

Kansas agricultural educators' perceived importance and competence integrating special
education accommodations

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Abstract

School-based agricultural education (SBAE) has served students with special educational needs for decades. Opportunities for students with special needs to explore careers, increase employment rates, and improve learning potential can be provided through their participation in SBAE. This study examined Kansas agricultural educators' professional development needs related to special education importance and implementation abilities (i.e. competence). It also aimed to assess statistical differences of both the perceived importance and self-reported competence of a variety of demographic differences (i.e. gender, race, highest degree earned). The instrument, based on an instrument developed by Norris et al. (2025), utilized fourteen special education competencies needed for educators to effectively teach students with special needs. A census of agricultural educators Kansas ($N = 306$) was conducted with a response rate of 17% ($n = 53$). Results from this study indicated that although agricultural educators in Kansas recognize the importance of special education, they may feel unprepared to implement areas of special education effectively. There were no significant differences between the various demographic groups, which speaks to the need for training overall, not towards specific groups. Recommendations from these findings include more professional development for SBAE teachers to best accommodate special needs students and more preservice coursework to improve knowledge and competence to implement special education practices in their future classrooms.

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Introduction

Over the years, agricultural education has evolved from a farmer and rural people program into one that is more diverse, multicultural, inclusive, and mainstream (Falkner & Baggett, 2010). School-based agricultural education (SBAE) has served students with special needs for decades. Opportunities for students with special needs to explore careers, increase employment rates, and increase learning potential can be provided to students with special needs by SBAE (Norris et al., 2025). Lempert (2025) studied the growth of intellectually disabled students within the agricultural education setting and found that systematic support and practice can help these students master complex academic and vocational content. There is a need to better understand how current teachers perceive the importance and their own competence towards integrating special needs practices in their agriculture classrooms.

Literature Review

Contemporary trends in agricultural education demonstrate a need for secondary teachers to obtain more knowledge and skills regarding accommodating students with exceptionalities (Hoerst et al., 2009; Ramage et al., 2021). Inclusion of learners with special needs is not only mandated by law but a civic and moral duty for teachers (Hoerst et al., 2009). Falkner and Baggett (2010) recognized the increasing number of students with disabilities in secondary agricultural education programs. They stated that more emphasis should be placed on the most suitable approaches, techniques, and activities to meet the educational needs of these students. While inclusion of students with special needs and individualized education programs, or IEPs, is important, teachers may often find themselves lacking confidence or knowledge on how to best accommodate those students.

For most of its history, SBAE has promoted an integrated, three-component instructional model. The integrated three components of supervised agricultural experiences (SAE), FFA, and classroom instruction are important as they teach students crucial career and industry skills such as communications, teamwork, problem solving, entrepreneurship, adaptability, digital literacy, and work ethics, which are some of the most in-demand skills employers say new graduates are missing (Crawford et al., 2011; Dondi et al., 2021; Rada et al., 2025). Johnson et al. (2012) concluded that most teachers had in-service training on the topic of including students with special needs that may have impacted their perceptions of including such students in FFA and SAE programs. The amount of in-service training had an overall positive relationship regarding the FFA component but was not evident regarding including students in SAE (Johnson et al., 2012).

Programs have evolved toward mainstreaming disabled students due to legislation and various philosophies held by educators, most agricultural educators continue to feel less than competent when working with disabled students (Elbert & Baggett, 2003). Aschenbrener et al. (2010) surveyed Missouri agricultural educators in 2006 and 2007, finding that despite teacher preparation programs addressing the topic of teaching students with special needs, differences in teacher efficacy and self-perceived success suggested early career teachers may lack self-perceived preparedness for the classroom. Ramage et al. (2022) identified in their study of Louisiana female agricultural educators, the participants believed most of their professional development experiences in special education were inadequate because they were fast-paced, repetitive, and not specific to SBAE. According to Giffing et al. (2010), teachers in their study had the will to include a majority of students with specific disabilities yet lacked the skill to do so successfully. These findings suggest that teachers, specifically young teachers, could struggle with the confidence to correctly accommodate students with special needs.

