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Perceptions and Educational Strategies of Louisiana Agricultural Education Teachers When Working with Students with Special Needs

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Abstract: A teacher's willingness to accept inclusion has been identified as an indicator of the quality of experience that a student with special needs will have in the classroom The purpose of this exploratory study was twofold: (1) to describe the overall perceptions of working with students with special needs and (2) to determine how teachers in Louisiana are currently working with students with special needs. A total of 152 teachers attended the Louisiana agricultural education teacher's summer conference with 43% completing a three part survey instrument. Data analysis indicated that teachers are confident in their ability to work with students with special needs and they agree that they can incorporate various areas of inclusion within their programs. However, they disagreed that they have received adequate in-service opportunities related to special education. Regarding educational strategies, teachers in this study identified all of the given inclusion strategies as being used regularly in their programs with the exception of tutoring after school. They also identified these educational practices as being highly effective within their programs. Due to the exploratory nature of this study, additional research is recommended to further investigate the in-service and training needs of teachers in Louisiana.

Introduction

The Individuals with Disabilities in Education Act (IDEA) of 1990 included provisions for inclusion, or the stipulation that all students with disabilities or students with special needs should have access to a general education curriculum. Since IDEA's implementation, there have been an additional three million students in the United States who require special services in general education classrooms (United States Department of Education, 2007). IDEA directs that students with special needs be given the right to be taught in the least restrictive environment possible for a successful educational experience. In order to qualify for services, a child must fall under at least one of 14 recognized disability categories (e.g., (a) autism, (b) deaf-blindness, (c) deafness, (d) developmental delay, (e) emotional disturbance, (f) hearing impairment, (g) intellectual disability, (h) multiple disabilities, (i) orthopedic impairments, (j) other health impairments, (k) specific learning disability, (l) speech or language impairments, (m) traumatic brain injury, and (n) visual impairments). Additionally, the child must also have demonstrated that their disability negatively impacts their educational achievement (National Dissemination Center for Children with Disabilities, 2014. While the practice of inclusion has been designed to provide specific opportunities that positively impact the classroom experience for students, teachers often identify inclusion as a significant concern in their classrooms (Elbert & Baggett, 2003; Kessell, 2005; Salend & Garrick-Duhaney, 1999; Stair, Warner, & Moore, 2012).

A teacher's willingness to accept inclusion has been identified as an indicator of the quality of experience that a student with special needs will have in the classroom (Soodak, Podell, & Lehman, 1998). Teachers who have developed a higher sense of teacher self-efficacy are more likely to assume responsibility for helping students with special needs succeed (Soodak & Podell, 1994). Similarly, teachers' attitudes toward inclusion direct their beliefs that they can impact learning outcomes for students with special needs within their programs (Buell, Hallam,

Gamel-McCormick, & Scheer (1999). Self-efficacy is defined by Bandura (1977) as the impact that one's beliefs have on the successful implementation of goals. Self-efficacy as a psychological process allows us to identify the links between behaviors and allows for a better understanding of how behaviors impact the achievement of a goal. In order for someone to achieve a desired outcome, specific behaviors should be reinforced that align with the targeted goal. Therefore, a person must not only support the effectiveness of specific strategies in their practice, but they must also be confident in their own abilities to use these strategies effectively (Buell et al., 1999).

The study of self-efficacy through the lens of teacher performance is not a new educational development. This information has advanced primarily through the widely known social cognitive theory developed by Bandura (1977). More recently, self-efficacy has established itself through educational research in terms of both student self-efficacy and teacher self-efficacy (Tschannen-Moran & Hoy, 2001). These beliefs influence several psychological factors, including thoughts, beliefs systems and emotions that stimulate action. Individuals who are identified as having a high self-efficacy invest time and energy to attain their goals, exhibit persistence in the face of obstacles, cope with setbacks, and exert a higher degree of control over situations that have a direct effect on their lives (Bandura, 1986; 1993; 1997). Teachers with high self-efficacy have a desire to succeed and expect that they will achieve success in teaching and managing their programs. This high expectation for achievement influences their interpretation of successes and disappointments as well as influences standards they set for themselves and their programs (Bandura, 1997; Ross, 1992). The benefit of a strong sense of self-efficacy is also linked to less stress and burnout among teachers and increased retention and job satisfaction. Teachers with a higher self-efficacy are also more likely to use a wide variety of instructional practices and have a higher rate of student achievement (Ashton & Webb, 1986; Ross, 1998).

