# Professional Development Needs of Mississippi School-Based Agricultural Education Instructors When Working with Students with Special Needs: A Pilot Study

Raegan Ramage
225 J. C. Miller Hall, Baton Rouge, LA, 70803
(662) 832-8117
rramag1@lsu.edu

Tyler Granberry
225 J. C. Miller Hall, Baton Rouge, LA, 70803
(903) 748-2565
tgranb1@lsu.edu

Dr. Joey Blackburn
129 J.C. Miller Hall, Baton Rouge, LA, 70803
(225) 578-7892
jjblackburn@lsu.edu

Dr. Kristin Stair
135 J. C. Miller Hall, Baton Rouge, LA, 70803
(225) 578-6128
kstair@lsu.edu

## Introduction

In 2018-2019, 14% of public education students were identified as having a special learning need (National Center for Education Statistics, 2020). Such an increase is especially relevant to School-based Agricultural Education (SBAE) classrooms as they are often seen as highly effective in serving students with special needs (Casale-Giannola, 2012). However, despite the fact that SBAE teachers may commonly serve students with special needs, they often report low confidence when working with this diverse population. This can be compounded by the lack of special education training included in many SBAE teacher preparation programs (Stair et al., 2010). In terms of professional development (PD) training once employed, Hoerst and Whittington (2009) found that 80% of agriculture teachers indicated the need for more training to implement teaching techniques related to inclusion. PD opportunities play a crucial role in teacher success when working with students with special needs (Alquarani & Gut, 2012). Teixeira and Edwards (2020) found that more needs to be done for special education students enrolled in SBAE and that PD programs may bridge the gap in teacher experience and training needs. However, in order for PD to be implemented effectively, it is essential to understand SBAE teacher's unique needs and develop targeted opportunities.

## Theoretical Framework

The Borich needs assessment model (1980) served as the framework for this study which presents a method to collect data surrounding educators' training while revealing areas of additional training needs. The Borich model includes a series of two-step responses, in which participants rank their perceived relevance and their perceived competency in specific need areas. Within the model, training needs are identified through "a discrepancy between an educational goal and trainee performance in relation to this goal" (Borich, 1980, p. 39). Understanding the discrepancy between relevance and competence can frame professional development needs within a specific content area and allow targeted programs to be developed that can meet specific training goals.

## Statement of Purpose

The purpose of this study was to identify which disability types were perceived as having the highest need for professional development training among SBAE instructors in Mississippi who responded to the online survey. In order to accomplish this purpose, the following objectives guided this study: (1) Identify the levels of perceived competence of Agriculture teachers in Mississippi related to teaching students with specific learning needs; (2) Identify the levels of perceived importance of Agriculture teachers in Mississippi related to teaching students with specific learning needs; (3) Describe the discrepancy between competence and importance of agriculture teachers in Mississippi when teaching students with specific learning needs.

## Methodology

Data for this study were collected as part of the pilot study component to a larger study being conducted to determine the PD needs of SBAE instructors in Louisiana when working with the

categories of disabilities identified by the Individuals with Disabilities in Education Act (2004). As part of the electronic survey, participants identified their perceived importance and competence when working with students who possess the following disability types: attention deficit disorder (ADHD), autism spectrum disorder, blindness or visually impaired, deaf or hearing impaired, emotional or behavioral disorders, intellectual disabilities, orthopedic impairments, other health impairments (i.e. epilepsy, anemia, diabetes, heart conditions, etc.), specific learning disabilities (i.e. dyslexia, dysgraphia, etc.), speech or language disabilities, and traumatic brain injury (TBI). Data were collected electronically using a Qualtrics survey instrument through a series of email solicitations to 139 SBAE instructors in Mississippi. Of those solicitations, 25 respondents completed the instrument for a response rate of 18%. Data were analyzed using SPSS version 26 and Microsoft Excel (McKim & Saucier, 2011) to determine the Mean Weight Discrepancy Score (MWDS) for each item.

## Findings

Overall, all special needs types were found to have at least some discrepancy. Table 1 depicts the five categories these teachers perceived to have the greatest need for PD. Working with students who are blind or visually impaired had a MWDS of 5.71, followed by working with deaf/hearing impaired students (*MWDS* = 5.43), Autism spectrum (*MWDS* = 4.86), TBI (*MWDS* = 4.84), and finally emotional or behavioral disorders (*MWDS* = 4.51).

