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# The Impacts Of Inclusive Learning On Special Needs Students, Traditional Students And Faculty In The Agricultural Education Classroom

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THE IMPACTS OF INCLUSIVE LEARNING ON SPECIAL NEEDS  
STUDENTS, TRADITIONAL STUDENTS AND FACULTY IN THE  
AGRICULTURAL EDUCATION CLASSROOM

By

Lynnetta Jane Wilson

B.S., Murray State University, 2004

A Research Paper

Submitted in Partial Fulfillment of the Requirements for the

Master of Science Degree

Department of Plant, Soil Science, and Agricultural Systems

Graduate School

Southern Illinois University Carbondale

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College of Agricultural Sciences

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## AN ABSTRACT OF THE RESEARCH OF

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**TITLE: THE IMPACTS OF INCLUSIVE LEARNING ON SPECIAL NEEDS STUDENTS, TRADITIONAL STUDENTS AND FACULTY IN THE AGRICULTURAL EDUCATION CLASSROOM**

**MAJOR PROFESSOR: Seburn L. Pense**

Agricultural Education prepares students for a wide range of opportunities in continuing education and employment. By allowing students of all academic and economic backgrounds to be involved in the agricultural classroom, students are capable of having an appreciation for agriculture and the environment. The classroom not only helps students develop essential career preparation skills but also is capable of providing personal growth that will benefit students now and in the future.

By including all students in the agriculture classroom, all students are impacted in various ways. The purpose of this study was to evaluate the impact on students and faculty where inclusive learning is in place. Studies have indicated that not only are there tremendous benefits for a student with special needs in the agricultural classroom, but for all parties involved. Further preparation for faculty would also increase the positive impact of the inclusive learning experience.

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## CHAPTER ONE

### INTRODUCTION

One of the many objectives for those who obtain careers in the education field focuses on determining the best methods to teach students adequately and prepare them to live sustainable lives in their future. Although the role of the teacher educator has changed over the past several years, Hillison (1998) citing Anderson, Barrick, and Hughes (1992) the preparation of individuals for teaching in middle school and high school agricultural education programs still remains the focal point of most agricultural education programs.

Agricultural education programs are structured so as to fulfill these objectives to the best of their ability. These programs have been around since a national interest in developing skilled labor led to the establishment of the Smith-Hughes Act in 1917, which federally funded public education (Roberts & Ball, 2009). These programs are continuously being restructured to meet the ever-changing needs of today's students. Meeting the needs of those students in recent times has required dramatic and innovative approaches as the population of students with learning disabilities has increased. Studies have shown that the number of students having identified learning disabilities in the United States has greatly increased over the past 30 or more years from 0.75 million in 1976 to 2.41 million in 2002 (Biddle, 2006).

As once said by a personal contact, "Agricultural programs are commonly referred to as a dumping ground for students with disabilities" (personal contact with William Kittinger, 2010). In fact, Pense (2009) reported nearly one-fourth of agricultural education students have Specific Learning Disabilities (SLD). Students with "Specific Learning Disabilities (SLD) means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or to do mathematical calculations, including conditions such as

perceptual disabilities, brain injuries, minimal brain dysfunction, dyslexia and developmental aphasia” (Special education, 2008, p.1).

The Illinois Core Standards are adapted to meet the changing needs of SLD students. According to the Illinois State Board of Education, “The Standards should be read as allowing for the widest possible range of students to participate fully from the outset, along with appropriate accommodations to ensure maximum participation of students with special education needs” (Background and Overview, 2010, p.3).

This agricultural curriculum typically has been ever-changing as it prepared this population for further training in various workforce fields. According to Pense, Watson & Wakefield (2010), “if the curricular needs of SLD students in the agricultural education classroom are not met, the agriculture industry risks losing 25% of the future workforce,” (p.115).

### **Statement of Problem**

While providing students with disabilities, the opportunity to be included through inclusive learning seems like an effortless decision. However, there are several questions to consider.

