

CHALLENGES EXPERIENCED BY NEW MEXICO AGRICULTURAL EDUCATION TEACHERS IN INCLUDING SPECIAL NEEDS STUDENTS

Thomas J. Dormody, Professor
Brenda S. Seevers, Professor
Randall J. Andreasen, Assistant Professor
Dawn VanLeeuwen, Professor
New Mexico State University

Abstract

Approximately 19% of the students enrolled in agricultural education in New Mexico are classified as special education students. The purpose of this descriptive-correlational study was to describe the challenges experienced by agricultural education teachers in New Mexico when including special needs students in their programs. A census of New Mexico secondary school agricultural education teachers received a mail questionnaire during spring and summer 2003. Most programs in the state offered instruction in a combination classroom and shop/laboratory format (85%) and a classroom-only (59%) format. Among disabilities/special needs, students with mental retardation and limited English proficiency were the most challenging to include in courses with the classroom-only format. In the laboratory/shop-only format, students with mental retardation, physical disabilities and emotional/behavioral disorders were most challenging. Mentally retarded students were the most challenging in the combination format. Older teachers and teachers on a regular schedule had lower perceptions of the degree of challenge in including students with special needs than younger teachers and teachers on a block schedule.

Introduction/Theoretical Framework

In 2000, the New Mexico Board of Education identified 11 technical competencies for entry-level secondary teachers related to teaching special needs learners (New Mexico Board of Education, 2000). These competencies have been included in teacher education programs in New Mexico. In a 2002 follow-up study of New Mexico State University Department of Agricultural and Extension Education graduates from 1990-2001 who were currently teaching secondary agriculture, respondents were asked to describe their perceptions regarding selected teacher competencies (Dormody & Torres, 2002). The researchers found at-graduation and current ability scores regarding the inclusion of exceptional students in the instructional process to be relatively low, suggesting the need for follow-up research with New Mexico agricultural education teachers to

determine more specifically the challenges they were experiencing including students with special needs. Such research could lead to appropriate improvements in the pre-service and in-service training of these teachers.

Similar findings were identified in a study of the in-service needs of Utah agricultural education teachers (Sorenson, Tarpley, & Warnick, 2005). This study found that the teachers rated their ability to "teach learning disabled students" (p. 8) the lowest among 31 core competencies while also rating it as an important core competency. These ratings led to teaching learning disabled students receiving the fifth highest weighted discrepancy score from among the 31 core competencies and hence, a high priority designation from the authors for in-service of Utah agricultural education teachers.

A study of Pennsylvania's secondary agricultural education teachers rated specific

competencies for working with disabled students (Elbert & Baggett, 2003). The five competencies the teachers ranked themselves most often as not or slightly competent in were: completing individual vocational plans, being familiar with the laws that apply to special needs students, completing individual education plans, assisting students in viewing his/her assets and limitations realistically, and integrating and actively involving special needs students into vocational organizations (p. 110). Current ability was rated significantly lower than desired ability on all 17 competencies for working with disabled students. The authors noted that "One implication arising from the findings of this study is that many students in Pennsylvania may not be adequately served because of the poor professional skills of teachers as reflected by their perceived levels of competence (p. 114)." They recommended more effort on developing competency in working with disabled students among the state's agricultural education teachers through pre-service and in-service education programs.

In 2003, another New Mexico State University study focused on state Family and Consumer Sciences teachers' preparation regarding special education. The study found that the teachers felt only somewhat prepared to work with special needs students and had received no formal preparation prior to licensure (Cummings, 2003). In "Special Populations in Career and Technical Education" (2003), authors Sarkees-Wircenski and Scott state,

One of the most important processes in which career and technical education personnel should be involved is the preparation, implementation, and evaluation of the individual education programs (IEPs) for learners from special populations...it is important that the instructor and other school- and community-based personnel engage in a team effort to develop individual plans that will enable learners to succeed in meeting their career goals" (p. 327).

Other studies and articles were reviewed that articulate a need to incorporate strategies for

teaching and serving special needs students into pre-service and in-service education programs to ensure that future teachers are competent in these areas (Cross, 1979; Crunkilton, 1985; Repps & Dormody, 1993; Harding & Darling, 2003).