Teacher education programs at the university level have been working to address this need in their future teachers. McCray and McHatton (2011) surveyed preservice educators in elementary and secondary education. They found preservice educators attending the required special education courses resulted in improved feelings and levels of comfort when working with SWDs (students with disabilities), it was also cause for concern at the end of their professional preparation. The teacher candidates indicated overwhelmingly they needed specific knowledge and skills to operationalize their changed perceptions and beliefs (McCray & McHatton, 2011). Agricultural educators perceived a knowledge of specialized instructional styles and non-traditional teaching practices and procedures as important, but lacked the competence to implement into the classroom (Norris et al., 2025).

Investigation of how well preservice agriculture teacher education programs are doing in preparing their students to work with special needs students has shown there is a need to continue work in this area. Roberts et al. (2020) recognized students in their early field experiences had various concerns throughout the semester and recommended teacher educators emphasize these concerns in their teacher preparation courses. Such a practice could instigate critical conversations by which agricultural education preservice discloses more profound concerns, which may allow teacher educators to respond better through targeted resources and support. Stair et al. (2010) found that overall, teachers are confident in their abilities; however, they disagreed that their teacher training programs and in-service opportunities have prepared them to work with students with special needs. Stair et al. (2010) reported that within the study, 58.8% of respondents took a class with one unit of teaching special education students, while 41.2% took an entire special education class. The strategies teachers identified as being used most often are also strategies easily implemented with an entire class, while strategies which are being used least often are strategies that may take more time to use for individual students (Stair et al., 2010).

Ramage et al. (2025) identified that while most pre-service teachers completed at least one special education class, even if participants received preservice education focused on teaching students with special needs, the limited extent of the course may not have provided adequate time for developing teachers' positive perceptions and strategies to accommodate students with special needs.

Moreland (2014) studied four agricultural education students from Land-Grant universities in Texas, and discovered they did not feel prepared with regards to teaching special education students. The participants all agreed they had heard the terms differentiated

instruction, modifications, accommodations, and IEPs, however even after completing the preservice program, did not feel they had good working knowledge of the meaning of those terms. What they did know, they said they had learned on the job. They reported not feeling prepared with regards to teaching special education students (Moreland, 2014).

Kessell (2005) showed that teachers feel adequately confident teaching special needs students in agricultural education classrooms, knowledge scores did not show positive results about disabling conditions and special education laws. Norris et al. (2024) surveyed school district superintendents who led districts with agricultural education programs, finding they recognize the importance of agricultural educators to be aware of educational laws. This is due to their increased risk in the classroom, laboratory spaces, SAE visits and school farms. Ramage et al. (2021) found that preservice agricultural educators feel unprepared to accommodate students with special needs in the agricultural education classroom, which increases the need for specialized training in each legal area (Norris et al., 2024). With the growth of special education litigation, there is a need for teachers to have a working knowledge of education law to ensure students with disabilities are provided with free and appropriate public education (FAPE) (Wilkins-Brittain et al., 2022). Wilkins-Brittain et al. (2022) asked SBAE teachers if they had background knowledge of the special education mandates that guide the education of students with disabilities, to which the teachers seemed to struggle with the concepts of FAPE. They also struggled with how FAPE impacts their responsibility in providing appropriate education for students with disabilities.

There is a strong need for enhanced professional development programming for agricultural educators across the nation. Andreasen et al. (2007) surveyed agricultural educators in New Mexico on professional development needs and found multiple training needs related to

special education students. They also identified that younger teachers particularly need professional development on including special education students in courses with a classroom only format. Teixeira and Edwards (2020) recognized that continuing to provide related teacher preparation and in-service professional development is essential. Smith et al. (2024) surveyed agricultural educators and found that teachers emphasized the ongoing need for continuous in-service training tailored to their requirements.

The literature clearly demonstrates the importance of further support of preservice and inservice teachers to better prepare them to work with special needs students in their programs.

Purpose and Objectives

Agricultural educators work with a variety of students every day, with varying levels of educational needs. The purpose of this study was to determine the perceived importance of key special education and IEP competencies and how competent agricultural educators feel implementing them in their programs. This will allow the researchers to better understand the professional development needs of Kansas agricultural educators. To accomplish this purpose, the following objectives guided this study:

1. Determine the self-perception of Kansas agricultural educators on the importance of special education competencies and their ability to implement those competencies into practice (i.e. competence).
2. Assess statistical differences in importance and competence to implement special education competencies based on demographic factors such as race, highest degree earned, and gender of Kansas agricultural educators.

