A Multi-Year Analysis of the Decision to Become a Secondary Agricultural Science Teacher

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Introduction/Conceptual Framework

In the field of agricultural education, there is a critical shortage of secondary agricultural science teachers. According to the National FFA Organization (2017), the ongoing shortage of qualified secondary agricultural science teachers is the greatest challenge facing SBAE, now spanning for more than a century. The demand for secondary agricultural education teachers is exceeding the supply, depriving students of quality education in agriculture, leading to program shutdowns and closures. Myers et al., (2005) identified one of the most critical issues the profession of agricultural education is facing is a shortage of qualified individuals to fill current and future secondary agricultural education positions. Many of the vacant positions in agricultural education are caused by teacher attrition—those who decide to leave teaching for at least one year (Tippens et al., 2013). Teachers often get burnt out and take a break from teaching but end up not returning to the classroom. New job opportunities have also been shown to be a reason why some agricultural teachers leave or consider leaving the profession. According to a study that McIntosh et al., (2018) conducted, individuals that had considered leaving the profession indicated that the top reason for considering leaving was to pursue employment in the agricultural business/industry sector.

According to Smith and Rayfield (2017), student teaching is a high impact experience that prepares prospective teachers for the real-world and helps them develop self-efficacy. The student teaching experience requires individuals to put in long hours to get ample and quality opportunities to complete work/tasks in different areas, develop new skills, and obtain crucial knowledge in areas such as the categories analyzed in this study. Wentz (2001) proposed a three-phase model that depicts the student teaching process. The three steps of the process include: 1) orientation and observation, 2) assisting the cooperating teacher with activities and teaching, and 3) assuming responsibilities in the school program and taking on a full load of independent teaching (Wentz, 2001). Based on this concept, it can be concluded that a student teachers' workload and the number of hours worked should increase as they move through their field experience. Lambert et al., (2011), conducted a study on how agriculture teachers talk about and describe the time their job demands. It was concluded that all the teachers in the study reported working well over a 40-hour work week, every week. It has been suggested that high workloads student teachers are tasked with may be impacting their decision to teach due to early burnout (Fives et al., 2007). The purpose of this study was to determine the relationship between time spent in different aspects of student teaching and the decision to become a secondary agricultural science teacher.

Methods

This was a multi-year study that utilized data from the spring 2021 (n = 17) and spring 2022 (n = 12) student teaching cohorts at Texas Tech University. The student teachers in both cohorts were required to fill out weekly reports over a fifteen-week period using a Qualtrics questionnaire where they had to quantify time spent in different areas of their student teaching experience, based on an instrument developed by Torres and Ulmer (2007). The student teachers were required to report hours in thirteen different areas which included: 1) observing cooperating teacher, 2) conference time with cooperating teacher, 3) preparation for instruction, 4) classroom/laboratory teaching, 5) laboratory preparation and/or maintenance, 6) grading/scoring students' work, 7) administrative duties (program management), 8) professional activities

(meetings, in-service), 9) SAE observations and livestock shows, 10) local FFA activities, 11) district, area, and state FFA activities, 12) CDE preparation, and 13) adult education. In terms of determining teaching status, the researcher utilized the online AST (agriculture science teacher) directory on JudgingCard, which is an online platform that agricultural science teachers in Texas heavily utilize. The data from the two cohorts was entered into SPSS version 28.0 where statistical analysis was ran using point biserial correlations.

Findings

The purpose of this study was to determine the relationship between the hours spent in different areas of the student teaching experience and the decision to become a secondary agricultural science teacher. Observing cooperating teacher (r_{pb} = -.39), overall hours spent student teaching (r_{pb} = .39), district, area, and state FFA activities (r_{pb}= .33), and laboratory preparation and/or maintenance (r_{pb} = .32) were categories that showed a moderate relationship (Davis, 1971). According to Davis (1971), the remaining categories showed either low or negligible relationships. Table 1 displays a complete list of correlation coefficients for the time spent in different areas of the student teaching experience and the decision to become a secondary agricultural science teacher.

Table 1

Relationship Between Time Spent Student Teaching and Decision to Teach (N = 29)

Student Teaching Time Category	Teaching Decision (r_{pb})
Observing Cooperating Teacher	-.39
Overall Total Hours Spent Student Teaching	.39
FFA Activities – District, Area, and/or State Level	.33
Laboratory Preparation and/or Maintenance	.32
Classroom/Laboratory Teaching	.28
Grading/Scoring Students' Work	.28
Conference Time with Cooperating Teacher	.25
Administrative Duties – Program Management	-.22
Adult Education	.22
CDE Preparation	.17
Preparation for Instruction	.17
FFA Activities – Local Level	-.08
SAE Observations and Livestock Shows	.04
Professional Activities (Meetings, In-Service)	.00

Note. Decision to teach coding: Decision not to teach = 1, Decision to teach = 2.

Conclusions, Implications, and Recommendations

The findings from this study challenge the work of Fives et al., (2007) which suggests that the number of hours that student teachers work has an impact on their decision to become a teacher. From this study, it can be concluded that the number of hours that the student teachers in 2021 and 2022 cohorts from Texas Tech University spent in different areas of their student teaching experience did not have a high impact on their decision to become a secondary agricultural science teacher. Twenty-three out of the 29 student teachers within the two cohorts analyzed entered the profession as agricultural education teachers. We can recommend for student teachers to engage in as many activities and aspects of the student teaching experience that they can, regardless of the number of hours they would have to work. Our data suggests this does not deter anyone from teaching agricultural education.

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