Conceptually, several legislative efforts such as Public Law (P.L.) 94-142, the Education for All Handicapped Children Act (EACHA); its subsequent amendment, P.L. 101-476; and P.L. 105-17, the Individuals with Disabilities Education Act (IDEA), which assured that all children with disabilities have available to them a free and appropriate public education provide the framework for this study. These laws emphasize special education and related services designed to meet the unique needs and protect the rights of children with disabilities. The laws also mandate that states and localities assist in providing for the education of all children with disabilities, and assess and assure the effectiveness of efforts to educate children with disabilities (Heward, 2003; Kessell, Lawver, Davis, & Frazee, 2005). P.L. 105-332, the Carl D. Perkins Vocational and Technical Education Act of 1998 (New Mexico Board of Education, 1998) requires public secondary schools receiving federal dollars for their career and technical education programs to ensure access, success, and absence of discrimination for special population students.

Never before has there been more accountability in American public schools for the academic performance of students with special needs. The No Child Left Behind (NCLB) Act of 2001 (United States Department of Education, 2001) and House Bill 212 as Amended (Legislature of the State of New Mexico, 2003), the New Mexico education law based on NCLB, make it clear that public schools will be held accountable for the same contracted percentages of students with disabilities, limited English proficiency, and from other subgroups performing at or above grade level in academic subjects (currently mathematics, reading and language arts, and social studies for grades eight through 11 in New Mexico) as other students. Under performance by any subgroup of students ensures a school fails to achieve adequate

yearly progress. Schools that fail to achieve adequate yearly progress over an extended period of years face a number of improvement and possibly corrective actions. Therefore, the expectation that secondary agricultural education teachers will contribute to the academic performance of their students including their special needs students is at an unprecedented high.

In their review of special education law, Kessell et al. (2005) warned the agricultural education profession,

“If the educator is incapable in meeting the needs of the special needs student, then the next course of action by a parent or guardian is to remedy these inequities in a court of law. Judicial proceedings lead to massive expense suffered by school districts and state educational agencies (pp. 9-10).”

In summary, this introduction indicates a paucity of research in secondary agricultural education related to teaching special needs students; that past research generally indicates agricultural education teachers perceive low ability, but high importance of competencies in teaching special needs students; unprecedented accountability for American schools and school personnel for the inclusion and performance of special needs students; and the possibility of tort action for failing to meet the educational needs of special needs students. Agricultural education teachers can expect students with special needs to represent a sizable proportion of the total students in their program. Therefore, further research on the challenges faced by secondary agricultural education teachers in teaching special needs students is both timely and needed.

Purpose/Objectives

The purpose of this study was to describe the challenges experienced by New Mexico secondary agricultural education teachers when including special needs students. The following specific objectives guided this study:

1. Describe New Mexico agricultural education teachers on selected personal and professional characteristics.
2. Describe the number of students enrolled in agricultural education courses, FFA, and SAE.
3. Describe the number of special education students enrolled in agricultural education courses, FFA, and SAE.
4. Describe special education students enrolled in agricultural education by type of disability/need.
5. Describe the perceived challenges New Mexico agricultural education teachers' experience in including special education students in their courses.
6. Determine relationships between selected personal and professional characteristics of New Mexico agricultural education teachers and perceived challenges to including special education students by course format and type of disability/need.

Methods/Procedures

The study was a descriptive-correlational census of all secondary school agricultural education teachers in New Mexico during spring 2003 (N = 93). Data were collected in spring and summer 2003 using a modified Dillman (1978) approach. A mail questionnaire based on previous research (Cummings, 2003) was developed by the researchers. The instrument contained seven sections. Objectives in this study addressed questions in sections one and six of the final instrument. Section 1 utilized open-ended questions seeking program information on the total number of students and the total number of special education students enrolled in agricultural education courses, FFA and SAE. Additionally, information was sought on the types of disabilities/special needs experienced by students. A four-point scale (4 = great challenge; 3 = moderate challenge; 2 = little challenge; 1 = no challenge) asked teachers to rank the degree of challenge they felt in