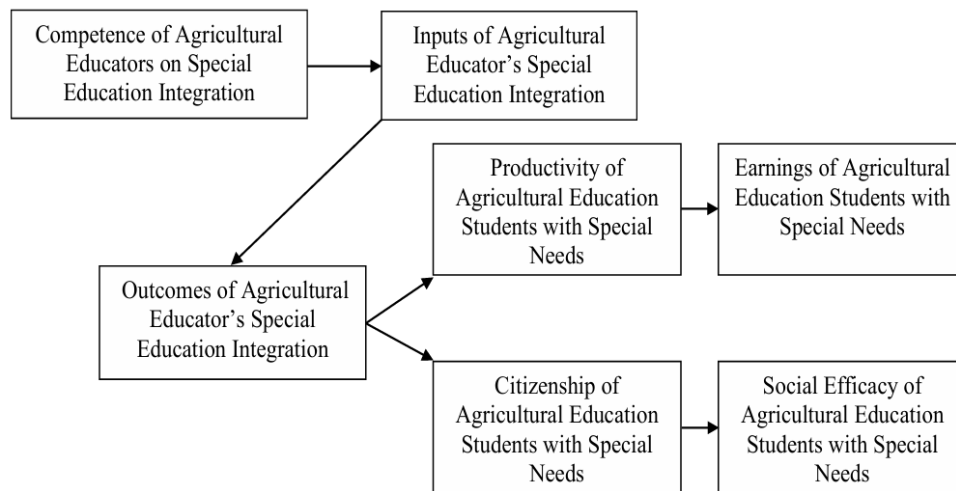
Theoretical Framework

The theoretical framework for this study was the Human Capital Theory (Becker, 1993). Human Capital Theory implies that individuals decide on their education, training, and other additions to knowledge by analyzing the benefits and cost (Becker, 1993). Human capital refers to the skill and training an individual can offer to their profession, such as preservice education and professional development (Smalley et al., 2026).

To increase human capital within agricultural educators, specialized training is offered through professional development (Norris et al. 2025). As agricultural educators increase their human capital through specialized training, they are better prepared to meet the needs of students with special needs, which ultimately leads to improved student outcomes in both academic achievement and career preparation (Andreasen et al., 2007; Norris et al., 2025; Ramage et al., 2021; Ramage et al., 2022; Wilkins-Brittain et al., 2022). If agricultural educators are not effective in providing special education students with the proper instructional modifications and accommodations, this ineffectiveness could directly influence the outcomes of agricultural education students with special needs (Andreasen et al., 2007; Norris et al., 2025; Wilkins-Brittain et al., 2022) Norris et al. (2025) demonstrated and designed this interaction between the human capital inputs on agricultural educators, their competence and importance when interacting with students with special needs, seen in Figure 1. (Norris et al., Figure 1, p 4, 2025).

Figure 1.

Impact of Agricultural Educator's Competence on Special Education Integration



Note. Developed based on Human Capital Theory (Becker, 1993).

Limitations

While this study aimed to identify areas of professional development needs, it is important to consider limitations. There was a small percentage of responses which does not allow for generalization of the findings. Therefore, this study is limited to the participating agricultural educators in Kansas (N=306) and the respondents of 17% ($n=53$). The data was also self-reported, which may not be a fully accurate picture of their own competence levels. Some demographic categories had a large percent in one area (i.e. White, Traditional Certification) which did not allow for a more rigorous comparison of means to other demographic categories in those areas. Additionally, the study only utilized fourteen competencies from Dingle et al. (2004). Because of this, these competencies are unlikely to fully evaluate all knowledge and skills needed by agricultural educators to engage with special needs students.

Methodology

Research Design

This study used a modified instrument from Norris et al. (2025) to conduct a survey of Kansas agricultural educators. Utilizing a descriptive correlational research design, respondents were asked to rate their confidence level and their perceived level of importance regarding fourteen special education competencies. Data was collected through an online survey, distributed via Qualtrics. This method allows teachers to quickly and easily fill out the survey and return it electronically. The survey was emailed on January 7, 2026, and closed on February 8, 2026. Two reminder emails were sent, one on January 20 and one on February 2, 2026.

