

**You can Lead a Horse to Water, but Will They Drink?
Pre-service Teachers' Evaluation of an Agriculture Literacy Seminar**

Josey M. Webb
PO Box 9745, Mississippi State, Mississippi 39762
jmw1552@msstate.edu

Allyson K. Moore
PO Box 9745, Mississippi State, Mississippi 39762
akm564@msstate.edu

Carley C. Morrison
PO Box 9745, Mississippi State, Mississippi 39762
(662) 325-0749
carley.c.morrison@msstate.edu

Stephanie M. Lemley
(662) 325-4367
sbennett@colled.msstate.edu

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Introduction

Agriculture has played a crucial role in the development of the United States, due to advancements in atomization, crop production, and the growing suburban areas, few people are directly rooted in agriculture. Since many people are typically not engaged in the field of agricultural production, it leads to a lack of familiarity with agriculture, causing a need for the public to understand agriculture in order to make informed decisions (Kovar & Ball, 2013; Pope, 1990). Because consumers are making decisions in policy, economics, and agriculture products, it is crucial for them to be agriculturally literate (Terry Jr. et al., 1996). Equipping today's youth on agriculture topics is important in changing perceptions of the agriculture industry and providing a better understanding of the integral role agriculture has. The work has begun by promoting agriculture integration into Mississippi State University pre-service teachers' education. Hosting seminars to show pre-service teachers how they can incorporate agriculture topics in core curriculum subjects such as Math, Science, ELA, and Social Studies is one step towards promoting change. Yet will these students actually use what they learned from the seminar in their future classrooms?

Methodology

An agricultural literacy seminar is offered to elementary and middle school pre-service teaching students in the College of Education at Mississippi State University. The four-hour seminar is conducted in person once a semester. The seminar proceeds as followed: (1) an introduction to agricultural literacy and its importance, (2) an ELA read-a-loud with related worksheet, and (3) agricultural literacy classroom activities. Each activity demonstrated is also included with lesson plans that follow the Mississippi education standards that teachers in Mississippi can access for free. Each demonstration in the seminar serves as an example to future teachers on how they can implement agriculture into their core class subjects.

The participants of the 2023 fall and spring seminars were provided with a post-seminar survey at the conclusion of the seminar. This survey asked their opinions of the seminar and how useful they perceived the information to be. In addition to this, the fall 2022 participants were followed up with after they completed their student teaching experience in the spring of 2023. These participants were given a survey to evaluate how well they incorporated the information from the seminar during their student teaching. The data from these surveys were used to determine pre-service teachers' initial perceptions of the seminar and their application of the seminars.

Results to Date

In the 2022 fall semester, 80 pre-service teachers ($N = 80$) participated in the seminar. From spring 2023 to fall 2023, 131 pre-service teachers ($N = 131$) participated in the seminar. Most of the respondents of this survey ($n = 104$) were female (93.3%; $n = 97$), of senior standing (93.3%; $n = 97$) and studying elementary education (96.2%; $n = 100$). The participants were preparing to teach an array of subjects, including Math, English-Language Arts, Science, Social Studies, etc., with almost half not specifying a particular subject area (47.1%; $n = 49$).

The pre-service teachers who responded to the post-seminar survey seemed to find the agricultural literacy seminar both informative and entertaining. 51.9% of the respondents ($n = 54$) found the seminar to be “Extremely” informative and 54.8% of the pre-service teachers ($n = 57$) thought that the seminar was “Extremely” entertaining. Interestingly, there seemed to be an increase of interest in including agricultural literacy in classrooms after attending the seminar. Before the seminar, only 26.9% of respondents “Strongly agreed” ($n = 28$) that they were interested in including agricultural literacy in their teaching, but after participating in the seminar, the number of respondents who “Strongly agreed” escalated to 57.7% ($n = 60$). When asked if they felt confident in teaching agricultural literacy lessons after attending the seminar, the participants largely responded back positively. However, a few participants felt that they were not necessarily ready to begin incorporating agricultural literacy. For example, one participant stated that they “would need some more practice and instruction before CONFIDENTLY teaching it”.

Of the 80 pre-service teachers who participated in the 2022 Fall semester seminar ($N = 80$), only 10 of them responded to our survey regarding their recent teaching experience ($n = 10$). When the pre-service teachers were asked if they discussed agricultural literacy with their cooperating teachers, 40% of them responded with “Definitely yes” ($n = 4$), 30% responded with “Probably yes” ($n = 3$), and 30% responded with “Might or might not” ($n = 3$). In connection with this, 70% of pre-service teachers were able to incorporate agricultural literacy during their student teaching ($n = 7$). However, 30% ($n = 3$) were unable to incorporate agricultural literacy, and when asked for a reason why, 66.7% ($n = 2$) stated that there was not enough time.

Future Plans/Advice to Others

Our future plans include reaching out to the 2023 spring and fall participants, after they have completed their student teaching, to assess the impact of the seminar during their experiences. Since we struggled in receiving responses post teaching experience, we recommend more frequent check-ins such as sending a survey per quarter semester to receive an update. We will also continue hosting the seminar each semester for pre-service teachers. By looking at the results of the seminar, it can be concluded that pre-service teachers can become interested in teaching agricultural literacy in their future classes. They may also share the idea of teaching agricultural literacy during their student teaching. Our advice is to encourage the practice of conducting agricultural literacy seminars in other Colleges of Education to spark more interest and increase the teaching of agricultural literacy in schools. Moreover, additional support during the student teaching semester may increase students’ confidence in incorporating agricultural topics into their primary subject areas.

Costs & Resources

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References

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