- Are the needs of students with disabilities different than those without disabilities?
- As SLD students are placed in mainstream classes, are the learning techniques that are applied in the classroom so different that the traditional learner will struggle?
- Can the needs of students with disabilities be met through agricultural education?
- Does inclusive learning provide benefits to students with learning disabilities?

### **Purpose of the Study**

The purpose of the study was to determine the impacts of inclusive learning on students with special needs, as well as others who are involved in the agricultural classroom. The research methods that have been established to examine these relations have varied. This study examined the literature on redesigning curriculum in agricultural classrooms. The study sought to identify whether the instruction in agricultural education classroom results in academic achievement of SLD students, and identify the attitudes of teachers and their efficacy when teaching students with disabilities and whether all these areas can have an ongoing impact on SLD students in the classroom.

### **Objectives**

1. Identify the impact of the agricultural classroom on students with special needs.
2. Determine if the classroom teacher affects the learning of students with special needs in the agricultural education classroom.
3. Outline the benefits of having students with special needs in the agricultural classroom for both the SLD student and traditional students.
4. Examine the limitations of including SLD students in the agricultural classroom.

### **Conceptual Framework**

The conceptual framework depicted in Figure 1 provided by Pense, Watson, & Wakefield in their 2010 article outlines four concepts to redesigning the curriculum for students with learning disabilities. The model focuses on four theoretical concepts: inclusion, student engagement, assistive technology and principles of curriculum redesign for the student with special needs. This framework established a basis to further inquire into related research and

address the established objectives. The framework utilizes all resources in the school environment to promote a successful educational experience for not only the SLD but the traditional students who are sharing the inclusive classroom setting.

Inclusion can be achieved by including several factors. The principles that are shown in Figure 1 to influence inclusion are: diversity, individual needs, reflective practice, and collaboration (Pense et al., 2010). By placing the traditional student in the same environment with the SLD an automatic diverse situation is established. The framework must then use collaboration of the students, teachers, and resources to adapt the curriculum to meet the needs of all students involved.

The capabilities of various resources in today's society make access to assistive technology possible to accommodate SLD specific needs. Furthermore the classroom engagement for all students, the SLD and the traditional student conclude to be successful with the diverse curriculum structure. A more in-depth look into the framework addressing additional literature review will model these principles.