Instrumentation

The survey was adapted from Norris et al. (2025), who used a survey modified from Dingle et al. (2004). The original instrument developed fourteen competencies on special education that educators need for effective implementation in their professional practice (Dingle et al., 2004), listed in Table 1. The instrument developed by Norris et al. (2025) utilized a modified Borich needs assessment to evaluate the perceptions of agricultural educators on the importance of special education integration into SBAE and their ability to integrate special education into professional practice. For questions related to the importance of special education competencies, the Likert scale range was 1 = *Not Important*; 2 = *Somewhat Important*; 3 = *Moderately Important*; 4 = *Very Important*; 5 = *Extremely Important*. The questions about competence included the following Likert range: 1 = *Not Competent at All*; 2 = *Somewhat Competent*; 3 = *Moderately Competent*; 4 = *Very Competent*; 5 = *Extremely Competent*. The modified instrument included demographic questions such as the Kansas State High School Activities Association (KSHSAA) classification, agricultural teaching license process, gender,

race, highest degree earned, and number of teachers in the respondent's program. This study utilized demographic information to assess statistical differences in importance and competence to implement special education competencies based on demographic factors such as race, highest degree earned, and gender of Kansas agricultural educators.

Table 1

Special Education Competencies Utilized in the Instrument

1.	Knowledge of specialized instructional styles and non-traditional teaching practices and procedures.
2.	Facilitates the physical classroom environment that allows for flexible scheduling and transition times.
3.	Knowledge of instructional adaptations including alternative assignments, supplemental instruction, differential standards, and shortened assignments.
4.	Implement lesson plans that are appropriate for diverse learners.
5.	Increase participation of students with special needs in general education settings or community settings.
6.	Promotes high level integrity, competence, ethics, and professional judgment.
7.	Selects, adapts, or modifies core curriculum to make it accessible for all students.
8.	Facilitates positive self-image of students
9.	Facilitates active participation in a fair and respectful environment that reflects cultural diversity.
10.	Knowledge of procedures and regulations for reporting child abuse and the legal rights and responsibilities of teachers and students.
11.	Knowledge of general education assessment procedures.
12.	Knowledge of interpersonal skills that work effectively with adults who have different styles
13.	Demonstrates strong interpersonal skills that are considerate, sensitive, non-judgmental, supportive, adaptive, and flexible.
14.	Demonstrates positive regard for all students, families, and professionals.

Note. Modified from Dingle et al. (2004).

Population

The population for this study was agricultural educators teaching in the state of Kansas during the 2025-2026 school year ($N = 306$). There were 53 valid responses ($n = 53$), with a response rate of 17%. The noteworthy demographics of the participating agricultural educators show 58.5% were early career teachers (1-7 years), 28.3% were middle career teachers (8-23 years), and 13.2% were late career teachers (24+ years). Additionally, 26.4% were in their second year of being an agricultural educator. Moreover, 9.4% of respondents were still working to obtain their teaching license, 75.5% came through a traditional preservice teacher education program, 7.5% were from an alternative certification program, and 7.5% certified in a different content area and tested into agriculture through the Praxis exam process. All demographics are included in Table 2.

Table 2*Demographic Data of Participating Agricultural Educators (n = 53)*

Demographic Area	Demographic Sub-Area	Participants	
		<i>f</i>	%
Gender	Male	20	37.7
	Female	33	62.3
Race	White/Caucasian	51	96.2
	American Indian or Alaska Native	1	1.9
	Hispanic	1	1.9
Highest Degree Earned	Bachelors	25	47.2
	Masters	27	50.9
	Doctoral	1	1.9
Agricultural Teaching License Process	Currently Working on License	5	9.4
	Traditional Preservice Program	40	75.5
	Alternative Program	4	7.5
	Certified in a Different Field and Tested into Agriculture	4	7.5
Teachers in Program	1 Teacher	31	58.5
	2 Teachers	15	28.3
	3 Teachers	2	3.8
	4+ Teachers	5	9.4
School Setting	Rural	43	81.1
	Urban	5	9.4
	Suburban	4	7.5
	Other	1	1.9
KSHSAA Classification*	1A	15	28.3
	2A	11	20.8
	3A	11	20.8
	4A	8	15.1
	5A	4	7.5
	6A	3	5.7
Years of Teaching Experience	Early Career (1-7 Years)	31	58.5
	Middle Career (8-23 Years)	15	28.3
	Late Career (24+ Years)	7	13.2

