

**Application of Arts-Based Research Methods in Agricultural Education and
Communication**

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Introduction

Arts based research (ABR) is a qualitative research paradigm that includes methods that can be used to investigate past and current experiences, examine content knowledge, and allow for individual reflection (Foster, 2007). ABR includes visual, sound, literary, performing and new media art for uncovering participants' experiences and understanding (Wang et al., 2017). ABR methods extend beyond the constraints of one-way traditional communication formats to artistic ways to express meaning (Barone & Eisner, 2011). The use of ABR methods often indicates a shift from conventional research, such as surveys and interviews, to a more in-depth and richer examination of participants' shared, lived experiences and meaning-making through artistic works such as co-constructed written narratives, participatory video and photography, or drawings (Barone & Eisner, 2011; Borron, 2013). ABR allows participants to apply their own meaning and express creativity in their responses (Bagnoli, 2009).

How it works

The researchers for this innovative poster abstract are currently using ABR methods in two current studies in Agricultural Education and Agricultural Communication. Specifically, the studies utilized arts-based visual research. This sub-category of research visual ABR methods can include the creation of graphics, diagrams, drawings and more to explore research questions (Leavy, 2019). A potential area of difficulty identified when using ABR is found when studying publics at a distance. For example, Loizzo et al. (2018) indicated that follow up instructions would have been more easily communicated to participants in person than via other communication technologies.

Results to date

Agricultural Education Study:

In a recent agricultural education study, ABR methods were used to describe teachers' ideal mentor/mentee relationship. First year teachers were asked to draw their ideal mentor relationship, while more established teachers were asked to draw their ideal mentee relationship. Along with the ABR method of drawing, the teachers were asked to answer questions about activities and feelings that are part of the mentor/mentee relationship. This step allowed the participant to provide a context for the drawing. The four research questions guiding this study were (a) how do mentor and mentees depict an ideal mentor/mentee relationship (b) how do mentees describe an ideal mentor and (c) how do mentors describe an ideal mentor?

Agricultural Communication Study:

In a recent agricultural communication research study, ABR methods were used to gauge the accomplishment of the study's learning objectives. Students participated in an electronic field trip (EFT) experience to the Austin Cary Forest, where they learned about fire, plants and scientist's' roles in maintaining a healthy forest ecosystem. Two classrooms of fifth grade students who participated in the live stream of the EFT were asked to complete pre- and post-drawings describing what they believed a forest to look like. The five research questions guiding this study were how do students (a) define forest conservation; (b) describe prescribed burning; (c) explain how plant research (dog fennel) and animal research (rattle snakes) are important in forest ecosystem; (d) explain what is forestry and conservation; and (e) draw a research forest.

Preliminary results indicated the students' drawings depicted information about forests, prescribed burning, forestry careers, and science communication artifacts demonstrated in the EFT program.

For both studies, researchers will choose deductive codes for examining the drawings based on the learning objectives and content, of the study as well as other repeated drawing features that inductively emerged. Coding will be completed by a group of four graduate students and an inter-coder reliability established. Figure 1 displays an example of a student's art.

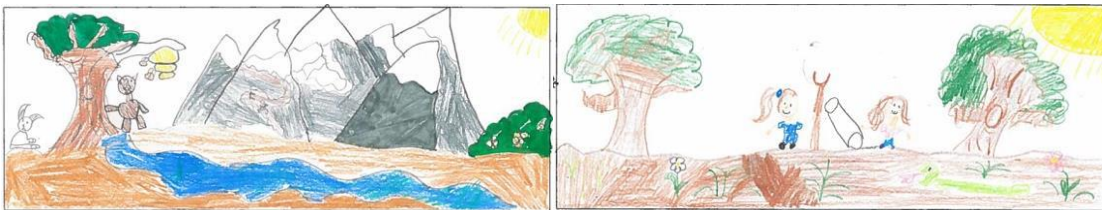


Figure 1. Examples of pre and post-drawings from the agricultural communications study.

Advice to others

Our advice is to continue using this research method to diversify studies within the agricultural education and communication disciplines. Ensure that your data collection methods are clear and streamlined so that the arts-based data is collected in an organized and timely manner. Following are future plans of how arts-based research can be used in agricultural education and communication.

Agricultural Education:

Future plans to conduct ABR method in agricultural education is with preservice teachers. Preservice teachers will be asked to draw the ideal agricultural educator, pre, during, and post of their academic program. These drawings will then be compared to find the perceptions of the ideal agriculture teacher at different stages throughout students' academic program.

Agricultural Communication:

Future agricultural communication studies that utilize ABR methods should consider trying videos, drawings, or podcasts for narrative inquiry to determine public perceptions of agriculture and natural resource issues such as biotechnology and climate changes. For example, another agricultural communication study underway examines public forest conservation and climate change perceptions using a virtual reality tour with 360-degree images of a research forest managed with prescribed-burning practices.

Resources Needed

ABR methods can be of relative low-cost depending on the approach that is taken. The cost and resources for ABR methods varies upon the chosen art method. As previously stated, arts-based research includes visual, sound, literary, performing and new media art (Wang et al., 2017). This can be translated into the A need exists for varying forms of art supplies such as, paper, pencils, markers, paint, canvases, instruments, digital recording devices, and cameras. Both studies mentioned in this abstract used printed handouts that provided room to draw and answer the survey questions, the participants were given pens, pencils, and markers to draw and fill in the survey. The studies maintained low costs when supplying paper and writing utensils.

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