

**The Product is in the Training: Describing the Deficiencies in Agricultural Teacher Preparation Programs as Reported by Agricultural Educators**

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## **Introduction, Purpose, and Objectives**

Over the past few decades, the agricultural education profession has suffered a teacher shortage crisis (Hainline et al., 2015; Solomonson & Retallick, 2018; Solomonson et al., 2021). In 2021, over 996 positions were open and there were 84 unfilled full-time positions (Smith et al., 2021). Furthermore, there were 789 graduates from a teacher preparation program and 586 of them entered the agricultural education classroom (Smith et al., 2021).

Traditionally, the post-secondary agricultural teacher preparation program is the most fruitful source of highly qualified educators to fill open positions. The agricultural education program typically trains students in various agricultural content areas, educational psychology, agricultural student organizations, educational law, etc (Roberts et al., 2020). While these areas of training are critically important, many pre-service teachers and early career educators report feeling unprepared for the classroom (Figland et al., 2019). Ensuring that graduates of agricultural teacher preparation programs feel confident in their ability to successfully enter the agricultural education profession is critical considering over 50% of educators leave within the first five years (Solomonson et al., 2019).

This study aimed to assess agricultural educator's level of preparation on various duties of a teacher when they were in the early stages of their career. The following research objectives were assessed:

- 1.) Evaluate the preparation levels of agricultural educators to implement various duties of an educator when they were in the early stages of their career.

## **Theoretical Framework**

The theoretical framework that guided this study is Bandura's (1994) self-efficacy theory. This theory defines self-efficacy as "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994, p. 1). Utilizing this theory as the foundation for this study depicts how the preparation levels of agricultural educators in the early career stages affect their beliefs about their capabilities therefore affect their performance in the role.

## **Methods**

The research study conducted utilized Qualtrics to administer a demographics and self-efficacy assessment to agricultural science teachers across [State A], [State B], and [State C] regarding the preparation levels of agricultural educators to implement various duties of an educator in the early stages of their career. The researchers utilized a descriptive correlational research design. Preparation levels of agricultural educators were evaluated utilizing a five-point Likert-type scale ranging from 1 = "Not Prepared at All" to 5 = "Extremely Prepared".

The instrument reliability was assessed post hoc using Cronbach's alpha and no reliability issues were found. A census was used to collect data which alleviated any sampling bias. A list of agricultural educators was developed, and it contained viable email addresses for

349 agricultural educators in [State A], 159 in [State B], 64 in [State C], and 503 in [State D] ( $N = 1,075$ ).

According to Gay and Diehl (1992), a response rate of 10% is necessary for quality descriptive research. In this study, a response rate of 11.26% ( $n = 121$ ) was achieved. Overall, partial responses that completed the survey portion but only part of the demographics portion were retained. There were ( $n = 109$ ) full responses and ( $n = 12$ ) partial responses. Furthermore, a MANOVA was used to ascertain any statistical differences among early/late respondents and no differences were found (Lindner et al., 2001).

### **Results, Conclusions, and Recommendations**

Overall, the participating agricultural educators rated themselves as somewhat prepared or moderately prepared on all items when they were in the early career stage. In the FFA/SAE section, SAE Grants ( $M = 1.79$ ,  $SD = .903$ ), Grants for FFA ( $M = 1.97$ ,  $SD = .948$ ), and the Agricultural Experience Tracker (AET) ( $M = 1.97$ ,  $SD = .948$ ) were rated as the lowest areas.

In the classroom management items, the lowest rated areas were implementing IEPs ( $M = 2.41$ ,  $SD = .963$ ), Implementing 504 plans ( $M = 2.37$ ,  $SD = 1.10$ ), and managing bullying situations ( $M = 2.60$ ,  $SD = 1.18$ ). Furthermore, the lowest ranked items in the instructional area are Utilizing Gamification as a Teaching Method ( $M = 2.24$ ,  $SD = 1.20$ ), Utilizing Independent Study as a Teaching Method ( $M = 2.87$ ,  $SD = 1.22$ ) and Utilizing Work Based Learning as a Teaching Method ( $M = 2.62$ ,  $SD = 1.14$ ).

Overall, the participating educators reported that they did not feel adequately prepared for implementing SAE-based programming into their agricultural education classroom., record keeping with the AET, writing grants, implementing special education mandates, and utilizing various teaching methods. This is consistent with other published literature that shows that teachers often struggle with these issues in the early career stage (Touchstone, 2015).

The integration of most items listed occurred on a either a daily, weekly, or monthly basis. Even the items that teachers felt unprepared for as early career educators were regularly implemented. Currently, approximately 50% of teachers leave the profession within their first five years. This could largely be due to their lack of confidence in their abilities to perform as a quality teacher.

Recommendations for future practice should include supporting early career educators in the areas that they feel unprepared such as special education mandate implementation, SAE programming in agricultural education, and integrating various teaching methods into their classroom. This responsibility will largely fall on teacher preparation programs because of their fruitfulness in producing educators. As teacher preparation programs evolve to adapt to a changing society, meeting the needs of early career educators will be increasingly vital.

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