*Note. *n = 52.*

Validity and Reliability

The reliability of the instrument was assessed by Norris et al. (2025), using post hoc Cronbach's Alpha reliability coefficients to measure the scales of the importance and confidence of educators to integrate special education competencies. The reliability coefficient for the portion assessing competence was a .93, while the section assessing importance was a .96. The validity of the original instrument was assessed by Dingle et al. (2004) and deemed appropriate. To ensure the validity of the instrument, three Kansas State University faculty evaluated the face, content, and construct validity of the instrument and deemed it valid for the intent of this study. The researchers chose not to conduct a pilot of this study, as Norris et al. (2025) had previously assessed and evaluated the instrument for validity and reliability and deemed it acceptable. There were no modifications made to the 14 competency items.

Data Collection

Surveys were sent to all Kansas agricultural education teachers ($N = 306$) via the Kansas State FFA teacher directory using the Qualtrics email option. Surveys were kept anonymous and participants could refuse to participate or not answer any of the questions. Confidentiality was kept for the results of each individual survey. Ramsey and Schafer (2012) recommend a minimum of 30 responses for high-quality descriptive research. This study achieved a response rate of 17% ($n=53$), passing the required threshold.

Results

Research Objective One

Kansas agricultural educators overall importance yielded a mean score of 4.32 ($SD = .46$) out of a maximum of 5. The competence score was slightly lower with 3.69 ($SD = .61$) out of a maximum of 5 (Table 3).

Overall, Kansas agricultural educators rated the importance of each special education competency as *Somewhat Important* to *Extremely Important* with means ranging from ($M = 4.70, SD = .61$) to ($M = 4.08, SD = .81$). They also rated their ability within each competency from *Not Competent* to *Extremely Competent* with means ranging from ($M = 3.23, SD = 1.07$) to ($M = 4.38, SD = .56$). The overall means for competence was ($M = 3.69, SD = .61$), while the overall importance was ($M = 4.32, SD = .46$). The results are displayed in Table 3. The competencies with the lowest importance means were both “Knowledge of specialized instructional styles and non-traditional teaching practices and procedures” and “Facilitates the physical classroom environment that allows for flexible scheduling and transition times” listed in Table 4, while the lowest competency regarding competence and implementation was “Knowledge of instructional adaptations including alternative assignments, supplemental instruction, differential standards, and shortened assignments.” listed in Table 5.

Table 3

Mean Scores on Importance and Competence of Special Education Competencies (n = 53)

Constructs	<i>M</i>	<i>SD</i>
Importance	4.32	.46
Competence	3.69	.61

Table 4

*Agricultural Educators Level of Importance Regarding Special Education Competencies
(n=53)*

Special Education Competency	<i>M</i>	<i>SD</i>
1. Knowledge of specialized instructional styles and non-traditional teaching practices and procedures	4.08	.70
2. Facilitates the physical classroom environment that allows for flexible scheduling and transition times.	4.08	.81
3. Knowledge of instructional adaptations including alternative assignments, supplemental instruction, differential standards, and shortened assignments.	4.21	.79
4. Implement lesson plans that are appropriate for diverse learners.	4.21	.72
5. Increase participation of students with special needs in general education settings or community settings.	4.55	.64
6. Promotes high level integrity, competence, ethics, and professional judgment.	4.51	.58
7. Selects, adapts, or modifies core curriculum to make it accessible for all students.	4.25	.83
8. Facilitates positive self-image of students	4.47	.67
9. Facilitates active participation in a fair and respectful environment that reflects cultural diversity.	4.25	.85
10. Knowledge of procedures and regulations for reporting child abuse and the legal rights and responsibilities of teachers and students.	4.70	.61
11. Knowledge of general education assessment procedures.	4.09	.79
12. Knowledge of interpersonal skills that work effectively with adults who have different styles	4.11	.67
13. Demonstrates strong interpersonal skills that are considerate, sensitive, non-judgmental, supportive, adaptive, and flexible.	4.45	.67
14. Demonstrates positive regard for all students, families, and professionals.	4.58	.60