including students with different disabilities/needs in courses with a classroom-only, shop/laboratory-only, or combination format. Section 6 collected data on personal and professional characteristics of the subjects. Face and content validity were assessed using a panel of experts representing the areas of agricultural education, teaching, research and special education. A coefficient of stability was calculated for non-summed items in Section 1 utilizing the test-retest method and a pilot group of New Mexico middle-school agri-science teachers and former agricultural education teachers now employed by the Cooperative Extension Service ($N = 12$). Since this was the first time the questionnaire was administered, the acceptable rate of agreement was based on responses in a range of plus or minus one category from the previous responses on the test. A level of 75 percent agreement was set *a priori*. Four of the 21 items in Section 1, Question 5 on the degree of perceived challenge to including students with special needs in the three different course formats by seven types of disabilities failed to meet the level of acceptance. Given the small number of responding subjects in the pilot group ($n = 5$) and that the 21 items were deemed necessary to ensure content validity, the researchers chose not to remove these items from the questionnaire. They do, however, recommend caution in interpreting these results due to potential item instability.

Data were collected from March through July, 2003. Two complete mailings and e-mail and postcard reminders were sent. A final follow-up was conducted in person in July 2003 with non-responding teachers attending the state agricultural education teachers conference. A final usable response rate of 74% ($n = 69$) was achieved. Given the extensive data collection procedures and high usable response rate achieved, a follow-up analysis of non-respondents was deemed unnecessary. Objectives 1-4 were analyzed with descriptive statistics (means, frequencies, percentages, standard deviations and ranges). Objective 5 was analyzed using a hierarchical linear model

(Raudenbush & Bryk, 2002) with course format, disability type and interaction between format and disability as fixed explanatory variables (or effects) and both the respondent and the usual error term as random effects. This model appropriately accounts for the correlations between responses from the same individual and was implemented using SAS Proc Mixed (SAS Institute, 1999) version 8.2. The Kenward-Rogers degree of freedom option was specified to adjust both error degrees of freedom and standard error of estimates. Follow-up analysis consisted of t-tests comparing contrasts of interest. Objective 6 was analyzed using Pearson and point biserial correlation coefficients. A significance level of .05 was set *a priori* on all statistical tests. Strength of correlation was analyzed utilizing descriptors set by Davis (1971).

Results/Findings

Objective 1: Describe New Mexico agricultural education teachers on selected personal and professional characteristics

Agricultural education teachers in New Mexico are predominately male (78.2%), range in age from 23-67 with a mean of 38.5 and have been teaching for an average of 11.3 years (Table 1). All teachers have a bachelor's degree and 47.8% have earned a master's degree. An overwhelming majority (97.1%) hold a secondary teaching license with an endorsement in agriculture. The most common second teaching field listed on a license was science. Only 21.7% reported teaching in a block schedule. A large majority of teachers taught students in grades 9-12, while 50.7% also taught students in grade 8 and 34.8% taught students in grade 7. Only four teachers taught agricultural education students in grade 6.

Table 2 identifies that 84.6%, 58.5%, and 44.6% of the teachers had courses in the combination classroom and shop/laboratory, classroom-only and shop/laboratory-only formats, respectively. The teachers taught an average of five classes.

Table 1. *Summary of Demographics*

Characteristic	<i>f</i>	%
<u>Gender</u> (<i>n</i> = 69)		
Male	54	78.2
Female	15	21.7
<u>Age</u> (<i>n</i> = 67)		
23-29	12	17.9
30-39	27	40.3
40-49	18	26.9
50-67	10	14.9
<u>Number of Years Teaching</u> (<i>n</i> = 69)		
1-5	15	34.8
6-10	14	20.3
11-20	20	29.0
21-41	11	15.9
<u>Highest Educational Degree</u> (<i>n</i> = 69)		
Bachelor's	35	52.1
Master's	34	47.8
<u>Type of Schedule</u> (<i>n</i> = 69)		
Block only	15	21.7
Regular only	45	65.2
Combination	9	13.9
<u>Grade Level Taught</u> (<i>n</i> = 69) ^a		
Grade 6	4	5.8
Grade 7	24	34.8
Grade 8	35	50.7
Grade 9	68	98.6
Grade 10	67	97.1
Grade 11	67	97.1
Grade 12	67	97.1