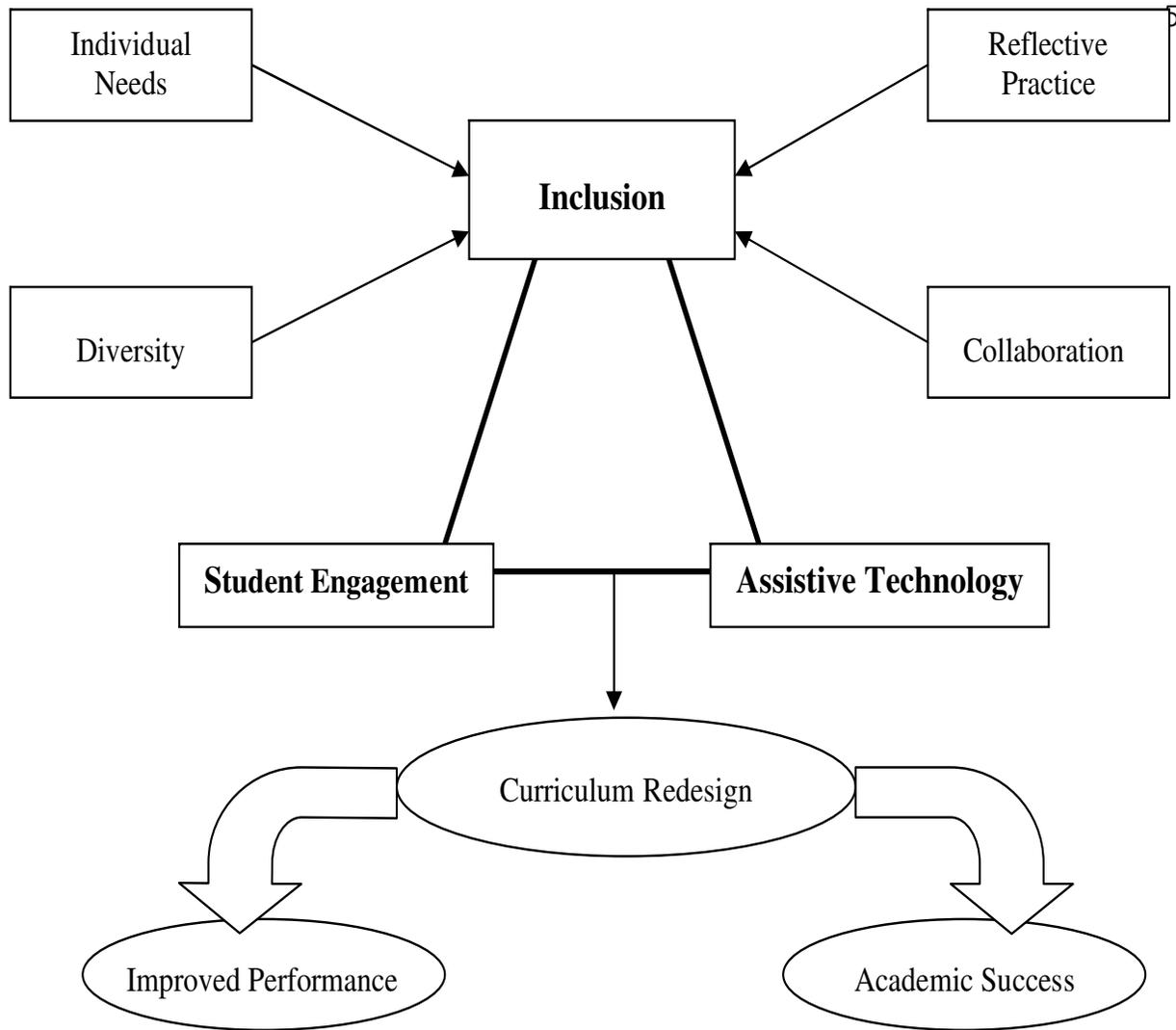


Figure 1. Conceptual model of curriculum redesign for SLD students. (Pense, Watson, & Wakefield, 2010. p.117)

### **Limitations**

Limitations found in this paper include the lack of research and journal entries outlining the specific reason successes in the agricultural classroom exist. There were many research projects that studied the behavior and attitudes, which are taught, but not many showed concentration on the actual agricultural curriculum. Due to the lack of flexibility with the student's IEP, individualized educational plan information, this could result in the materials not being as available as other subject matter.

## Definition of Terms

To limit the misunderstanding in human communication, the following definitions have been provided:

**Agricultural Education:** *Instruction about crop production, livestock management, soil and water conservation, and various other aspects of agriculture. Agricultural education includes instruction in food education, such as nutrition. Agricultural and food education improves the quality of life for all people by helping farmers increase production, conserve resources, and provide nutritious foods (Us legal definitions, 2012).*

**Life Skills:** *Life skills are a set of human skills acquired via teaching or direct experience that are used to handle problems and questions commonly encountered in daily human life (Karmaza, 2008).*

**Special Needs:** *Particular educational requirements resulting from learning difficulties, physical disability, or emotional and behavioral difficulties (Encyclopedia of Education, 2002).*

**Kinesthetic Learning:** *A learning style in which learning takes place by the student carrying out a physical activity, rather than listening to a lecture or watching a demonstration. People with a kinesthetic learning style are also commonly known as "do-ers." According to the theory of learning styles, students who have a predominantly kinesthetic style are thought to be discovery learners: they have realization through doing, rather than thinking before initiating action. They may struggle to learn by reading or listening (Berman, 2009).*

**Inclusive Learning:** *The practice of teaching disabled students alongside their non-disabled peers in regular classroom settings, instead of segregating them in special classrooms. The principle of inclusion is based on the idea that every child has a right to belong and to be included in the school community (Pavri & Luftig, 2001).*

**FFA:** *FFA is an integral part of a well-rounded, three-part agricultural education program.*

*FFA focuses on a child's development as a leader and a professional. The other two parts of the agricultural education program, Instruction and SAE, Supervise Agricultural Experience, focus on teaching a child technical skills and knowledge while providing hands-on learning experiences (Organization, 2012).*