Note. 1=Not important at all, 2=Somewhat important, 3=Moderately important, 4=Very important, 5=Extremely important

Table 5

Self-Perceived Competency Level of Agricultural Educators to Implement Special Education Competencies in the Classroom (n = 53)

Special Education Competencies	<i>M</i>	<i>SD</i>
1. Knowledge of specialized instructional styles and non-traditional teaching practices and procedures	3.26	.90
2. Facilitates the physical classroom environment that allows for flexible scheduling and transition times.	3.72	.84
3. Knowledge of instructional adaptations including alternative assignments, supplemental instruction, differential standards, and shortened assignments.	3.23	1.07
4. Implement lesson plans that are appropriate for diverse learners.	3.64	.88
5. Increase participation of students with special needs in general education settings or community settings.	3.77	.91
6. Promotes high level integrity, competence, ethics, and professional judgment.	3.70	.87
7. Selects, adapts, or modifies core curriculum to make it accessible for all students.	3.40	.99
8. Facilitates positive self-image of students	4.08	.70
9. Facilitates active participation in a fair and respectful environment that reflects cultural diversity.	3.77	.78
10. Knowledge of procedures and regulations for reporting child abuse and the legal rights and responsibilities of teachers and students.	3.74	1.11
11. Knowledge of general education assessment procedures.	3.62	1.10
12. Knowledge of interpersonal skills that work effectively with adults who have different styles	3.47	.99
13. Demonstrates strong interpersonal skills that are considerate, sensitive, non-judgmental, supportive, adaptive, and flexible.	4.00	.81
14. Demonstrates positive regard for all students, families, and professionals.	4.38	.56

Note. 1=Not competent at all, 2=Somewhat competent, 3=Moderately competent, 4=Very competent, 5=Extremely competent

Research Objective 2

Research objective two aimed to assess statistical differences in importance and competence to implement special education competencies based on demographic factors such as race, highest degree earned, and gender. There was no significant differences between race, degree earned, and gender. Race lacks even distribution, as seen in Table 6, with fifty-one participants (96.2%) being white, while there are only two participants (3.8%) who identified as another race. Degrees earned had even distribution, with no significant difference between the

two groups (bachelor's degree and graduate degree), seen in table 7. The importance rating for those with a Bachelor's degree ($M = 4.33$, $SD = .43$) was almost the same as those with a graduate degree ($M = 4.31$, $SD = .49$). The mean for competence in Bachelor's earning participants was $M = 3.47$ ($SD = .61$), compared to those who obtained a graduate degree $M = 3.90$ ($SD = .59$).

In regard to gender, males had a higher self-perceived competence ($M = 3.78$, $SD = .77$) than females ($M = 3.65$, $SD = .49$), but females rated special education competencies more important overall ($M = 4.36$, $SD = .44$) than males ($M = 4.26$, $SD = .50$), as seen in Table 8. There was no statistical difference between the two groups.

Table 6

Independent Samples t-test on the competence and importance of Special Education by Race (n=53)

Constructs	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>f</i>	<i>Sig</i>
Competence White	51	3.68	.61	-1.14	51	.95	.34
Special Education Competence							
Competence Other	2	4.18	.25				
Importance White	51	4.32	.47	-.22	51	1.67	.20
Special Education Importance							
Importance Other	2	4.39	.25				

Table 7

Independent Samples t-test on the competence and importance of Special Education by Degree (n=53)

Constructs	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>f</i>	<i>Sig</i>
Bachelor's Degree	25	3.47	.56	-2.68	51	.15	.70
Special Education Competence							
Graduate Degree	28	3.90	.59				
Bachelor's Degree	25	4.33	.43	.16	51	.56	.46
Special Education Importance							
Graduate Degree	28	4.31	.49				

Table 8

Independent Samples t-test on the competence and importance of Special Education by Gender (n=53)

Constructs	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>f</i>	<i>Sig</i>
Competence Male	20	3.78	.77	.74	51	3.35	.07
Special Education Competence							
Competence Female	33	3.65	.49				
Importance Male	20	4.26	.50	-.81	51	.77	.38
Special Education Importance							
Importance Female	33	4.36	.44				

Conclusion and Discussion

This study aimed to identify the professional development needs of agricultural educators in the state of Kansas regarding the importance of special education competencies and the educator's ability to implement the competencies in the classroom. In addition, this study aimed to assess statistical differences in importance and ability to implement special education competencies based on demographic factors such as race, highest degree earned, and gender.