^a Respondents could select multiple responses

Table 2. *Course Format of Courses Taught* (*n* = 65)

Format	# teachers utilizing the format	Percent of total respondents	Total # of courses in the format	Avg. # of courses per teacher in the format
Classroom-only	38	58.5	80	2.1
Shop/lab-only	29	44.6	60	2.1
Combination	55	84.6	183	3.3
Total			323	5.0

Objective 2: Describe number of students enrolled in agricultural education courses, FFA and SAE

Teachers were asked to indicate the total number of students in their program who were currently enrolled in agricultural education courses, FFA and SAE (Table 3). Agricultural education courses had the largest enrollments with a range from

20-475 and a mean of 96 students per program followed by membership in FFA with a range of 13-315 and a mean of 71.9 members per program. Enrollments in SAE were the lowest with a range of 0-190 and a mean of 33 students per program. The three distributions were positively skewed so Table 3 also identifies enrollment numbers by percentiles.

Table 3. *Total Enrollment Per Program in Agricultural Education Courses, FFA and SAE by Percentiles*

Component	Range	<i>M</i>	<i>SD</i>	10 th	25 th	50 th	75 th	90 th
Ag. Ed. Courses	20-475	96.0	90.0	21	39	69.5	117	206
FFA	13-315	71.9	70.4	15	26	45.5	90	150
SAE	0-190	33.0	40.0	5	10	21	35	56

Objective 3: Describe the number of special education students enrolled in agricultural education courses, FFA, and SAE

Table 4 describes enrollment of special education students in agricultural education courses, FFA and SAE. Teachers were asked to identify only those students for whom a specified Individual Education Plan (IEP) had been developed. Agricultural education courses had the largest enrollments with a

range from 0-125 and a mean of 17.8 students per program followed by membership in FFA with a range of 13-125 and a mean of 12.5 members per program. Enrollments in SAE were the lowest with a range of 0-60 and a mean of 5.3 students per program. The three distributions were positively skewed so Table 4 also identifies enrollment numbers by percentiles.

Table 4. *Enrollment Per Program of Special Education Students in Agricultural Education Courses, FFA and SAE*

Component	% of total students enrolled	Range	<i>M</i>	<i>SD</i>	10 th	25 th	50 th	75 th	90 th
Ag. Ed. Courses	18.5	0-125	17.8	20.3	4	6	12	21	30
FFA	17.4	0-125	12.5	18.4	1	4	6	20	27
SAE	15.9	0-60	5.3	8.7	0	1	2	6	13

Objective 4: Describe special education students enrolled in agricultural education by type of disability

For Objective 4, the agricultural education teachers were asked to describe only the disabled and limited English proficiency special education students in their agricultural education program. These special education students are described in

Table 5 according to type of disability/need. Students with learning disabilities and emotional/behavioral disorders were in greatest number (an average about 7 and 4 per program, respectively). The disabilities least represented were physical disabilities and mental retardation. Since enrollment numbers were positively skewed they are also shown as percentiles.

Table 5. *Special Education Students Enrolled in Agricultural Education by Type of Disability*

Types of Disability/Need	Range	<i>M</i>	<i>SD</i>	10th	25th	50 th	75th	90 th
Physical Disabilities	0-5	0.5	1.0	0	0	0	1	2
Emotional/Behavioral Disorders	0-20	3.9	5.1	0	0	2	5	10
Learning Disabilities	0-27	7.2	6.5	1	2	5	10	15
Communication Disorders	0-20	2.2	4.2	0	0	0	3	7
Other Health Impairments	0-70	2.7	9.1	0	0	0	2	5
Mental Retardation	0-10	0.4	1.5	0	0	0	0	1
Limited English Proficiency	0-20	2.5	4.7	0	0	0	2.5	10
Other	0-25	0.7	3.3	0	0	0	0	0

Objective 5: Describe the perceived challenges New Mexico agricultural education teachers experience in including special education students in their courses

