

An Analysis of Pre-Service Agricultural Educators' Self-Efficacy with Exceptional Learners

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Introduction

In 1975, the Education of Handicapped Children Act, now known as the Individuals with Disabilities Education Act (IDEA), was passed, which mandated that students with disabilities had access to free, appropriate public education (Mastropieri & Scruggs, 2018). Inclusion is still at the forefront of agricultural education today as the inclusion of diverse and non-traditional students has been noted in research priority four by the American Association of Agricultural Education (Roberts, Harder, & Brashears, 2016). More specifically, one of the research questions challenges the need for continually evolving delivery of educational programs in agriculture to meet the needs and interests of students. The myriad exceptional learners populating agricultural education classrooms today desire inclusion in all components of the program, including Supervised Agricultural Experiences (SAE).

Conceptual Framework

More than 13% of the nation's current school population is housed under the thirteen IDEA disability categories, attesting to the fact that large numbers of special needs students are now in agricultural education classrooms. However, working with exceptional students within agricultural education has posed itself as a serious challenge for many as numerous self-efficacy and competency studies have shown (Andreasen, Seevers, Dormody, & VanLeeuwen, 2007; Faulkner & Baggett, 2010; Kessell, Wingenbach, & Lawver, 2009; Mastropieri & Scruggs, 2018; Stair, Moore, Wilson, Croom, & Jayaratne, 2010). The primary recommendation was restructuring agricultural teacher preparation programs to better prepare pre-service educators for working with special needs students in their classrooms (Andreasen et al., 2007; Elbert & Baggett, 2003; Kessell et al., 2009; Stair et al., 2010).

Experiential learning has been analyzed for decades by many theorists, all characterized by similar tenets of what is known as Experiential Learning Theory, or ELT. Kolb dedicated his research agenda to develop his definition of ELT (Kolb, 1984; Kolb & Fry, 1975). Kolb and other professionals have conducted significant amounts of work in applying his ELT specifically to agricultural education and other areas of career and technical education (Kolb & Fry, 1975; Roberts, 2006). More hands-on preparation with exceptional students can be achieved through the implementation of experiential learning components within the teacher preparation program.

This study was part of a larger undergraduate honors dissertation related to pre-service agricultural education teachers' self-efficacy implementing the total program of agricultural education with exceptional learners. Therefore, the objective of this dimension of the study was to describe the self-efficacy of pre-service agricultural education teachers with respect to incorporating Supervised Agricultural Experiences for exceptional learners.

Methodology

A 22-question instrument was developed through an analysis of previous research regarding self-efficacy when working with exceptional learners (Elbert & Baggett, 2003; Kienast & Lovelace, 1981). Participants responded to each question using a Likert-type scale from one (not at all confident) to six (completely confident). The instrument was sent via email to each student enrolled in the Murray State University agricultural education program during spring 2019. This initial survey served as a voluntary pre-assessment. An intervention was implemented whereby

pre-service volunteers focused on working with a total of six exceptional learners over the course of a three-week long experience learning about caring for and showing market hogs. An identical voluntary post-assessment was administered via email with one additional question asking participants to describe any specific experiences working with exceptional students.

Results

The pre-assessment yielded responses from all 6 participants for a 100% response rate. From this sample, 66.7% (n=4) were male. Overall, females expressed a higher overall mean efficacy score of 4.93, while males reported a mean of 4.78. Of note from the set of pre-assessment questions, efficacy regarding understanding needs of exceptional learners ranked lowest with a mean of 4.17. Participants' perceived efficacy regarding their ability to conduct purposeful SAEs with exceptional learners yielded an overall mean of 5.33. When queried about previous university courses specific to diversity and inclusion of exceptional learners, 50% of participants stated they completed courses, but suggested that few strategies for working with exceptional learners were taught or that the course was ineffective. Higher self-efficacy scores were reported in the post-assessment, but the sample was significantly smaller (n=2). All post-assessment participants reported previous experience with exceptional learners. It can be speculated that pre-service students may have overstated their efficacy on these instruments as most shied away from the opportunity to work closely with exceptional learners and engage with the intervention portion of this study. Additionally, an analysis for relationships between variables was not conducted due to the overall small sample size from both assessments.

Conclusions

Based on the literature, pre-service agricultural educators are deficient in preparation and field experiences related to exceptional learners, and programming should be implemented to address this deficit. Interventions with an Experiential Learning Theory basis while allowing pre-service educators to work with exceptional learners directly will allow for impactful early field experiences, thus correlating to increased self-efficacy while working with exceptional students. While the sample was small, results still suggest increased self-efficacy levels amongst pre-service volunteers. The need for more emphasis on experiences with exceptional learners within coursework was also highlighted various times.

Implications & Recommendations

1. Because of the limited sample size, this study should be replicated to increase the number of participants in both the intervention and assessment.
2. When repeating this study, the intervention would benefit from pre-service students being required to take part in this early field experience and complete the assessment.
3. Further research and replication of this study amongst pre-service institutions and other practitioners would be beneficial to gauge the benefit of early field experiences with exceptional learners related to self-efficacy and teacher preparation in all three components of agricultural education.
4. Pre-service institutions and other practitioners should seek out partnerships with schools or 4-H clubs for exceptional learners to provide impactful early field experiences for pre-service educators.
5. Evaluation of university special education coursework curriculum is also suggested.

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