Based on the theory of self-efficacy, teacher perceptions may impact how students with special needs are engaged in agricultural education programs. While support for teachers has been more forthcoming since the required implementation of inclusion, teachers still identify working with students with special needs as being a significant concern (Elbert & Baggett, 2003; Kessell, 2005; Stair, Moore, Croom, & Jayaratne, 2010; Stair et al., 2012). Center and Ward (1987) found that teachers often support the theory of inclusion but are unwilling to support that inclusion of students with disabilities within their own classrooms (as cited in Campbell, Gilmore & Cuskelly, 2003).

Regarding overall perceptions of inclusion, Dormody, Seevers, Andreason and VanLeeuwen (2006) studied the perceptions of agriculture teachers working with students with special needs and found that all types of students with special needs were rated as being a challenge to teach within the total agricultural education program. The authors reported that a statistically significant relationship existed between teaching experience and acceptance of inclusion. Teachers with the most experience were more comfortable teaching inclusive classes. Even more detrimental to educators is the feeling of being unprepared, which impacts the particular class and the total perception of teaching as a career (Andreasen, Seevers, Dormody & VanLeeuwen, 2007). Lobosco and Newman (1992) reported that teachers felt they were unprepared to teach students with special needs, and they had an overall negative perception of job satisfaction when working with students with disabilities. Thus, there is a need to better understand the confidence levels of teachers when working with this student population.

A wide variety of strategies exist for working with students with special needs. However, classrooms that allow for differentiation are often seen as being more successful for inclusion (Soodak et al., 1998). Richardson and Washburn (2006) conducted a Delphi study to identify specific techniques employed by agriculture teachers when working with students with special needs. A panel of 45 teachers identified several different strategies as being the most beneficial for their students with disabilities. Techniques that were most commonly identified within this Delphi study were (a) *modified notes (fill in the blank or outline),* (b*) IEP modifications*, (c) *video or media related to the topic*, (d) *notes to copy*, (d) *vocabulary exercises*, (e) *PowerPoint presentations, handouts, and study guides*, and (f) *read-aloud tests and assignments*. Similarly, Stair et al., (2010), found most activities used to work with inclusive classrooms are strategies that, typically, are completed at a larger whole class level, rather than strategies specifically geared toward the development of students with special needs. It is imperative to understand how inclusive strategies impact the overall classroom environment.

Escalating emphasis on preparing all students for a career after high school has led to an increase in students with disabilities taking coursework that assists them in becoming more workforce ready (Harvey, 2001). The agricultural education environment provides fertile learning ground for these students. However, making these environments available to all learners requires additional training and resources. According to Andreasen, Seevers, Dormody and VanLeeuwen (2007), teachers in agricultural education programs identified several topics needed for additional training and education including: (a) *modifying IEP's* , (b) *evaluating learning*, and (c) *making classroom modifications*. Phillips and Dormody (1993) reported that teachers needed more information on how to make classrooms and laboratory learning environments more accessible to students with special needs. Additionally, this study highlighted that one of the biggest advantages for agriculture teachers is their extensive use of hands-on learning techniques. While the identification of strategies and perceptions has been documented in various research studies (Boone, Watts, Boone & Gartin, 2008; Elbert & Baggett, 2003; Stair et al., 2010) there is need for additional research to determine specifically how teachers in agricultural education provide resources to students with special needs (Stair et al., 2010).