The mixed model analysis indicates that degree of challenge differed significantly depending on disability/need and format (interaction $F(12, 962) = 4.24, p < 0.0001$). Additionally, averaging across formats, disability/need main effects were significant ($F(6, 967) = 15.25, p = 0.0001$) although format main effects (averaging across disability/need types) were not significant ($F(2,983) = 1.67, p = 0.1897$). Overall,

respondents rated the disability of mental retardation significantly more challenging to include in their courses than any other disability/need and the disability category of "other health impairment" (qualified in the questionnaire as ADHD, ADD, diabetes, asthma, cystic fibrosis, etc.) as significantly less challenging than any other disability/need. Students with emotional/behavioral disorders were rated significantly more challenging than those with learning disabilities, communication disorders, physical disabilities or other health impairments. Because the interaction was

significant, care should be taken in interpreting differences among disability means.

Table 6 summarizes the model estimates for challenge by disability/need and format. Format comparisons were made within each type of disability/need. Disability/need comparisons were made within each of the three course formats. For including students with either physical disabilities or emotional/behavior disorders, the classroom format was rated less challenging than the shop/laboratory-only format. For including students with limited English proficiency, the classroom-only format was rated more challenging than the shop/lab-only format. Within the classroom-only format, students with physical disabilities and "other health impairments" were rated significantly less challenging to include than other disabilities/needs. Students with mental retardation and limited English proficiency

did not differ, but students with mental retardation were rated as more challenging to include in the classroom-only format than the other five disabilities. In the shop/laboratory-only format, students with mental retardation and physical disabilities/needs were rated as equally challenging to include as students with emotional/behavior disorders, but more challenging than those with learning disabilities, limited English proficiency and other health impairments. In the combined classroom and shop/laboratory format, students with "other health impairments" were found to be the least challenging and those with mental retardation the most challenging to include. Overall, the most challenging disability/need for the teachers was mental retardation followed by emotional/behavioral disorders which did not differ from limited English proficiency. The least challenging category was "other health impairments."

Table 6. *Perceived Challenges: Least Square Means from Mixed Model Analysis*

Type of Disability/Need	Course Format			Across All Formats
	Classroom Only	Shop/Laboratory Only	Combination	
Physical Disabilities	1.94 bC	2.85 aA	2.56aAB	2.45C
Emotional Behavioral Disorders	2.53bB	2.83aAB	2.71abAB	2.69B
Learning Disabilities	2.63aB	2.38aC	2.55aB	2.52C
Communication Disorders	2.56aB	2.43aBC	2.52aB	2.50C
Other Health Impairments	2.06aC	2.20aC	2.12aC	2.13D
Mental Retardation	2.97aA	3.06aA	2.87aA	2.97A
Limited English Proficiency	2.70aAB	2.37bC	2.56abB	2.54BC

a, b: means within a row that have the same letter do not differ significantly.

A, B, C, D: means within a column that share the same letter do not differ significantly.

Scale: 1 = no challenge, 2 = little challenge, 3 = moderate challenge, 4 = great challenge

Alpha level: .05.

Objective 6: Determine relationships between perceived challenges New Mexico agricultural education teachers experience in including special education students in class and laboratories taught and selected personal and professional characteristics

Table 7 contains the correlation matrix for reporting this objective. Agricultural education teacher age was negatively related to the perceived challenge of including special education students in courses with a classroom-only format ($r = -.44$, moderate strength, Davis, 1971) and the perceived challenge of including students with physical disabilities ($r = -.36$, moderate strength), other health impairments ($r = -.24$, moderate strength), and mental retardation ($r = -.47$, moderate strength). Teaching on a block schedule was associated with higher

perceived challenge of including special education students in courses in the shop/laboratory-only ($r = .34$, moderate strength) and combination classroom and shop/laboratory ($r = .34$, moderate strength) formats and higher perceived challenge of including students with physical disabilities ($r = .53$, substantial strength). The more teachers perceived themselves to be prepared to work with special education students the less challenged they felt toward including students with communication disorders ($r = -.36$, moderate strength). The more formal courses teachers had taken in special education, the less their perception of the challenge to include special education students in courses with the classroom-only format ($r = -.33$, moderate strength).

