

**Identifying Areas of Difficulty in Teachers' Ability to Classify Supervised Agricultural Experiences into New SAE Categories**

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### Introduction/ Conceptual Framework

It has been documented by many that supervised agricultural experiences (SAE) are an essential component of agricultural education (Smith & Rayfield, 2016; Talbert, Vaughn, Croom, & Lee, 2007; Newcomb, McCracken, Warmbrod, & Whittington, 2004). Many have documented the lack of student participation in SAEs (Dyer & Osborne, 1995; Lewis, Rayfield, & Moore, 2012; Rank & Retallick, 2016). Recently the National Council for Agricultural Education (2017) has redefined SAE and presented new categories for adoption including Foundational and the following Immersion categories: Placement, Internship, Ownership, Entrepreneurship, Experimental Research, Analytical Research, Invention Research, School-Based Enterprise, and Service Learning.

Dyer and Osborne (1995) posited that changes in SAE had created uncertainties, resulting in a decline in participation. A lack of knowledge of SAE categories was identified as a possible cause of declining SAE participation by Steel (1997) and later by Wilson and Moore (2007). Roberts and Harlin (2007) suggested that project classification adds confusion and can impede creative development of projects. More recently, Lewis, Rayfield, and Moore (2012) found student knowledge of SAE categories was low, indicating teachers may not be teaching students about SAE categorization. Rubenstein and Thoron (2015) concluded that the agriculture teacher is the most important influencer in engaging students in their SAE program. With new changes to SAE categorization, can teachers classify SAEs correctly? If not, what are some of the common problems with classification using the new categories?

### Methodology

The purpose of this study was to identify areas of difficulty in classifying SAE scenarios using the new SAE categories. A descriptive study was conducted using purposive sampling of all agricultural education teachers ( $N = 260$ ) attending the state level FFA degree check in Texas. The population was selected because of their expertise in working with current SAE terminology as required by the degree check. A researcher designed questionnaire was used to survey the teachers. Participants were given four SAE scenarios and were asked to match them to the correct new SAE category. The following scenarios were used for the matching portion of the instrument: Scenario 1 A student shadows a worker at the local grain elevator to identify a possible career in the agriculture field, Scenario 2 A student surveys FFA members and nonmembers on agricultural literacy to compare knowledge levels of agricultural products, Scenario 3 A student builds a gooseneck trailer after school in the school shop. The project is financed by the school but will be exhibited by the student at the end of the year. The student is unpaid, and Scenario 4 A student purchases a steer that will be raised at his/her parent's facilities. The steer will be exhibited throughout the year and sold at market. Content and face validity were established by a panel of experts at in the area of SAE. A pilot test was conducted to establish instrument reliability with ( $n = 31$ ) participants not included in the study. A Cronbach's alpha of ( $\alpha = .91$ ) was calculated for the instrument. Dillman's tailored design method using five contacts was used to distribute the online survey through Qualtrics (Dillman, Smyth, & Christian, 2014). A response rate of 44.62% ( $n = 116$ ) was achieved. Descriptive statistics were calculated in Microsoft Excel using methods outlined by Lane (n.d.).

**Findings**

Demographics collected show a majority of the participants were male ( $n = 82, 70.7\%$ ) while ( $n = 34, 29.3\%$ ) were female. There was a wide range of teaching experience reported from one to over 30 years of teaching experience. From data collected from teachers matching SAE scenarios to the new SAE categories, Scenario 1 had the highest level of disagreement in which category was appropriate, with only ( $n = 38$ ) classifying it correctly. The greatest number of responses for classifying Scenario 1 was Immersion: Internship ( $n = 47$ ), which was incorrect. Scenario 2 had the greatest number identifying it correctly as Immersion: Analysis Research ( $n = 69$ ). The frequency each scenario was classified in each of the new SAE categories is shown in Table 1.

Table 1

*Frequency of Teacher Responses to Classifying SAE Scenarios into New SAE Categories*

SAE Category	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Foundational	38	9	3	5
Immersion: Internship	47	2	6	1
Immersion: Placement	20	2	40	3
Immersion: Ownership	1	1	1	46
Immersion: Entrepreneurship	2	0	3	60
Immersion: Experimental Research	3	27	2	0
Immersion: Analysis Research	1	69	1	1
Immersion: Invention Research	0	2	0	0
Immersion: School-Based Enterprise	0	2	59	0
Immersion: Service Learning	4	2	1	0
Total	116	116	116	116

**Conclusions, Implications, and Recommendations**

From the findings of this study, it can be concluded that teachers had the most difficulty classifying Scenario 1 correctly. This may indicate teachers do not have a good understanding of what a Foundational SAE is, or they may be unfamiliar with the new term. For Scenario 2 the majority understood that it was an Immersion: Research SAE, but there seemed to be some difficulty in distinguishing between Experimental and Analysis research. Scenario 3 saw divergence in Immersion: School-Based Enterprise and Immersion: Placement. This is probably because in the old SAE categories, Scenario 3 would most appropriately fall under Unpaid Placement. Scenario 4 had similar results in that teachers had difficulty in distinguishing Immersion: Ownership and Immersion: Entrepreneurship SAEs. Under the old classification system, Scenario 4 would have fallen under Entrepreneurship, however with the new classification system it should fall under Immersion: Ownership.

Teachers surveyed in this study seem to have the most difficulty in distinguishing between new categories that resulted from dividing an old category into multiple categories. For example, the old Entrepreneurship category was divided into Immersion: Ownership and Immersion: Entrepreneurship. Teachers are familiar with the old category name and do not seem to be able to differentiate new categories when the old category name is included. Increased efforts need to be made in educating teachers on new category definitions. A clear line of communication from decision making entities in the agricultural education community to the SBAE teacher needs to be established to reduce confusion concerning SAEs and increase awareness of changes.

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