The purpose of this study was twofold:

1. To describe the overall perceptions of working with students with special needs and
2. Determine how teachers in Louisiana are currently working with students with special needs.

The following research objectives guided this research study:

1. Identify the perceptions of Louisiana Agricultural Education teachers when working with students with special needs.
2. Identify confidence levels of Agricultural Education teachers when working with students with special needs.
3. Determine Louisiana agriculture teachers' frequency of use of specific strategies when working with students with special needs.
4. Identify Louisiana agriculture teachers' perceptions of the effectiveness of specific strategies when working with students with special needs.

Method

Population and sampling

The population for this exploratory research study consisted of secondary agriculture teachers in [state] who were in attendance of a [state] Agriculture Teachers Association Summer in-service workshop during the summer of 2014. A total of 152 teachers attended the conference with 65 completing the survey instrument which yielded a 43% response rate. Because there has been relatively little research conducted on the inclusion needs of teachers in [State], this study serves as a beginning point for understanding the perceptions and needs of teachers better, and it should not be considered representative of all teachers in the state.

Within this study, 73% of the agriculture teachers surveyed were male who averaged 40 years of age. The average years of teaching experience was 10 years and 84% of these teachers were traditionally certified. Over 55% of the teachers held a bachelor's degree as their highest degree completed. Of the participants, 63% indicated they had completed at least one course specifically related to teaching students with special needs.

Instrumentation

The instrument for this study was adapted from Stair et al. (2010). To establish face and content validity, a panel of experts consisting of two university agricultural educators and one secondary agricultural education teacher reviewed the questionnaire. The panel of reviewers deemed the instrument to be valid and did not suggest that any changes be made to the survey. Stair (2009) reported reliability coefficients ranging from .77 to .86 for the confidence portion of the instrument; therefore, a pilot study was not conducted. Reliability analysis for the present study was conducted, *post hoc*, yielding a Cronbach's alpha of 0.87. It should be noted that three items in this section were negatively worded and required recoding prior to calculating reliability.

The instrument was divided into three sections. Section I of the instrument consisted of a 12 statement Likert-type scale to determine the perceptions of teachers on statements related to inclusion in agricultural education. Data were considered ordinal in nature because when employing Likert-type scales the "intervals between the values cannot be presumed equal" (Jamieson, 2004, p. 1217). As such, the mode was utilized as the measure of central tendency (Gay, Mills, & Airasian, 2009). Teachers were asked to choose a response based on a 4-point scale of *Strongly Disagree* to *Strongly Agree*. Teachers were also asked to rank their total confidence when working with students with special needs on a scale of 1-10 with 1 being *Not Confident* and 10 being *Very Confident.*

Part II of the instrument consisted of instructional strategies developed through earlier research by Richardson and Washburn (2006) who identified instructional strategies of agricultural education teachers in North Carolina when working with students with special needs. A total of 26 strategies were included and for each strategy, teachers were asked to identify how often they use that strategy as part of their regular class instruction with one of the following choices: "Never" (I have never used this strategy), "Rarely (this strategy is used, but only a few times each semester), "Occasionally" (this strategy is used only once or twice per month), Often (the strategy is used several times a month), "Regularly" (the strategy is used as often as possible as part of my method of teaching). Teachers were also asked to rate the effectiveness of each strategy on a scale of 1-10.

Section III of the instrument was utilized to collect personal and professional characteristics of the teacher participants. Data collected included (a) gender, (b) age, (c) years of teaching experience, (d) acquired level of education, (e) teacher licensure information, (f) the number of previous courses taken related to students with disabilities, (g) hours of in–service opportunities related to inclusion, and (h) whether the responded has a close friends or family members with a disability.

Data analysis

Data were analyzed using Statistical Package for the Social Sciences (SPSS) version 22 for Macintosh. Measures of variability, including frequency, percentage, minimum, maximum, and mode, were calculated to meet the objectives of the study.