Table 7. *Correlations Between Selected Personal and Professional Characteristics and Level of Inclusion Challenge by Course Format or Type of Disability (n varies from 34 to 45)*

Personal/ Professional Characteristic ^a	Classroom Format (r/p)	Shop/Lab Format (r/p)	Combination Format (r/p)	Physical Disabilities (r/p)	Emo./Behav. Disorders (r/p)
Male or female	.15/.3564	.20/.1969	.06/.7162	.15/.3325	.17/.2644
Age	-.44/.0036*	-.29/.0558	-.16/.3091	-.36/.0154*	-.07/.6364
Highest degree held	.13/.4286	.21/.1682	.18/.2695	.21/.1607	.01/.9424
Block or regular sch.	.32/.0572	.34/.0312*	.34/.0456*	.53/.0004*	.22/.1690
Level of sp. ed. prep	-.27/.0829	-.16/.2913	-.18/.2588	-.26/.0847	.08/.6160
Courses in sp. ed.	-.33/.0345*	-.29/.0636	-.23/.1526	-.14/.3586	.24/.1128
Sp. ed. enrollment	.11/.5062	-.01/.9495	.04/.7982	.08/.6108	.10/.5395

^a Abbreviations used in this column: sch. = schedule, sp. ed. = special education.

* $p < .05$.

Table 7 (cont.). *Correlations Between Selected Personal and Professional Characteristics and Level of Inclusion Challenge by Course Format or Type of Disability (n varies from 34 to 45)*

Personal/ Professional Characteristic ^a	Learning Disabilities (r/p)	Communic. Disorders (r/p)	Other Health Impairments (r/p)	Mental Retardation (r/p)	Limited English Prof. (r/p)
Male or female	-.07/.6588	-.02/.9103	-.01/.9421	.14/.3989	.11/.4765
Age	.09/.5617	-.10/.5542	-.24/.0349*	-.47/.0035*	-.29/.0667
Highest degree held	-.09/.5756	.11/.4895	.20/.2202	.23/.1677	.04/.8164
Block or regular sch.	.09/.5807	.13/.4440	.26/.1241	.19/.2941	.21/.2150
Level of sp. ed. prep	-.22/.1411	-.36/.0235*	-.30/.0639	.07/.6477	-.30/.0534
Courses in sp. ed.	.15/.3144	.22/.1671	-.27/.0903	-.18/.2978	.08/.6378
Sp. ed. enrollment	-.11/.4711	-.10/.5595	.04/.8117	.02/.9212	.01/.9608

^a Abbreviations used in this column: sch. = schedule, sp. ed. = special education.

* $p < .05$.

Conclusions/Recommendations/ Implications

According to the New Mexico agricultural education teachers, approximately 19% of the students enrolled in an average agricultural education program are classified as special education students (have an IEP). Of these students, approximately 70% are FFA members and only 30% have a SAE. In comparison, 75% of all students enrolled in an average agricultural education program were indicated as being FFA members and only 34% as having a SAE. These percentages are slightly higher than those for the special education students. Strategies for increasing the number of agricultural education students in FFA and SAE must continually be developed for all students, with additional emphasis placed on including special education students. Further research is needed to clarify why such small percentages of agricultural education students are involved in SAE in the state.

The average agricultural education program in the state enrolls approximately seven students with learning disabilities, four students with emotional/behavioral

disorders and two or three students with other health impairments (qualified in the questionnaire as ADHD, ADD, diabetes, asthma, cystic fibrosis, etc.), limited English proficiency, and communication disorders. On average, fewer students with mental retardation or physical disabilities were enrolled in the agricultural education programs in this study. Agricultural education teachers can expect to work with students with all of the types of special needs, and hence, need to receive pre-service and in-service training on including these students in all aspects of the program.

Most of the agricultural education programs in the state had courses in combination classroom and shop/laboratory (85%) and classroom-only (59%) formats. Approximately 45% of the programs had courses in the shop/laboratory-only format. The agricultural education teachers rated students with mental retardation as the most challenging to include in a classroom-only course format from among the types of disabilities/needs. They rated students with physical disabilities and other health impairments as the least challenging to include in the classroom-only format.

In a shop/laboratory course format, students with mental retardation, physical disabilities, and emotional behavioral disorders were rated the most challenging to include from among the types of disabilities/needs. Students with other health impairments, limited English proficiency, and learning disabilities were rated as the least challenging to include in the shop/laboratory format.

