Ag Aware Pop-Ins: High-Impact Short Exposure Learning Experience to Enhance Agricultural Literacy in University Students

Courtney Cramer
Undergraduate Student
Texas A&M University
Courtney.cramer@tamu.edu

Theresa Pesl Murphrey
Professor
Texas A&M University
t-murphrey@tamu.edu

Avery Culbertson
Instructional Assistant Professor
Texas A&M University
avery.culbertson@ag.tamu.edu

Ag Aware Pop-Ins: High-Impact Short Exposure Learning Experience to Enhance Agricultural Literacy in University Students

Introduction/Need for Innovation

Agricultural illiteracy among adult populations is on the rise in America and globally, due in part to increasing urbanization and the separation of agricultural production from the large majority of adults in the workforce (Colbath & Morrish, 2010; Cosby et al., 2022). This is particularly alarming because the global population is expected to reach 9 billion by 2050, placing an ever-increasing demand on food production (Blackburn, 1999; Hodges, 2005; Johnson & Jorgenson, 2006; Sayers, 2011 as cited in Dale et al, 2017). To address the challenges facing the agricultural industry, Americans must possess at least a modest understanding of food production processes, natural resource ecosystems, and the socio-economic sustainability of communities ranging from urban to remote (Cosby et al. 2022). An increase in agricultural awareness has the potential to increase investment in technological development for the agricultural space, agricultural policies, and protection of global food safety (Specht et al., 2022). Less than 2% of the U.S. population works directly in the agricultural sector and presumably understands their respective role in the U.S. and even global food supply chains (Colbath & Morrish, 2010). With the rapidly expanding population, the U.S. needs to prioritize educational efforts about the importance of the agricultural industry as it relates to food safety and the need for innovative solutions to ag-industry problems (Specht et al., 2022). While many institutions offer agricultural education to America's youth, providing this education to adults is often overlooked (Dale et al., 2017). It is imperative to educate and produce greater numbers of dedicated agricultural professionals and leaders to innovate in areas of crop management, food supply chain, and other agricultural-related technologies to keep pace with population growth (Colbath & Morrish, 2010). Undergraduate students become more likely to pursue additional learning independently when exposed to a topic, regardless of their proposed area of study (Ditta, 2020). Our innovative idea increases adult agricultural literacy through a targeted activity that exposes undergraduate students to key agriculture concepts, thereby creating awareness of agriculture and planting the seeds for future learning opportunities.

How it Works

Our innovative idea encourages agricultural awareness by quickly introducing basic agricultural facts during a short burst of time used efficiently. After obtaining instructor permission, the innovative idea entitled "Ag Aware Pop-In" is implemented. The five-minute activity consists of a series of items: a slide show (5 slides), an audio/video clip (less than 5 minutes), posters (5 posters with agricultural facts), giveaways (5 giveaways connected to the facts on the posters), and a survey (5 questions). Our concept is to provide an impactful lesson in 5 minutes. The slide show consists of an overview of the "Ag Aware Pop In", a call to learn about agriculture, access to the selected video, and a link to the survey. Each of the five posters presents an agricultural fact in written form, accompanied by a visual, which engages visual and reading/writing learners. As students enter the classroom, the slide show plays, and five individuals holding the posters enter and position themselves throughout the classroom, where they remain for the 5-minute Pop-In. At one minute into the 5-minute session, the audio/video clip plays, highlighting an agricultural topic. While the audio/video clip is played, five distinct

tangible items related to the written quotes on the posters are randomly shared with students in the class (e.g., wheat bread for wheat, popcorn for corn, bandanas for cotton, etc.), further solidifying the connection between the aural, visual, written, and kinesthetic information (Collins, 2004). At the 4-minute mark, a 5-question survey (using a URL and QR Code) appears on the screen that invites students to provide feedback. All involved in the Pop-In immediately exit the room at the 5-minute mark. Acknowledging that everyone learns differently, the "Ag Aware Pop-In" incorporates the four major learning styles – aural, visual, reading/writing, and kinesthetic – by designing the short experience to encompass an element of each (Collins, 2004).

Results to Date

During the Fall 2025 semester, our "Ag Aware Pop-Ins" were piloted and reached 65 students from a variety of majors. Based on feedback, the activity was well received by students. Over 96% of the students chose to complete the survey, and most of the students reported the need to become more "ag aware." Of the 63 respondents, 60 (96%) reported that they were exposed to something they did not previously know about agriculture during the Ag Aware Pop-In. When asked to indicate if they were interested in learning more about agriculture, 55 (87%) of respondents responded favorably, reinforcing that even brief exposure to a concept inspires a desire to learn more (Ditta et al., 2020). Thirty (55%) students indicated interest in learning more about agriculture through college coursework. While facilitating, we visually observed active participation and engagement by students. While tangible giveaways were being dispensed, students were highly enthusiastic as evidenced through their body language and energy level when interacting with the individual distributing the giveaways.

Resources Needed

Implementation of "Ag Aware Pop-Ins" requires coordination with instructors as permission is required to conduct a Pop-In. Other required resources include presenting the audio/video clip at the front of class, designing and printing posters to display the written quotes, purchasing tangible items and attaching small versions of the poster quotes to them, and creating a short, engaging survey with a URL and QR code for sharing. Additionally, the ability to have individuals carry the posters or the ability to hang the posters in the room is needed. It is advisable to look for sponsorships for tangible giveaways and university printing centers for printing posters to reduce cost.

Future Plans

"Ag Aware Pop-Ins" is an innovative idea that is designed to generate agricultural awareness in a short amount of time, therefore making it a viable activity for a multitude of spaces, including formal and non-formal learning environments. We plan to conduct this awareness program in lectures across our college and develop a series of "Poster Sets" across agricultural topics. Ultimately, we will create a standardized kit of materials, including implementation instructions, fact posters, recommended tangibles, audio-video recording suggestions, and a QR-code survey, to enable others to implement "Ag Aware Pop-Ins." Adult education can benefit from high-impact, short-exposure experiences that maximize information retention by stimulating a person's innate desire to learn.

References

Colbath, S. A., & Morrish, D. G. (2010). What do college freshmen know about agriculture? An evaluation of agricultural literacy. *NACTA Journal*, *54*(3), 14–17. http://www.jstor.org/stable/nactajournal.54.3.14

Collins, J. (2004, September 1). Eduction techniques for lifelong learning. *Radio Graphics 24*(5). https://doi.org/10.1148/rg.245045020

Cosby, A., Manning, J., Power, D., & Harreveld, B. (2022). New Decade, Same Concerns: A Systematic Review of Agricultural Literacy of School Students. *Education Sciences*, *12*(4), 235. https://doi.org/10.3390/educsci12040235

Dale, C., Robinson, J. S., & Edwards, M. C. (2017). An assessment of the agricultural literacy of incoming freshmen at a land-grant university. *NACTA Journal*, *61*(1), 7–13. https://www.jstor.org/stable/90004098

Ditta, A. S., Strickland-Hughes, C. M., Cheung, C., & Wu, R. (2020). Exposure to information increases motivation to learn more. *Learning and Motivation.* https://doi.org/10.1016/j.lmot.2020.101668

Specht, A. R., McKim, B. R., & Rutherford, T. (2014). A little Learning is dangerous: The influence of agricultural literacy and experience on young people's perceptions of agricultural imagery. *Journal of Applied Communications, 98*(I3). https://doi.org/10.4148/1051-0834.1086