

Modifying Instruction for Learners with Exceptionalities: A Needs-Based, Andragogy-Centered, Professional Development Program

Bradley M. Coleman
University of Florida
PO Box 110540
Gainesville, FL 32608
352-392-0502
bradleycoleman@ufl.edu

Rachel E. Brown
University of Florida
PO Box 110540
Gainesville, FL 32608
352-392-0502
rbrown5@ufl.edu

Carla B. Jagger
University of Florida
PO Box 110540
Gainesville, FL 32608
352-294-1992
carlajagger@ufl.edu

J.C. Bunch
University of Florida
PO Box 110540
Gainesville, FL 32608
352-294-2226
bunchj@ufl.edu

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Introduction

A wealth of research has been conducted on the needs of school-based agricultural education (SBAE) teachers (DiBenedetto et al., 2018). One method in which teachers' needs can be addressed is via the delivery of professional development programs. However, for professional development programs to be effective, they should be informed by frequent needs assessments (Darling-Hammond et al., 2017). In a needs assessment of SBAE teachers conducted by Coleman et al. (2020), one of the highest-ranked professional development needs was modifying instruction for students with special needs. Other research was also congruent with this finding, evidencing that SBAE teachers consistently need further skill development in managing inclusive classrooms for students with special needs (DiBenedetto et al., 2018; Hoerst & Whittington, 2009; Thornton et al., 2020). Therefore, there is a need to design and implement an SBAE teacher professional development program that focuses on differentiating instruction for learners with exceptionalities in agricultural education settings. Further, this program should extend beyond the traditional "one-and-done" workshop approach frequently modeled by teacher professional development programs. Rather, the following recommendations from Garet et al. (2001) should be included in the structure of the program design: (a) extended duration, in contact hours and over time; (b) opportunities for collaboration, mentorship, and resource sharing; and (c) collective participation of teachers to share skills, experiences, and effective practices. Characteristics of *effective* professional development programs are often overlooked (Easterly & Myers, 2017; Garet et al., 2001; Shoulders & Myers, 2014). Therefore, while the design and delivery of a professional development program for teachers is not inherently innovative, a program planned to emphasize effective delivery practices, prioritize the content needs of participants, and utilize delivery practices applicable for adult learners *is* key to effective education (DiBenedetto et al., 2018; Desimone, 2009; Knowles et al., 2015). Reforming and improving agricultural education through effective professional development programs is directly aligned with research priority five of the *AAAE National Research Agenda*, efficient and effective agricultural education programs (Thoron et al., 2016).

How it Works

The following performance objectives directed this professional development program: (a) define differentiated instruction, (b) discuss implications for educators as a result of key legislation for students with exceptionalities, (c) determine appropriate strategies for differentiating instructional practices, (d) assess a total program of agricultural education and identify areas in need of instructional differentiation, and (e) evaluate scenarios where agricultural education instruction should be differentiated based on learner exceptionalities. The primary teaching methodology used to accomplish objectives a, b, and c was a lecture modified to include questioning and discussion. The use of a modified lecture encourages learners to be engaged in rich discussions about the content and allows them the opportunity to share their knowledge and experiences. This aligns directly with the andragogical principle by Knowles et al. (2015), which highlights the importance of tapping into adult learners' prior experiences. Additionally, to address objectives d and e, a problem-based learning approach was used. Within

this approach, problem-based scenarios in agricultural education contexts were presented and learners were instructed to develop potential solutions. Lastly, learners applied the knowledge they gained throughout the day by evaluating their own program. This practice follows the notion by Knowles et al. (2015) that adults are most ready to learn when the educational content is of immediate value. Therefore, participants assessed the components of their total SBAE program (classroom/lab, SAE, and FFA) for gaps in instructional differentiation and inclusivity to create a plan for addressing those gaps. The content of this program was delivered in one day. However, per the recommendations of Darling-Hammond et al. (2017) and Garet et al. (2001), informal peer-mentors were designated, and a minimum of two follow-up meetings to check progress and exchange ideas were conducted.

Results to Date

To date, this program has been implemented in three smaller-scale, virtual professional development sessions with eight Florida agriscience teachers and 15 preservice teachers. Due to the COVID-19 pandemic, there has been restricted opportunity for a full-scale, in-person implementation of this program. Thus far, it has been observed that participants have most enjoyed opportunities to share their previous experiences with exceptional learners, exchange ideas for modifying instruction, and discuss real-life contextual scenarios. These could be early indicators that this professional development program can be effective due to its needs-based nature and use of andragogical principles throughout program facilitation.

Future Plans

Following the COVID-19 pandemic, a full-scale, in-person implementation of this program should be conducted. As a new program, it should be evaluated for its effectiveness. A short-term assessment of the program should be conducted in two ways: a participant evaluation and a facilitator self-evaluation. A long-term program evaluation could include follow-up meetings with participants to assess how they have applied the knowledge and skills learned in their teaching practices. This could include having participants report the extent to which they have implemented their plan to address the instructional differentiation and the inclusion gaps they identified. Further, program participants could report how they have used instructional differentiation strategies in their classrooms and the academic progress of their students with exceptionalities. Findings from this program should then be shared with the profession to aid in addressing the immense need for agriscience teachers to modify instruction for learners with exceptionalities (Coleman et al., 2020; DiBenedetto et al., 2018; Hoerst & Whittington, 2009; Thornton et al., 2020).

Costs and Resources

There are no direct costs necessary to implement this program. However, indirect costs and resources associated with this program include faculty time, participant time, meeting space, and presentation technologies.

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