Limitations

As previously mentioned, this study serves as a beginning point for understanding how teachers in [State] work with students with special needs in their classroom. This study utilized a convenience sample for data collection and therefore, should not be considered representative of all teachers in the state.

Results

Research objective one sought to identify state agriculture teachers' perceptions of working with special needs students (see Table 1). Modal responses indicated that the teachers agreed with the following items:

(a) *I can provide a positive classroom atmosphere for students with special needs*,
(b) *I am capable of following the requirements found in special education legislation*,
(c) *I can modify assignments or activities according to a student's IEP*,
(d) *I am confident that my teacher training program prepared me to work with students with special needs*,
(e) *I can provide physical accommodations for students with special needs if needed*,
(f) *I am comfortable working with students with any type of disability*,
(g) *I am confident in my ability to involve students with special needs in the local FFA chapter*, and
(h) *I provide Supervised Agricultural Experience (SAE) projects for students with special needs that are comparable to SAE programs for students without special needs*.

Mode scores for the remaining items indicated the agriculture teachers disagreed with the items. It should be noted that the items the agriculture teachers were in disagreement with were negatively worded.

Table 1

[State] Agriculture Teachers' Perceptions of Working with Students with Special Needs (n=65)

Item	*Min.*	*Max.*	*Mode*
I can provide a positive classroom atmosphere for students with special needs.	2	4	3
I am capable of following the requirements found in special education legislation.	2	4	3
I can modify assignments or activities according to a student's IEP.	2	4	3
I am confident that my teacher training program prepared me to work with students with special needs.	1	4	3
I can provide physical accommodations for students with special needs if needed.	1	4	3
I am comfortable working with students with any type of disability.	1	4	3
I am confident in my ability to involve students with special needs in the local FFA chapter.	1	4	3
I provide Supervised Agricultural Experience (SAE) projects for students with special needs that are comparable to SAE programs for students without special needs.	1	4	3
I have difficulty evaluating students who have special needs.	1	4	2
I am concerned that I do not provide adequate instruction for students with special needs.	1	4	2
I do not think that I can manage behavior of students with special needs.	1	4	2
I have received adequate education and training for working with students with special needs through in-service opportunities.	1	4	2
Note. 1 = Strongly Disagree; 2 = Disagree; 3 = Agree; 4 = Strongly Agree.			

The second research objective was to determine [state] agriculture teachers overall confidence in working with students with special needs. The mode for this data was an eight. Responses ranged from a low of one to a high of 10. For analysis purposes, 1–2 was considered *not at all confident*, 3–4 was considered *lacking confidence*, 5–6 was considered *unsure of confidence*, 7–8 was considered *confident* and 9–10 was considered *very confident* (see Table 2).

Table 2

[State] Agriculture Teachers' Confidence in Working with Students with Special Needs (N=65)

Variable	*Minimum*		*Maximum*		*Mode*
Confidence Working with Students with Special Needs	1		10		8
Note. 1–2 = *not at all confident*, 3–4 = *lacking confidence*, 5–6 = *unsure of confidence*, 7–8 = *confident* and 9–10 = *very confident*					

The third research objective was to determine how frequently [state] agriculture teachers employed specific strategies for working with students with special needs (see Table 3). The teachers indicated regular use of (a) *Read a student's IEP and provide those modifications*, (b) *Show videos and other visual media that relate to topics*, (c) *Use of Power Points in class for notes or visuals*, (d) *Spend more time with them or watching them more closely during hands-*

on activities, (e) *Give students handouts that coordinate with lessons*, (f) *Give study guides for tests*, (g) *Modify testing*, (h) *Emphasize hands-on skills or activities*, (i) *Strategically assign partners or groups for work/projects*, (j) *Not penalizing spelling errors*, (k) *Require student to keep a notebook that is graded and checked for accuracy*, and (l) *Use a different rubric/scoring guide for students with special needs on the same assignment other students complete*. The least utilized strategy was *tutor students after school* receiving a mode score of two.

