Bridging the Mandate Gap: Creating an Innovative Online Platform to Guide Teachers in Supervising Foundational SAEs

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Introduction/Need for Innovation

The purpose of SBAE is to recruit and prepare students for entry into food, agricultural, natural resources, and human sciences (FANH) careers (Phipps, Osborne, Dyer, & Ball, 2008; Roberts & Ball, 2009). SAEs play a vital role by exposing students to FANH careers, creating interest in FANH career pathways, and building career readiness skills through hands-on, experiential, apprenticeship projects outside of the classroom. Unfortunately, there has been a decline in the delivery of student SAE projects, which is a concern because agriculture is an *at-risk* industry ripe for a future potential skill gap (Oklahoma Department of Commerce, 2005).

Though HB 3006 has sent a strong message that career exploration and preparation in FANH areas is important, researchers (Marx, Simonsen, & Kitchel, 2014; Ramsey & Edwards, 2011; Robinson & Haynes, 2011) have noted that without educational resources, FANH content support, and creative approaches to reach those not typically involved in the SAE portion of the course, teachers fail to implement quality SAE experiences (Rubenstein, Thoron, & Estepp, 2014). Further, it has been suggested that to reach students not typically involved in SAEs, teachers must employ creative and innovative approaches for implementation with this underrepresented group of students (Retallick, 2010). The National Council for Agricultural Education (2014) shared recently, "The SAE is a required component of a total Agricultural Education program and intended for every student, not just those from farming backgrounds or in rural communities" (p. 1).

The pedagogical approach utilized in this innovative approach is modeled after Kolb's (2015) experiential learning process. The theory of learning aligns well with agricultural education (Baker, Robinson, Kolb, 2013) primarily because of the use of SAE projects to provide context to students' learning experience. Students engage in concrete experiences, reflect on those experiences, are provided abstract concepts related to agriculture, and then apply those concepts to their personal project or SAE. Research has repeatedly demonstrated the effectiveness of this strategy. However, this approach is predicated on the fact that students truly do connect to a personal SAE. Currently, only approximately 20% of students maintain an authentic SAE program. This project would make it possible for those not usually engaged in traditional SAE programs to explore FANH careers through the experiential learning process tied to exploratory SAE projects designed through the grant. The projects are purposefully designed to not require a great deal of money, family support, extensive time, or an immersion in the agricultural industry.

How It Works

During the first phase of the project, industry leaders and agricultural educators met to identify key foundational SAE experiences relevant to agricultural careers. At the conclusion of that meeting, eight to ten foundational experiences were identified for each of the AFNR career pathways. Phase two involved the creation of the foundational modules. These modules were created to compliment the newly released SAE For All model put forth by the Council for Agricultural Education. Each of those modules are currently being uploaded into a website

platform that will house and guide students in developing foundational SAEs. This platform is user specific allowing students to login to a system, explore agricultural careers using career exploration programs built by the National FFA Organization, identify a foundational SAE interesting to them, collaborate with their teacher, and ultimately submit final SAE products to be assessed by the agricultural instructor. Phase three of the project will focus on the dissemination, evaluation, and refining of the foundational SAE website based on beta testing results. Another unique element to the program is a number of career interest and agricultural knowledge assessments that will provide the opportunity for longitudinal assessment of growth and development resulting from foundational SAEs. Teachers will be able to operate within the system to assess their students, provide feedback, and monitor progress.

Results to Date

To date the conceptual designs of the modules have been developed and are in website design and development. The website is expected to be completely functional by December of this year and beta testing will begin in January.

Future Plans

Phase three of the project will begin in January. The website will be shared with the original cohort of teachers for beta testing. Adjustments to the modules will be made based on feedback and then the system will be released to a larger audience for full implementation. Data and feedback will be collected for six additional months to allow for final modifications and ultimate release of the resource to teachers for nationwide implementation.

Costs

This USDA-NIFA project direct costs equaled $34,119. Approximately 22% of the funds were allocated to the support of a graduate research assistant (salary $3,333, benefits $870). Fifteen percent of the funds ($7,000) are devoted to travel. Almost ten percent of the funds ($4,250) were devoted to ITLE, where an agreement was reached to receive support in creating high quality and innovative educational resources. The funds devoted to ITLE are primarily to pay staff to create the interest videos, develop and brand the experience modules, and design and deliver the final resource website integral to the project. To weave evaluation throughout the project, an outside evaluator ($3,000) was secured to assist in data collection, management, and analysis. Finally, almost twenty percent of the budget ($8,300) was devoted to the key collaborators crucial to the creation of industry relevant and effective SAE resources. Each SBAE educator was provided a $500 stipend to complete the pilot program including all assessments and rounds of feedback. During the third year, each SBAE educator was provided $500 to travel to both the COLT district meeting and NAAE conference where the resources and their effectiveness would be disseminated to state and national audiences.

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