**SLD:** *Specific Learning Disability, SLD is a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia (Johnson, 2006).*

## CHAPTER TWO REVIEW OF LITERATURE

### Background

From its inception in the 1700's, agriculture by definition is an applied science that combines principles of the physical, chemical, and biological sciences in the process and production of food and fiber (Merriam Webster, 1988). Presently agriculture has been referred to as a highly intensive, technologically sophisticated industry (Dailey, Conroy & Shelley-Tolbert, 2001). According to Dailey (2001), Agricultural Education was designed to provide better opportunities for all students who were interested in pursuing a career in agriculture. Dailey's framework also examined that the study of agriculture education can also provide a context in which learners can explore biological and mathematic concepts and skills (2001).

#### *Identify the impact of the agricultural classroom on students with special needs.*

The emphasis to prepare these students for a career after high school has led to an increase in students with disabilities taking Career Technical Education, CTE coursework, which allows students to gain a practical, hands-on education that will help them to become more successful upon entering the workforce (Harvey, 2001).

Most of the recent research that related to the importance of agricultural education in the classroom for students with special needs includes the understanding of the important process in which career and technical education should be highly involved in the preparation, implementation, and evaluation of the individual education programs (IEPs) (Andreasen, Seevers, Dormody, & VanLeeuwen, 2007).

Due to today's learning standards and the focus on the expectations for all students have risen. Educational focus has identified higher standards for students in mathematics and science

in the last decade, emphasizing teaching strategies that place students in more control of their own learning strategies and inquiry. The focus links connections within and between disciplines, as students' life experiences within the classroom environment (Jarrett, 1999, p.4-5).

According to *Condition of Education*, a report published by the National Center for Educational Statistics in 2007, 50% of students with disabilities spent 80% of their time in the general education classroom. Students served under the Individuals with Disabilities in Education Act now account for 14% of the total number of students enrolled in public school. These students will be placed in the CTE programs within school districts. This large number has resulted in special skills possessed by educators for all curriculums and more adaptability in the classroom environment.

***Determine if the classroom teacher affects the learning of students with special needs  
in the agricultural education classroom***

Due to the fact that the agricultural classroom is made up of more than just the classroom instruction, teachers are capable of increasing participation in FFA and SAE projects for those students with disabilities to further address their specific abilities and skills (Stair, Moore, Wilson, Croom, & Jayaraine, 2010). The numbers of special education students do not seem to be decreasing anytime soon. In fact, according to Pense, et al (2010), the number of students with identified learning disabilities in the United States has greatly increased over the past 30 or more years.

Although many times misleading, according to Dailey, et al. (2001), participants in the study agreed the term *vocational agricultural* has negative impacts on the public image of the programs and that science-based instruction would help that image (Dailey, et al., 2001). By showing the relation with the agricultural curriculum and science based studies the curricula

would become more of a staple in the education system, further benefiting more students as the population of students with special needs continues to grow (Jarrett, 1999, p.4-5).

According to Jolene Hinrichsen, science associate for the Northwest Regional Educational Laboratory (NWREL) in Portland, Oregon. “Often, a weakness in mathematical reasoning is counterbalanced with strength in spatial or interpersonal intelligences. Respect for diverse intelligences must be apparent to all persons in a classroom if students with disabilities are to be given support to succeed (Jarrett, 1999).

***Benefits of having students with special needs in the agricultural classroom for both the SLD student and traditional students***

Teachers are now seeing the need to adapt curricula and teaching strategies to close the gap between agricultural and academic education (Eaton, 1994). In an effort to fill this gap, Balschweid and Thompson (1999) called for providing preservice education for both agricultural and science teachers on the benefits of integrating science into the agriculture curriculum. To encourage teachers to make this integration, some states have provided a biological science endorsement for agricultural education teachers (Guistino & Straquadine, 1994). This allows school districts and communities to see the large connection between the agricultural industry and the science field by allowing specific agricultural classes to count towards the science graduation requirements. The Department of Education provides information that when designing curriculum programs for classrooms, the needs of all students should be addressed in order for the traditional students as well as the SLD to thrive. All students belong in an environment together and each individual is valued (Department of Education, 2006).