Table 3

[State] Agriculture Teachers' Use of Strategies for Working with Students with Special Needs (n=65)

Item	*Min.*	*Max.*	*Mode*
Read a student's IEP and provide those modifications	1	4	5
Show videos and other visual media that relate to topics	2	5	5
Use of Power Points in class for notes or visuals	1	5	5
Spend more time with them or watching them more closely during hands-on activities	1	5	5
Give students handouts that coordinate with lessons	1	5	5
Give study guides for tests	1	5	5
Modify testing (open notebook tests for learning disabled students. Separate location, more time, etc.)	1	5	5
Emphasize hands-on skills or activities	1	5	5
Strategically assign partners or groups for work/projects	1	5	5
Not penalizing spelling errors	1	5	5
Require student to keep a notebook that is graded and checked for accuracy	1	5	5
Use a different rubric/scoring guide for students with special needs on the same assignment other students complete	1	5	5
Slow down to give more individualized instruction	1	5	4
Keep Special Education teachers informed about what students should be learning in your class	1	5	4
Allow tests or assignments to be read aloud to the student	1	5	4
Allow students with special needs to use a word bank for difficult vocabulary on tests (Plant Id tests, Tool Id tests, etc.)	1	5	4
Assign them tasks that focus on active learning rather than passive learning	1	5	4
Provide shorter assignments	1	5	4
Use stories to illustrate a point in the lesson	1	5	4
Use oral exams or presentations	1	5	3
Give students fill in the blank note guides or note outlines	1	5	3
Focus on vocabulary that may be difficult for them to understand (creating a word wall, worksheet, etc)	1	5	3
Tutor students after school	1	5	2
Ask Special Education teachers to provide an overview of each student	1	5	4,5
Give students a rubric for the grading of performance items	1	5	3,5
Give students copies of notes from teacher or other student	1	5	3,4
Note. 1 = Never; 2 = Rarely; 3 = Occasionally; 4 = Often; 5 = Regularly.			

Research objective four sought to identify [state] agriculture teachers' perceptions of the effectiveness of specific strategies for working with students with special needs (see Table 4). Emphasize hands-on skills or activities and ask special education teachers to provide an overview of each student received mode scores of 10 denoting these strategies as being highly effective in working with students with special needs. The remaining items received mode scores of seven or greater. For analysis purposes, a mode score of 1–2 was considered "*very ineffective,*" a 3–4 was considered "*ineffective,*" 5–6 was considered "*average,*" 7–8 was considered "*effective*" and 9–10 was considered to be "*very effective.*"

Table 4

[State] Agriculture Teachers' Perceptions of the Effectiveness of Strategies for Working with Students with Special Needs (n=65)

Item	*Min.*	*Max.*	*Mode*
Emphasize hands-on skills or activities	1	10	10
Ask Special Education teachers to provide an overview of each student	1	10	10
Give students fill in the blank note guides or note outlines	1	10	8
Read a student's IEP and provide those modifications	1	10	8
Show videos and other visual media that relate to topics	1	10	8
Give students copies of notes from teacher or other student	1	10	8
Use of Power Points in class for notes or visuals	1	10	8
Spend more time with them or watching them more closely during hands-on activities	1	10	8
Give students handouts that coordinate with lessons	1	10	8
Allow tests or assignments to be read aloud to the student	1	10	8
Use oral exams or presentations	1	10	8
Not penalizing spelling errors	1	10	8
Allow students with special needs to use a word bank for difficult vocabulary on tests (Plant Id tests, Tool Id tests, etc.)	1	10	8
Modify testing (open notebook tests for learning disabled students. Separate location, more time, etc.)	1	10	8
Assign them tasks that focus on active learning rather than passive learning	1	10	8
Provide shorter assignments	1	10	8
Use stories to illustrate a point in the lesson	1	10	8
Tutor students after school	1	10	8
Give students a rubric for the grading of performance items	1	10	8
Keep Special Education teachers informed about what students should be learning in your class	1	10	8
Require student to keep a notebook that is graded and checked for accuracy	1	10	8
Slow down to give more individualized instruction	1	10	8
Use a different rubric/scoring guide for students with special needs on the same assignment other students complete	1	10	8
Focus on vocabulary that may be difficult for them to understand (creating a word wall, worksheet, etc.)	1	10	7
Give study guides for tests	1	10	8,10
Strategically assign partners or groups for work/projects	1	10	8,9
Note. 1–2 = "*very ineffective*", 3–4 = "*ineffective*", 5–6 = "*average*", 7–8 = "*effective*", 9–10 = "*very effective*"			

