Using Agricultural Literacy to Develop a Community of Practice for SBAE Students

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Introduction

A community of practice (CoP) is a group of individuals who engage in a shared experience (Cox, 2005). Where "ways of doing things, talking, beliefs, values, practice emerge in this mutual endeavor" (Holmes & Meyerhoff, 1999, p. 174). In School-Based Agricultural Education (SBAE) teacher programs, the development of a CoP is valuable because a community of practice bridges teaching theory and practice while promoting the development of a community for the individuals involved (Berggren & Soderlund, 2011; Holmes & Meyerhoff). Researchers have identified that upon graduation, many SBAE students still feel they lack the skills necessary to be successful (Garton & Chung, 1997). Additionally, due to the ongoing agricultural education teacher shortage crisis, teacher educator programs should invest in innovative programming within preservice programs that will contribute to teacher success in the short and long term (Eck & Michael, 2019). One way that the Program of Agricultural Education at Colorado State University (CSU) is exploring incorporating CoP into the SBAE teacher preparation program is through the use of our agricultural literacy outreach program, CAM's Ag Academy (CAA). It is hoped that providing experiences for SBAE students to engage in agricultural literacy work together will foster a CoP promoting practices central to success in the agricultural education profession.

Methodology of an Agricultural Literacy Community of Practice for SBAE Students

From June 2022 to February 2023, the CAA program facilitated two opportunities for SBAE students to become part of the core team to develop, deliver, and evaluate agricultural literacy programming. A community of practice develops within "three crucial dimensions; mutual engagement, a joint enterprise, and shared repertoire" (Holmes & Meyerhoff, 1999, p.175). The methodology and results of this innovative idea will be explained using the dimensions as a thematic framework for developing the agricultural literacy CoP.

Mutual engagement

The space of mutual engagement is considered the "basis for the relationships that make CoP's possible" (Holmes & Meyerhoff, 1999, p. 175). The CAA students regularly interacted through regular weekly meetings and group travel opportunities. From the start of the experiences-regular meetings were held to accomplish team business and conduct team-building activities. Additionally, these students were immersed in unfamiliar locations to deliver agricultural literacy experiences. Often these events would last for several long days, significantly expediting the relationship development of the individuals who were part of this core team.

Joint enterprise

The joint enterprise dimension explains the set of experiences that the members experience, which contributes to the CoP's common goal and their development as a member of the CoP. Using the experiential learning model, the core team members created original agricultural literacy lessons, took turns being "program leads" for each event, and conducted training for CSU and school-aged youth serving as guest educators in agricultural literacy programming. In

the examples above, students were active in teaching and learning, immersed in a cycle of experiences, reflection, thinking, and doing (Bergsteiner et al., 2010).

Results to Date

Shared repertoire

The third dimension essentially describes the results of the CoP (Holmes & Meyerhoff, 1999). As of February 2023, CAA has had the opportunity to engage 9 SBAE students. What began as a simple student hourly job to conduct agricultural literacy work transformed into an innovative, collaborative community of practice for SBAE students. At the end of their experiences, each student completed a post-survey which revealed that CAA positively impacted their knowledge and skills of practices relevant to teaching agriculture, including curriculum development, self-efficacy to teach, and effectively engaging K-12 students and their knowledge of agriculture. Additionally, students remarked that working alongside their peers significantly impacted their development as a professional, specifically in curriculum development, mentorship skills, and teaching self-efficacy. One student mentioned that the CAA experience contributed to developing an increased sense of belonging. Wenger (2010) explains that the critical features of this phase: Shared ways of doing things, communication, propagation of innovation, acknowledgment of member strengths, shared stories and inside jokes, and efficiency in addressing problems. Faculty observed that students went from acting as independent units to independently organizing group sessions to test curriculum; they would critically reflect on their own, as well as, evaluate each other's teaching, and develop innovative solutions as a team to overcome daily challenges. Students shared jokes and stories and shared a common language. Lastly, they would openly discuss and draw upon each other's strengths in moments of need.

Future plans

Future plans for this program are to consider it an essential part of the preservice program of SBAE students, including developing ways for more students to engage in CAA meaningfully. Additional future plans include collecting more data from SBAE students participating in CAA to determine medium and long-term outcomes. Advice to others includes implementing similar experiential learning opportunities that foster CoP development. These opportunities should be student-led to promote ownership and a sense of communal *wins* and *losses* during the execution of the experiences. Additionally, adequate training, debriefing, and reflection time are essential to the experience SBAE faculty must provide.

Costs

No direct costs are associated with this innovative idea of a CoP for SBAE students. However, costs were associated with the experiences provided. All students involved in the CAA program were hired as hourly student workers at $15.00/hour, 20-30 hours per week that they were hired. Transportation and lodging costs were also accrued at an average of $250.00 per day when travel was required. Lastly, each developed agricultural literacy lesson costs approximately $25.00, totaling $225.00 for all nine CAA students.

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