Mississippi Agriculture in the Classroom Program: Through the Lens of Educators

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Introduction

There is an ever-growing gap of knowledge and trust between agricultural producers and consumers (Giovannucci, Scherr, Nierenberg, Hebebrand, Shapiro, Milder, & Wheeler, 2012). This divide in agricultural literacy and firsthand experience in the agricultural industry may affect consumer perceptions (Specht, McKim & Rutherford, 2014). Through agricultural literacy efforts, such as the Agriculture in the Classroom (AITC) program, there is a significant decrease in the gap between producers and consumers (Pense, Leising, Portillo & Igo, 2005).

Through AITC, educators receive agricultural literacy materials from the local County Agricultural Literacy Coordinator or the local Farm Bureau offices, free of charge or available online, (National Agriculture in the Classroom, 2018). The agricultural industry provides real-life contexts for students to engage in experiential learning and apply what they learn in science, math, social studies, and language arts (Knobloch, 2008). Although research shows that agricultural concepts should be integrated into classroom instruction, there are several factors why teachers do not choose to integrate this subject into curricula such as being uncomfortable with the content (Moore, 1987), and not seeing the benefits (Knobloch, Ball, & Allen, 2007). There is not a lack of curriculum resources to assist teachers in integrating agricultural concepts into their classrooms, rather the challenge is how to shape these components into a deliverable, student-centered curriculum that align with state academic standards and make them available to educators (Bellah & Dyer, 2006). The purpose of this study was to gain insight on Mississippi's AITC program so more informed decisions about improving the program can be made.

Conceptual Framework

The theoretical framework guiding this study was Kolb's Theory of Experiential Learning (1984). Kolb believed that experiential learning was a "holistic integrative perspective on learning that combines experience, perception, cognition, and behavior" and could be applied to any educational setting (Kolb & Kolb, 2012). Kolb's theory has four parts: concrete experience, reflective observation, abstract conceptualization, and active experimentation. The AITC program follows this model in that it gives students hands-on experiences that provide opportunities to gain knowledge, reflect on their learning, and draw meaningful conclusions tied to real-world agricultural topics.

Methodology

The study consisted of telephone interviews involving a total of eight participants and were conducted from October 4-25, 2017. All participants were purposively selected based on their experience with the AITC program or similar programming. Each interview lasted 15 minutes to one hour and were semi-structured around a set of open-ended questions pertaining to their experience with the AITC program. We asked planned questions flexibly, allowing room for participants' more unprompted descriptions and responses (Brinkmann, 2014). During the process, we recorded and transcribed the interviews. When analyzing the interview transcriptions, we looked for repetition, linguistic connectors, similarities, and differences amongst responses (Bernard, Wutich, & Ryan, 2017). In order to reduce the amount of text to analyze, significant key fragments from each interview were marked then further organized into categories based on common themes through triangulation (Denzin, 1978).

Results

Upon interpreting the interview transcriptions, we found seven common themes: Mississippi lack of commodities focus, state curriculum standard linkage, grade level inclusivity, online availability, varied activities and lesson structure, effective teacher trainings, and publicity and promotion. Several respondents stated they would like to see the program focus on Mississippi's top commodities, since "it is important for our students to learn about products grown in our state" (R3; R6; R8). In regards to program materials, respondent 4 stated if they aligned with the Mississippi department of education curriculum standards, "teachers would be more apt to use them." In addition to making all program materials available online, all respondents agreed that there should be lessons appropriate for every grade level with varied lengths and structure. Finally, respondent 2 said that teacher trainings should "take place regularly in various locations around the state and give teachers the confidence to use program materials."

Conclusions

Previous research has shown that agricultural concepts should be taught to students (Pense et al., 2005), and this study found that educators feel it is important. Although the AITC program exists for this purpose (National Agriculture in the Classroom, 2018), program materials do not match the wants and needs of Mississippi's teachers. The AITC program has the potential to integrate agriculture into core subjects (Knobloch, 2008), but it fails to correspond with state curriculum standards, so teachers are not using the program materials. According to Moore (1987), teachers must feel knowledgeable about teaching agricultural content before they do so, and participants of this study feel teachers need more quality training before feeling comfortable using AITC program materials. It is important that program materials be readily available to educators (Bellah & Dyer, 2006); however, they are not easily accessible.

Recommendations

It is recommended that the Mississippi AITC program undergo a series of updates to meet the needs of students and teachers. The program curriculum should be revised to include Mississippi's top commodities. Lessons of different lengths, methods/techniques, and grade level appropriateness should be available. Program materials should be accessible online so teachers can easily acquire them. In addition, teacher trainings should be restructured to expand the reach of the program and include more in-depth training. Further research should be conducted to expand the breadth of this study to include more teachers, including those of different grade levels, geographical location, and AITC experience. In addition, a comparative study should be conducted to investigate AITC programs in other states.

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