Discussion and Implications

Adequate training is often identified as a primary challenge for teachers when working with students with special needs (Dormody, Seevers, Andreasen, & VanLeeuwen, 2006; Sorenson, Tarpley, & Warnick, 2005). The majority of teachers within this study *agreed* or *strongly agreed* with 11 of the 12 statements regarding their perceptions of inclusion ability. Overall, this indicates very positive perceptions of their ability to evaluate, supervise and provide instruction for students with special needs. This belief was further validated as teachers also expressed very high overall confidence when working with students with special needs. While this finding is inconsistent with many other studies on regards to overall perceptions (Boone, Watts, Boone & Gartin, 2008; Elbert & Baggett, 2003; Kessell, 2005). Aschenbrener, Garton and Ross (2010) also found that early career agriculture teachers expressed some confidence in working with students with special needs. This overall confidence is a positive step, not only for successful inclusion, but for overall teacher career efficacy and satisfaction. Because teachers with a high self-efficacy have not only a desire to succeed, but also an expectation that they will succeed in teaching students and managing them effectively, teachers who identify themselves as being successful within these areas are often identified as being more successful in their programs (Buell et al., 1999).

Regarding the strategies that teachers use when working with students with special needs, teachers in this study used almost all of the recommended strategies *often* or *regularly* as part of their program. The only strategy that was not reported as being used regularly was *tutoring after school*. This may be indicative of the complex needs of agricultural education teachers to balance the classroom along with other program demands**.** Teachers in this study showed a more frequent use of strategies overall then in previous research (Stair et al., 2010). All strategies included in this study were identified as being *effective* or *highly effective*.

Overall, teachers in this study report being confident in their ability to include students with special needs in their programs and to use a wide variety of strategies that support inclusion. The only statement that indicated disagreement was the perception of receiving adequate training through in-service opportunities. This is an area that should be strengthened. Special Education needs and resources are constantly changing and evolving (Gargiulo, 2011). Even though the majority of teachers in this study have taken coursework in special education, adequate in-service should be provided so that teachers can stay on top of the research within the special education field. Additionally, there is evidence that teachers who have experienced more in-service opportunities related to inclusion tend to be more willing to include students in other aspects of the agricultural education program, including participation in FFA and SAE (Johnson, Wilson, Flowers, & Croom, 2012). This presents a need for additional training in all areas of the agricultural education program.

Because individual student needs and resources change over time, it may be helpful to encourage agriculture teachers to include special education teachers on advisory committees or in course planning. This would allow for teachers to be given guidance on a long term planning level rather than on a class by class basis. This could also benefit the working relationships between agriculture teachers and special education teachers.

Because this was an exploratory study with a relatively small number of teachers, additional research should be conducted to determine if all teachers in [state] share these same in-service

needs. Additionally, teacher strategies and overall confidence should continue to be tracked over time to determine how trends in special education may affect teacher confidence. It is also recommended that qualitative research be used to determine what practices the most successful teachers are implementing within their programs.

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