Understanding Communication Barriers Within the Agricultural Literacy Conversation.

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Introduction

According to Frick et al. (1991), "agricultural literacy can be described as a person possessing knowledge and understanding of the food and fiber system. An individual possessing such knowledge would be able to synthesize, analyze, and communicate basic information about agriculture" (p. 52). Throughout the history of agricultural literacy research, the primary focus has been on students and teachers (Doerfert, 2003; Kovar & Ball, 2013), with relatively few studies being conducted on adult agricultural literacy. These studies had spanned across the United States and covered varying age groups. Each study employed a different instrument for measuring agricultural literacy and many found distinct trends in agricultural literacy rates among specified age groups, demographics, and geographic locations. The purpose of this study was to identify historical agricultural literacy efforts, determine their value, and develop more effective methods of improving agricultural literacy moving forward.

Theoretical Framework

The premise of this study was formulated based on the theory of Social Constructivism (Vygotsky, 1978). Social constructivism focuses on the idea that an individual's social environment and culture determine how they develop and learn (Amineh & Asl, 2015). According to the theory, individuals construct their understanding of the world collaboratively with their social circles and cultural groups (Amineh & Asl, 2015). This idea applies to the methods that this study explored to improve agricultural literacy in the general public. Social interactions between agriculturalists and the general public, as well as implementation of cultural components that increase agricultural literacy would align with Vygotsky's theory.

Methods

This qualitative case study (Merriam, 1998) observed and analyzed the verbal elaborations of participants of a roundtable discussion. The study involved seven participants, each chosen for their relative experience and knowledge in various agricultural subjects. Each participant of the study was a resident of an agriculturally rich location. Of the seven participants, four had agricultural experience and backgrounds, and three had little or no exposure to agriculture prior to the event. The focus group consisted of four males and three females. The participants were arranged in a roundtable format and asked nine questions regarding agricultural literacy and their personal perceptions of agricultural communications. Responses were recorded and transcribed by the researchers. In addition to answering the questions, participants were encouraged to engage in discussions with others at the table and elaborate on the questions being presented. After the roundtable event, the data were analyzed using Glaser's Constant Comparative Method of Analysis (Glaser, 1965). The quality of this study was confirmed using Tracy's Criteria for Excellent Qualitative Research (Tracy, 2010).

Results

Analysis of the discussion between participants revealed 132 initial codes. These codes

were categorized into seven themes. The first theme to emerge was *Motivation*. Within this theme, five main motivators for people to learn about agriculture were discussed, including participants' personal interest in agriculture, participants' personal network and connections to individuals involved in agriculture, the connection between agriculture and participants' careers, the need for participants to understand agriculture in order to serve others around them, and the presence of agriculture in participants' communities. The next theme discovered was *The State of Agricultural Literacy*, which consisted of the complexities of agriculture, the current state of agricultural literacy of the public, the benefits of agriculture and agricultural literacy, and the various types of engagements available for individuals interested in agriculture. *Importance of Consumers* was the following theme, and it explored the impact that consumers have on agricultural markets and commodities, the big picture of agricultural production, the importance of consumer votes on agricultural legislation, and the seasonal components of agricultural production. Afterward, *Influences on Consumers* emerged, focusing on the quality of available agricultural research, individuals' personal connections with agriculture and agriculturalists, and the impact of social media and social influences on agricultural literacy. *Issues with Communication* emerged as well, involving conversations about the difficulties of agricultural literacy in adults, hesitancy to communicate and get involved in agriculture, and social media's potential harm to communication between producers and consumers. The largest theme to emerge, *Improving Communication*, came next, outlining potential solutions to disparities in agricultural literacy. These solutions included the use of entertainment media to teach the public about agriculture, the use of transparency on the part of agriculturalists when communicating with the public, simplification of agricultural terms during communication with the public, hands-on exposure opportunities for consumers, using experts to guide the public on tours, and finding agriculturalists willing to communicate with consumers about their operations. Finally, the smallest theme to emerge, *Agricultural Issues*, concluded the discussion as it mostly consisted of the participants' general views on various agricultural issues such as water, energy, the environment, the economy, regulations, and education.

Conclusions, Implications, Recommendations

Seven major themes emerged from the data analysis process. The data was reflective of the evolving nature of the discussion. The discussion began with the agriculturally experienced participants taking an educator role for the consumer participants and shifted to the consumers leading the discussion and the agricultural participants being active listeners to their perspectives. The study implied that disparities in agricultural literacy are more likely due to communication issues between producers and consumers than the consumers being uneducated (Dietrich, 2016; Rumble & Irani, 2016). Agricultural literacy research would benefit from more studies in adult agricultural literacy, as is evident by the few articles available on this subject compared to other age demographics (Doerfert, 2003; Kovar & Ball, 2013; Lewis, 2018). A similar study is recommended with adjustments being made to the size and demographics of the focus groups. Additionally, participants discussed multiple ideas to improve agricultural literacy, such as increased transparency and hands-on experiences for consumers. Continuing research in this area could serve as a useful guide in continuing the discussion to improve the connection between producers and consumers, and therefore, increase agricultural literacy outcomes.

References

Amineh, R. J., & Asl, H. D. (2015). Review of constructivism and social constructivism. *Journal of Social Sciences, Literature and Languages*, *1*(1), 1–8.

Dietrich, C. N. (2016). How Did We Get Here? Understanding Consumers' Attitudes Toward Modern Agriculture Practices (Doctoral dissertation, The Ohio State University).

Doerfert, D. L. (2003). Agricultural literacy: An assessment of research studies published within the agricultural education profession. In *Proceedings of the 22nd Annual Western Region Agricultural Education Research Conference, Portland* (Vol. 41).

Frick, M. J., Kahler, A. A., & Miller, W. W. (1991). A definition and concepts of agricultural literacy. *Journal of Agricultural Education*, *32*(2), 49–57. https://doi.org/10.5032/jae.1991.02049

Glaser, B. G. (1965). The constant comparative method of qualitative analysis. *Social Problems*, *12*(4), 436–445. https://doi.org/10.2307/798843

Kovar, K. A., & Ball, A. L. (2013). Two decades of agricultural literacy research: A synthesis of the literature. *Journal of Agricultural Education*, *54*(1), 167–178. https://doi.org/10.5032/jae.2013.01167

Lewis, M. L. (2018). Agricultural literacy among the generations: A national study (Doctoral dissertation, Tennessee State University).

Merriam, S. B. (1998). *Qualitative research and case study applications in education.* Jossey-Bass.

Rumble, J. N., & Irani, T. (2016). Opening the doors to agriculture: The effect of transparent communication on attitude. *Journal of Applied Communications, 100*(2), 57-72. https://doi.org/10.4148/1051-0834.1030

Tracy, S. J. (2010). Qualitative quality: Eight “big-tent” criteria for excellent qualitative research. *Qualitative Inquiry*, *16*(10), 837–851. https://doi.org/10.1177/1077800410383121

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Harvard University Press.