The first research objective assessed the professional development needs of Kansas agricultural educators by identifying the means of both competence and importance of fourteen special education competencies. The five lowest competencies with the lowest competence to implement means were "Knowledge of specialized instructional styles and non-traditional teaching practices and procedures" ($M = 3.26$, $SD = .90$), "Knowledge of instructional adaptations including alternative assignments, supplemental instruction, differential standards, and shortened assignments" ($M = 3.23$, $SD = 1.07$), "Selects, adapts, or modifies core curriculum to make it accessible for all students" ($M = 3.40$, $SD = .99$), "Knowledge of general education assessment procedures" ($M = 3.62$, $SD = 1.10$), and "Knowledge of interpersonal skills that work effectively with adults who have different learning styles" ($M = 3.47$, $SD = .99$). These five competencies deal with general education of special needs students. Modifications, alternative assignments, student accessibility, and supplemental instructions are crucial for the success of special education students (Joyce et al., 2020).

Research objective two aimed to assess statistical differences in importance and ability to implement special education competencies based on demographic factors such as race, highest degree earned, and gender. Males had a higher self-perceived competence ($M = 3.78$, $SD = .77$) than females ($M = 3.65$, $SD = .49$), but females rated special education competencies more

important overall ($M = 4.36$, $SD = .44$) than males ($M = 4.26$, $SD = .50$). The difference was not statistically significant, but there may be a gender-based difference in perceived importance, which could have implications for future professional development.

Overall, there were no significant differences in the importance or ability to implement special education competencies in the classroom based on demographics such as race, highest degree earned, and gender. This indicates that training programs could be designed to reach multiple demographic areas without having to modify for certain ones.

There is a need for further research on this topic to better understand the current situation and provide more clarity for future professional development needs.

Recommendations for Future Practice and Research

To address a lack of confidence to implement special education competencies into agricultural education classrooms in Kansas, stakeholders should evaluate professional development opportunities. Ramage et al. (2022) suggested that special education professional development was catered towards general education teachers, not SBAE educators. Additionally, Ramage et al. (2022) discussed offering professional development based on specific disability type, catering to the instruction in a SBAE setting. More research should be done to identify the best way to accommodate, supplement, assess, and instruct students with special needs in SBAE.

There is a need for research regarding how agricultural education directly influences the outcomes of students with special needs. Additionally, research should be done to determine what educators currently use to provide accommodations for students with special needs through modified assignments, assessments, and instructional content. With the rise of artificial intelligence (AI), there is a need to research how AI is being used to help create accommodations, assignments, assessments, and instructional content to meet the needs of diverse learners. More research should also occur to learn how to best harness AI to benefit the learning experience of special needs students in the agricultural education classroom.

More educational opportunities at the preservice level for preservice educators to gather knowledge and information on various special education competencies is recommended. With 75.5% of this study's participants certified in the traditional preservice route, there is a need for more coursework and experience to build competence working with special education students at the preservice level. A specific course developed to cater towards SBAE special education students is highly recommended. This course could include various learning theories and how to best implement said theories within the SBAE classroom to accommodate all students, and how

to make accommodations or adaptations to best meet the needs of special education students. Activities for preservice educators to practice accommodations with various assignments and courses related to SBAE could also prove beneficial.

Professional development opportunities for SBAE teachers to gain more confidence in implementing special education competencies within classrooms is needed. The Beginning Educators Support Team (BEST) program should run workshops or programs to better educate early career teachers on how to create accommodations, modifications, or supplemental instructions for special education students. Additionally, workshops at Kansas Association of Agricultural Educators (KAAE) symposiums catering towards educating special education students in SBAE is highly recommended. Professional development opportunities for SBAE teachers to gain competence in implementing special education competencies such as accommodations, adaptations to curriculum, and specialized instructional procedures would benefit both the SBAE instructors and the students they educate.

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