered on further studies around the concept of collaborative village building for the good of the student, extending into the community and home life of the student. Secondarily, is this village-building concept limited to students who are engaged in FFA career development events? As parents played such a large role in collaboration, what does this mean for students with a non-traditional home life? Research on how teachers and students facilitate these partnerships is warranted for the continued success of such projects.

Recommendations for practice begin with the empowerment of teachers to collaborate more extensively and effectively. Teachers must be ready to guide students using the facilitator and expert roles, in addition to the coach and evaluator roles. Resources for all collaborators, especially non-traditional collaborators, could prove beneficial.

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