Where's the Expert? Understanding the Expertise Gap in Preservice Agricultural Education Teachers

Introduction

Many preservice agricultural education teachers voice a commitment to experiential learning practices (Baker, Robinson, & Kolb, 2012), but the profession is unsure whether their choice of pedagogical practice supports this stance. It has long been asserted agricultural education aligns with Experiential Learning Theory (Roberts & Ball, 2009). A previous study by Roberts, Baker, and Goosen (2016) found a lack of continuity between preservice teachers' articulated epistemological views and how those beliefs were operationalized. For this mixed methods study, the Educator Role Profile (ERP) self-assessment (Kolb, Kolb, Passarelli, & Sharma, 2014) was adapted as an observational instrument within a semi-structured interview to 1) determine the least common educator role preferred by preservice agricultural education teachers in an upper division teaching methods course at [state university], and 2) investigate preservice agricultural education teachers' lack of preference for the lowest ranked educator role. Addressing the American Association for Agricultural Education's National Research Agenda Priority Five: Efficient and Effective Agricultural Education Programs (Thoron, Myers, & Barrick, 2016), this study seeks to explain why an *expertise gap* exists among preservice teachers, with the subject expert role preferred least among the four educator roles.

Conceptual/Theoretical Framework

The ERP self-assessment was developed to provide understanding for how educators approach the learning process and is rooted in experiential learning theory (Kolb, 1984; Kolb et al., 2014). The ERP assessment aids educators in matching learning styles and the concepts of experiential learning theory into a model for engaging learners in all modes of the learning cycle (Kolb et al., 2014). The ERP identifies the most common educator role teachers adopt, influenced by the educational activities preferred and their relation to the four learning cycle modes of experiential learning (Kolb et al., 2014). The four educator roles adopted are coach, facilitator, standard setter/evaluator, and subject expert (Kolb et al., 2014). Just as experiential learning theory posits learners engage in all four modes of the learning cycle (Kolb, 1984), the ERP proposes teachers develop the flexibility to use all educator roles (Kolb et al., 2014). Identifying an educator's most common role through the ERP brings about self-awareness for one's own preferred teaching role and identifies opportunities for additional educator role adoption to improve the learning environment for learners (Kolb et al., 2014).

Methodology

A concurrent triangulation mixed methods approach was utilized for this study (Creswell, 2003), with the structured ERP self-assessment items comprising the quantitative strand and the non-structured probing interview questions comprising the qualitative strand. Semi-structured interviews facilitated the administration of an observational instrument containing the ERP self-assessment items, allowing for probing questions to better understand participant responses (Creswell, 2003). The population was a convenience sample (Privitera, 2017) of preservice agricultural education teachers enrolled in the agricultural education teaching methods course at [state university] during the fall 2017 term with intentions of completing their program student teaching requirements the following semester. Eleven interviews were recorded, transcribed, and analyzed to determine the preservice teachers' most common educator role and to identify key themes. Credibility, transferability, dependability, and confirmability principles were followed to

ensure rigorous and trustworthy results (Lincoln & Guba, 1985). The frequency distribution of preferred educator roles was calculated (Privitera, 2017). Qualitative data were analyzed using in vivo and pattern coding methods (Saldana, 2013). Researcher biases were identified and controlled through self-reflexivity, maintaining the integrity of data interpretation (Tracy, 2010).

Findings

The distribution of preservice teachers' most common preferred educator roles were: 72.73% (n=8) preferred the coach role, 9.09% (n=1) preferred facilitator, and 18.18% (n=2) preferred standard setter/evaluator. With zero preservice teachers preferring the expert role (0.00%), it was determined to be the least preferred educator role. This finding supports the conclusion of preservice teacher weakness in the subject expert role (Baker & Twenter, 2016).

After analysis of the interview transcription, the following themes regarding preservice teachers' conceptualization of the subject expert role emerged: *apprehensions, image of an expert, how learning occurs best, most valued knowledge type,* and *expectations of school-based agricultural educators*.

Conclusions/Implications/Recommendations

A goal of agricultural teacher education programs is to prepare students with the knowledge of teaching and learning to be effective teachers in the secondary classroom (Barrick & Garton, 2010; Myers & Dyer, 2004). According to experiential learning theory and the ERP, this can be accomplished when educators develop the ability to adopt all four educator roles and engage learners in all modes of the learning process (Kolb, 1984; Kolb et al., 2014). Results imply suggest an expertise gap, indicated by preservice teachers' consistent ranking of subject expert as the least preferred role (Baker & Twenter, 2016).

Highlighted by the *apprehensions* theme, preservice teachers hesitate to adopt the subject expert role because they hold a belief that agricultural educators cannot know everything about their subject content, and as a result, have a fear they cannot be expected to know everything. As made evident by the *image of an expert* theme, preservice teachers believe a right or wrong answer does not exist to everything and find the subject expert role to represent unengaging lecture-based teaching methods unable to apply and put content into practice for learners. The preservice teachers hold a firm belief that *learning occurs best* hands-on, focusing on practice and application rather than the acquisition of key concepts and principles in agriculture. When discussing a preference for types of knowledge, the preservice teachers emphasize real world and practical skills as more *valued knowledge* than content-based knowledge in agriculture. Although four themes representing the data explain why preservice teachers do not prefer the subject expert role, the *expectations of school-based agricultural educators* theme provides insight into why preservice teachers view the role as needed, even when it is not their preference. The preservice teachers believe agricultural educators should know the content they are teaching and must be able to demonstrate their knowledge for students to increase interest in learning. However, preservice teachers believe they cannot fulfill this expectation, lacking confidence in their own agricultural content-knowledge capacity.

Understanding why the expertise gap exists for preservice teachers is paramount to agricultural teacher educator programs. Strategies should be developed and studied to increase preservice teachers efficacy in subject expertise, such as those techniques recommended by Baker and Twenter (2016), to improve their flexibility within the subject expert role.

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