

**From Pre-Service to Profession: Examining the Impact of Early
Professional Engagement on Teacher Retention**

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Introduction and Need for Research

The need for school-based agricultural education (SBAE) teachers has increased to a record national level, with 334 SBAE teachers in Minnesota and 14,756 SBAE teachers in the United States (Eck & Edwards, 2019; Foster et al., 2025; Smith et al., 2023). Minnesota has been listed as having a shortage of SBAE instructors since 2018 (US Department of Education, 2025; PELSB, 2023). To address the need for teachers, many SBAE support systems have developed programs to engage preservice teachers early, aiming to boost teacher preparation program completion and retention in teaching.

The Midwest Future Agriscience Teacher (FAST) Symposium began in 2019 as a pre-conference event for pre-service teachers held in conjunction with the Minnesota Association of Agricultural Educators' winter conference. Designed for students enrolled in Midwest agricultural education teacher preparation programs, FAST is promoted through university staff. For a nominal fee, attendees receive conference housing, state and National organization membership, and a significant registration discount for the full two-day winter conference. Six cohorts have attended FAST and now completed licensure programs; it is time to evaluate the short and long-term impacts of program participation.

Theoretical Framework

Learning is social. Communities of practice unite individuals with shared interests, helping newcomers develop knowledge and skills through active participation (Lave & Wenger, 1991). Wenger (1998) describes community as the social design in which our "membership in a community of practice translates into an identity as a form of competence" (p. 153). These communities shape our actions, identities, and interpretations (Wenger, 1998). We applied Wenger's (1998) framework to create an experience where pre-service teachers engage in professional practices, connect with peers and mentors, and shape their identities as SBAE teachers. Strengthening SBAE communities of practice, through initiatives such as this, can provide a safe space to explore challenges.

Methodology

Utilizing Wenger's (1998) social learning theory to explore how pre-service teachers learn about becoming an SBAE teacher, this study aimed to assess the effects of involvement in the (FAST) Symposium. The following research questions served as a guide for this study:

1. Does participation in the FAST Symposium affect retention rates of graduates into the SBAE profession upon graduation?
2. Does participation in the FAST Symposium affect short-term teacher retention rates in SBAE?

When registering for FAST, students provided their name, gender, university in which they were enrolled, and anticipated graduation date. Researchers compiled additional data from 2019 to 2024 from FAST program participants, university commencement programs, and annual teacher directories in participating states. Graduation status was confirmed by faculty at participating institutions. Based on the graduation date and annual employment data, researchers calculated if participants entered the SBAE profession upon graduation and if they were retained in the profession.

Results and Findings

Over seven years of the FAST Symposium, 161 unique pre-service students participated. This study focuses on the 113 who have graduated. Students attended FAST for up to three years, averaging 1.3 years. Participants came from six universities across four states, with 69 (58.2%) from in-state institutions and 44 (41.8%) from out-of-state. Of the 113 graduates, 28 (24.8%) were male and 85 (75.2%) were female.

We evaluated whether graduates of an agricultural education teacher preparation program were more likely to enter and persist in SBAE teaching. Using annual teacher directories, participants were tracked for entry into the profession and retention over time. Of the 113 FAST participants, 91 (80.5%) entered teaching after graduation and taught at least one year. Retention data show that of the 103 eligible graduates (those who could have taught for at least two years), 82 (79.6%) remained in the profession. By the third year, 65 of 75 eligible participants (86.7%) continued teaching. In the fourth year, 41 of 54 (75.9%) remained. By the fifth year, 21 of 33 (63.6%) continued, and in the sixth year, 7 of 14 (50.0%) were still teaching in SBAE.

Conclusions and Recommendations

This study provides an initial analysis of how pre-service programming influences entry into teaching. Findings show strong early retention among participants, though it declines over time. While this study focuses on a specific experience, researchers acknowledge that various influences within communities of practice shape pre-service teachers. Further analysis is needed to compare participants with non-participants in terms of entry and long-term retention in SBAE and broader teaching trends. Qualitative research can offer deeper insights into pre-service teachers' experiences, helping to understand how programs like FAST impact teacher development. Examining specific elements of FAST may further clarify its role in preparing effective agricultural educators.

This study builds on previous research (Claflin et al., 2023, 2024) exploring Communities of Practice (Wenger, 1998) as a framework in agricultural education. A series of experiences help pre-service teachers transition into SBAE teaching, but further research is needed to understand how early-career professionals integrate into the agricultural education community. Conducting qualitative research provides valuable insights into the complex and context-dependent experiences of pre-service agricultural education teachers. By capturing the nuances of interactions, reflections, and engagement within communities of practice, qualitative approaches can reveal deeper understandings of how programs like FAST influence teacher development. Further qualitative inquiry could help uncover the specific elements of FAST that have the greatest impact, offering a richer, more comprehensive perspective on its role in shaping effective agricultural educators.

This study focused on FAST program participants, and future research should include those from Midwestern preparation programs who did not participate. Those supporting pre-service and early-career teachers should understand SBAE expectations, communicate them to new professionals, and foster support networks both within and beyond formal programs.

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