Students with mental retardation were considered the most challenging to include in combination classroom and shop/laboratory courses while those with other health impairments were rated the least challenging to include in this format. These two conclusions can also be made across all of the course formats.

On average, all types of special education students were rated by the teachers as either a "little" or a "moderate" challenge to include across all three course formats. On average, none were considered "no" or a "great challenge" to include in any of the formats. Within disabilities, students with physical disabilities were considered more challenging to include in the shop/laboratory-only and combination formats than the classroom-only format. Students with emotional/behavioral disorders were considered most challenging to include in the shop/laboratory-only and least challenging to include in the classroom-only format. Students with limited English proficiency were rated most challenging to include in the classroom-only and least challenging to include in the shop/laboratory-only format. Students with other disabilities were not rated differently across the three teaching formats.

New Mexico agricultural education teachers need to receive pre-service and in-service training for including students with all types of disabilities/needs in classroom-only, shop/laboratory-only, and combination course formats. It is further recommended that the teachers and programs receive adequate resource support for including students with mental retardation in their courses, regardless of course format and that adequate resource support be made available to the teachers for including students with limited English

proficiency in classroom-only courses. Adequate resource support should also be made available for including students with physical disabilities and emotional/behavioral disorders in shop/laboratory-only courses.

The older the teacher the less the perceived challenge was for including special education students in courses with a classroom-only format. The older the teacher the less the perceived challenge was for including in their courses students with physical disabilities, other health impairments, and mental retardation. Teachers on a block schedule perceived it to be more challenging to include special education students in courses having the shop/laboratory-only and combination classroom and shop/laboratory formats than did teachers on a regular schedule. Block teachers perceived that students with physical disabilities were more challenging to include in their courses than did teachers on a regular schedule.

The more teachers felt they were prepared to work with special education students, the less challenging they felt it was to teach students with communication disorders. The more formal courses on special education the teachers had taken, the less challenged they felt to include special education students in courses with the classroom-only format.

Overall, state in-service professional development opportunities related to including special education students should focus on younger agricultural education teachers and those teaching on a block schedule. Younger teachers particularly need professional development on including special education students in courses with a classroom-only format. Teachers on a block schedule particularly need professional development on including special education students in courses with shop/laboratory-only and combination formats and in including students with physical disabilities. These educational needs could also be addressed through courses in the state's pre-service education program. Experienced teachers with block schedule teaching experience would be ideal resource people for assisting with these in-service and

pre-service professional development activities. Further research is recommended to:

1. Describe agricultural education teachers' perceptions of the importance, their competence in, and pre-service and in-service professional development needs related to the state's inclusion competencies and skills for working with special education students.
2. Describe agricultural education teachers' preferences for in-service professional development topics on special education.
3. Describe agricultural education teachers' access to resources and professional development opportunities for working with special education students.
4. Describe the methods of accommodation or modification utilized by agricultural education teachers with their special education students.
5. Describe the perceived challenges agricultural education teachers experience in including gifted and talented students in their courses.
6. Describe the reasons why agricultural education students in New Mexico are or are not undertaking SAE.

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THOMAS J. DORMODY is a Professor in the Department of Agricultural and Extension Education at New Mexico State University, 111 Gerald Thomas Hall, MSC 3501, Las Cruces, NM 88003. E-mail: tdormody@nmsu.edu.

BRENDA S. SEEVERS is a Professor in the Department of Agricultural and Extension Education at New Mexico State University, 111 Gerald Thomas Hall, MSC 3501, Las Cruces, NM 88003. E-mail: bseevers@nmsu.edu.

RANDALL J. ANDREASEN was an Assistant Professor in the Department of Agricultural and Extension Education at New Mexico State University, 111 Gerald Thomas Hall, MSC 3501, Las Cruces, NM 88003 at the time this study was conducted.

DAWN VANLEEUEWEN is a Professor in the Department of Agricultural and Extension Education at New Mexico State University, 111 Gerald Thomas Hall, MSC 3501, Las Cruces, NM 88003. E-mail: dvanl@nmsu.edu.