Who wants to bring agriculture into their classrooms? An online professional development program

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Introduction

The general population is often not involved with production agriculture and is, therefore, considered to be agriculturally illiterate which impairs their ability to make educated decisions regarding the industry (Kovar & Ball, 2013). And with students being at least three generations removed from the farm, it is important for us to consider the educator's role as they are key to a student's education (Reed Jr., 2019). When students have good teachers, "its impact amounts to an entire year's worth of learning" (Moe, 2011, p. 4). Therefore, in order to make agriculture literacy more prevalent in schools, the willingness and interest of the teachers must be taken into consideration. Consequently, we need to know what types of teachers are interested in bringing agriculture to their classrooms, and we should know why they are interested in doing so.

The Farm to Classroom Program is funded by the USDA NIFA and performed by the School of Human Sciences, with the College of Education, at Mississippi State University. The overall focus of the Farm to Classroom Program is to educate teachers on ways that they can bring agriculture into their classrooms. It is the mission of the project team to institute teacher professional development opportunities to train teachers on how to integrate agricultural education lessons into core curriculum areas. The purpose of this study was to describe the demographics and professional interests of our participating teachers in order to better meet the needs of teachers through future professional development opportunities.

Methodology

The free Farm to Classroom workshop is unique in the fact that it is a fully online educational course. Though the Canvas Learning Management System, participants complete the course at their own pace within the span of a month. This allows us to reach a broader group of educators. The course is made up of four different modules. Each module includes a short lesson on ways educators can bring agriculture into their core subjects, a discussion thread for participants to share what they have learned, and a short hands-on assignment. These lessons eventually lead up to a final assignment of participants creating their own agriculture-based lesson plan.

Advertisement for the workshop began a month in advance using the program's website and social media platforms. Email messages, containing a digital flyer and link to the application, were sent to public school superintendents and extension offices across the state. An incentive of two free CEUs was used to obtain more participation.

The application to participate in the workshop contained demographic questions such as where the participants currently teach and what subjects and age group they have taught. At the very beginning of the workshop, the participants were asked to take a pre-test. The instrument asked the participants questions regarding their interest and background in agricultural literacy. It is from these applications and tests, from the year 2020 to 2022 (three sessions), collected the data needed to describe the demographic information about the teachers who are interested in the program.

Results to Date

From 2020 to 2022 a population of 161 teachers (*N* = 161) have applied to the workshop, with 94.4% coming from across the state (*n* = 152), and 5.6% of teachers (*n* = 9) from other states. Most applicants taught elementary school, making up 45.3% (*n* = 73), with 31.7% teaching high school (*n* = 51), 14.3% teaching middle school *(n = 23)*, 2.5% taught all grade levels *(n = 4)*, and 6.2% specialized in other areas *(n = 10)*. Every core learning subject was represented among the applicants. 6.8% taught math subjects (*n* = 11), 8.1% taught science *(n* = 13), 0.6% taught social studies (*n* = 1), 11.8% taught ELA *(n* = 19), and 29.8% taught multiple or all these subject areas (*n* = 48). Surprisingly, 42.9% of teachers (*n* = 69) taught in other areas. Some of these areas included agriculture-based topics, but this group also included culinary arts, elementary art, special education, etc. In total, 111 individuals participated in the program (*N* = 111). 97 of the respondents reported their gender (*N* = 97), 86.6% of the respondents were female (*n* = 84), with 12.4% identified as male (*n* = 12) and 1% preferred not to say (*n* = 1).

Participating teachers were asked if they considered themselves to be agriculturally literate. Of the 97 respondents (*N* = 97), 6.1% replied with "Definitely Not" (*n* = 6), 17.5% replied with "Probably not" (*n* = 17), 33% replied with "Might/Might Not" (*n* = 32), 27.8% replied with "Probably yes" (*n* = 27), and 11.3% replied with "Definitely Yes" (*n* = 15). These numbers show that the majority of the participants are agriculturally illiterate and therefore do not have previous experience with production agriculture (Kovar & Ball, 2013).When asked why they wanted to take a course on agricultural literacy, a few participants stated simply that they were interested and wanted to learn more about it. However, several teachers responded with concern for their students. Overall, teachers seemed to want their students to know where their food comes from and how they can grow their own food to be self-sufficient and experience new opportunities.

Future Plans/Advice to Others

Our future plans include reaching out to past participants to assess the impact of agricultural literacy in their classrooms. We will assist those who reach out for help and continue to provide resources through the website and social media platforms. We will also continue to use the online Canvas platform. Our hope is to continue to reach a broader audience by expanding our social media to gain more interest. By looking at the results of the program, it can be concluded that a wide variety of educators are wanting to bring agriculture into their classrooms, but they often do not feel confident in doing so. Our advice is to encourage extension-based services to conduct their own online workshops for interested teachers within their area. When developing the workshop, make it valuable for teachers on all levels

Costs & Resources

This program is supported by the Agriculture and Food Research Initiative – Education and Workforce Development Program (2020 – 68018 - 1021637), from USDA, NIFA, who provided a total grant funding of 212,784 dollars for the expenses of this program, and we are in the third year of the four year program. Associated costs included creating a Canva Pro account to create visuals for social media, funding for a master-level graduate assistant, and partial summer funding for three faculty members. Resources included free access to Canvas for workshops, free advertising and promoting through social media, and advertising through email communication.

Reference

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