Table 1

*Mean Weighted Discrepancy Scores for Professional Development Needs for Working with Students with Special Needs*

| | | | Importance | | Competence | |
|---|---|---|---|---|---|---|
| Rank | Type of Special Need | MWDS | *M* | *SD* | *M* | *SD* |
| 1 | Blindness/Visual Impairment | 5.71 | 3.48 | .92 | 1.84 | .99 |
| 2 | Deaf/Hearing Impairment | 5.43 | 3.48 | .87 | 1.92 | .86 |
| 3 | Autism Spectrum | 4.86 | 3.68 | .56 | 2.36 | .76 |
| 4 | Traumatic Brain Injury (TBI) | 4.84 | 3.64 | .64 | 1.92 | .91 |
| 5 | Emotional or Behavioral Disorder | 4.51 | 3.36 | .91 | 2.40 | .82 |

## Conclusion/Implications/Recommendations

Based on the analysis of the MWDS, SBAE study participants indicated a high need for PD opportunities across many disability types. Providing targeted PD focused on the methods of creating inclusive classrooms and presenting accommodations for students with the highest rated disabilities may serve as a starting point for professionals within Mississippi to provide training in areas that teachers need. The results of this study echo previous research that has identified the need for additional PD opportunities for SBAE instructors when working with students with special needs (Alquarani & Gut, 2012; Kessell et al., 2009; Stair et al., 2016; Stair et al., 2010). However, because this study was conducted with a small number of participants, it is recommended that a larger study be conducted to better understand the needs of teachers in Mississippi. Further research may allow for the development of targeted PD workshops and teacher trainings to increase teacher success within SBAE classroom.

## References

Alquraini, T., & Gut, D. (2012). Critical components of successful inclusion of students with severe disabilities: literature review. *In International Journal of Special Education, 27*(1), 42-59. https://eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=EJ979712

Borich, G. D. (1980). A needs assessment model for conducting follow-up studies. *Journal of Teacher Education, 31*(3), 39-42. https://doi.org/10.1177%2F002248718003100310

Casale-Giannola, D. (2012). Comparing inclusion in the secondary vocational and academic classrooms: strengths, needs, and recommendations. *American Secondary Education, 40*(2), 26-42. http://libezp.lib.lsu.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=edsjsr&AN=edsjsr.43694128&site=eds-live&scope=site&profile=eds-main

Hoerst, C., & Whittington, S. (2009). The current status of classroom inclusion activities of secondary agriculture teachers. *Journal of Agricultural Education, 50*(2), 38–51. https://doi.org/10.5032/jae.2009.02038

Individuals with Disabilities Education Act, Pub. L. No. 101-476, § 104 Stat. 1142 (2004). https://www.congress.gov/bill/108th-congress/house-bill/1350/text

Kessell, J., Wingenbach, G. J., Lawver, D. (2009) Relationships between special education confidence, knowledge, and selected demographics for agriculture education student teachers. *Journal of Agriculture Education, 50(*2), 52-61. https://doi.org/ 10.5032/jae.2009.02052

McKim, B. R., & Saucier, P. R. (2011). An Excel-based mean weighted discrepancy score calculator. *Journal of Extension, 49*(2). http://www.joe.org/joe/2011april/tt8.php

National Center for Education Statistics. (2020). *Students with disabilities.* Institute for Education Sciences. U.S. Department of Education. http://nces.ed.gov/pubs 2000/2000154.pdf.

Stair, K. S., Blackburn, J. J., Bunch, J. C., Blanchard, L., Cater, M., & Fox, J. (2016). Perceptions and educational strategies of Louisiana agriculture education teachers when working with students with special needs. *Journal of Youth Development, 11*(1). https://jyd.pitt.edu/ojs/jyd/article/view/433/417

Stair, K. S., Moore, G. E., Wilson. B., & Croom. B. (2010). Identifying confidence levels and instructional strategies of high school agriculture education teachers when working with students with special needs. *Journal of Agriculture Education. 51*(2), 90-101. https://doi.org/10.5032/jae.2010.02090

Teixeira, K. L., & Edwards, M. C., (2020). Teaching students with special needs in school-based agricultural education: A historical inquiry. *Journal of Research in Technical Careers. 4*(1), 75-91. https://digitalscholarship.unlv.edu/jrtc/vol/iss1/6