Manifestation of the Three-Circle Model in Rural Missouri High School Agriculture Programs: An Instrumental Case Study

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Introduction/Need for Research

Agricultural education program structure has long been associated with three integral, intra-curricular components: classroom instruction, SAE, and FFA as a model for agricultural education. (Dyer & Williams, 1997; Dailey et al, 2001; Barrick & Hughes, 1993; National Research Council, 1988; National FFA, 2023b; National Association of Agricultural Educators, 2023; Croom, 2008; SAE For All, n.d.; The Council, 2012). The three components of the three-circle model originated at different times throughout history and no evidence can be found to establish a date or an event that put the components into the current well-known diagram (Croom, 2008). Shoulders and Toland (2017) recommended that further research be conducted on the philosophical beliefs and practices of ag teachers concerning the three-circle model. Croom (2008) suggested more research be conducted to ensure all components are needed and to explore other models for agricultural education programs. The purpose of this instrumental case study was to describe how the three circle model manifests in rural, single-teacher secondary agriculture programs in the state of Missouri.

Theoretical Framework

The theoretical framework for this study is rooted in Symbolic Interactionism Theory, which explains that facts are based on symbols and meanings derived from human interactions. Symbols shape perceptions of the world, and actions are influenced by people's understandings of those symbols. Symbolic Interactionism Theory can trace its origin to the works of theorists such as Dewey, Cooley, Parks, and Mead (Aksan et al., 2009).

Methodology

We utilized an instrumental case study to understand and describe how the three-circle model manifests in rural, single-teacher agriculture programs. This approach can help provide insight into an issue; the case is of secondary interest (Stake, 2005). The method of sampling used for this IRB-approved research was purposeful criterion-based. The case, or bounded system, included Missouri agricultural education teachers who met the following criteria: traditionally certified, trained at the University from 2002 – 2010, single teacher departments, requirement of FFA membership for all students in program, and currently tenured teachers at their current districts. This method of sampling is consistent with the case study approach as outlined in Creswell and Poth (2018) and yielded two participants for this study. We conducted and recorded one-on-one, semi-structured interviews, as defined by Merriam (2009), relying on an interview protocol to help guide the conversation. Interviews lasted between 45 and 60 minutes and were conducted via Zoom following the conclusion of the school day. During the interview process, participants were also asked to draw the three-circle model depicting their personal programs. Finally, participants were invited to share program documents that might provide more insight about how they utilize the three-circle model. Trustworthiness and credibility were achieved using several methods recommended by Merriam (2009), including data source triangulation and rich, thick descriptions.

Findings

The case for this study included two male ag teachers, Mr. Jones, and Mr. Clark, who met the criteria for the case. Both teachers have earned master's degrees and have taught in their current schools for their entire careers. Thematic analysis of interviews, drawings, and documents

resulted in the following themes: a). Assigning grades with heavy reliance on classroom assignments, b). Experiencing ambiguity around SAE, and c). Using the three-circle model to justify agriculture program decisions.

Theme 1: Assigning grades with heavy emphasis on classroom assignments

While both teachers reported using the three-circle model to justify the requirement of FFA membership, the grading scale does not reflect the same interpretation of the model. Mr. Jones reported 60% of his students' grades came from classroom with 15% coming from FFA, 15% from SAE, and 10% from district required testing. Mr. Clark reported 90% of his students' grades came from classroom with less than 5% coming from SAE and only 100 points per semester for FFA. He said, "So percent wise, neither one of those are anywhere close to 33%.".

Theme 2: Experiencing ambiguity around SAE

During the interview process, participants were asked to draw what they perceived their program's three-circle model to look like and to share the drawing with the researchers. Both drew much smaller circles for SAE. Mr. Jones stated, "I just think SAE, as much as I'd love for it to be, is not truly the same size in three circle model." Although both teachers explained that all three circles are critical for the success of an agriculture program, neither requires their students to have an SAE. Both instructors indicated SAE to be the weakest component in their programs and explained that requiring an SAE is difficult due to finances, time, conflicts with sports and other activities, and lack of parent support. Mr. Clark explained that he wants his students to have an SAE but said he would not "run them off" if they did not have one.

Theme 3: Using the three-circle model to justify agriculture program decisions

Mr. Jones and Mr. Clark both use the model for program explanation to their boards of education, stakeholders, and parents/students. Both teachers expressed the model as being a "vital" and "tangible" symbol to share with others to help them understand an agricultural education program. Both participants use the integral relationship of the model to justify the requirement of FFA membership in their school.

Conclusions/Implications/Recommendations/Impact on profession

Although this research is limited by its small number of participants and lack of generalizability, insight from this case study could be transferable to other contexts. Croom (2008) suggested the three-circle model described the philosophy surrounding agricultural education in the early 20th century. Participants in this study attribute meaning to the three-circle model and recognize it as a symbol for the philosophical foundation of agricultural education programing. However, while they use the three-circle model to justify how their agriculture programs operate to school administrators and stakeholders, what occurs in their agriculture programs does not reflect the three equal-sized circles depicted in the model. While classwork receives heavy emphasis by both rural secondary agriculture teacher participants, they struggle to prioritize and integrate SAE into the model for all students. The profession should continue exploring the use of the three-circle model as a philosophical model for agricultural education. This study should be replicated to explore how the three-circle model manifests in larger, multi-teacher agriculture programs. Finally, research needs to be conducted to explore alternative program models as suggested by Croom (2008).

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