According to the Department of Education (2006), inclusive schools recognize and respond to the diverse needs of their students, accommodating both different styles and rates of learning and ensuring quality education. Findings from the University of British Columbia suggested that students with disabilities in mainstreamed classrooms made greater overall academic gains than their peers with similar disabilities in segregated classrooms (Katz & Miranda, 2002).

Effective youth programs such as the FFA which is found in most agricultural programs, addresses a positive interaction with peers and adults. Programs such as this are well attuned to the special educational and developmental need of its students. The interaction can help youth understand and more fully develop appropriate social roles. (Phipps, et al, 2008, p. 55)

### ***Limitations of including SLD students in the agricultural classroom***

To compensate for the various types of students being taught in an inclusive environment, various techniques have been adapted to be able to teach both types of students at the same time. The opponents of inclusion view it as a policy driven by unrealistic expectations where schools try to force all students into the mold of regular education (Special Education, 2008)

In addition to the environmental techniques within the classrooms, teachers should be provided additional support to learn strategies to implement these strategies (Elbert & Baggett, 2003). There are students that need the special education classroom where there is a small class size, limited distractions, more one-on-one instruction, and an individualized academic program where they are learning the important skills needed to be successful once they are out of school. “With these students, you want to hit them hard in terms of education with reading, writing, math, and all other basic skills” (Lehrer, 1998).

According to Easterly and Myers (2011), meeting the educational requirements of students with special needs is an issue that should be addressed, however little has been done to determine the best ways to educate these students in School Based Agricultural Education (SBAE) settings. The reauthorization of the Perkins Vocational Act in 2006 mandated that appropriate vocational education is provided to students with special needs. Dormody, SeEVERS, Andreasen, and VanLeeuwen (2006) found 19% of SBAE students in New Mexico had an Individualized Education Plan (IEP), compared to 23% in Illinois (Pense, 2008).

The Individuals with Disabilities Education Act of 2004 (IDEA) requires that students with special needs receive individualized instruction that meets their needs in the least restrictive environment (Kinder, Kubina, & Marchand–Martella, 2005). For most students with special needs this includes being mainstreamed into the regular classroom for at least part of the school day. Ninety–seven percent of students with disabilities are in general education courses for at least 40% of the day (Smith, 2007).

Beyond hands on application and leadership skills, “Agricultural education [also] provides students with transferable academic skills so as to prepare them to achieve in other courses, as well as preparing them for higher education” (Dailey, et al., 2001, p. 14). Leadership activities conducted through the FFA provide opportunities for students to learn about teamwork, public speaking, debates, writing for communication of ideas, and other skills identified as important for the worker of the future (SCANS, 1991). This impacts student’s abilities in the workforce largely, focusing on an area where many students lack in skill.

According to the National Center for Education Statistics, as of fall 2008 approximately 95 percent of students with disabilities from the ages of 6-21 years were placed into the regular

classroom setting (USDE, 2011) This furthermore relates the need for students to gain the knowledge and skill needed to be employed after high school (Elbert & Baggett, 2003).

## **CHAPTER THREE**

### **SUMMARY, CONCLUSIONS & RECOMMENDATIONS**

#### **Summary**

In summary, agricultural education provides, at a minimum, hands-on, experiential science and mathematics education that meets the demands for cross-curricular integration and needs of students in the nontraditional setting (Dailey, et al., 2001). The incorporation of agricultural education into the classroom has lasting effects on the students as an individual and as a community merging with various abilities that will be seen in the workforce

#### **Conclusions**

The findings are presented according to the study's objectives, identifying the impact of the agricultural classroom on students with special needs, determining if the attitude and efficacy of the classroom teacher affects the learning of students with special needs in the agricultural education classroom, outlining the benefits of having students with special needs in the agricultural classroom for both the SLD student and traditional students and examining the limitations of including SLD students in the agricultural classroom.

The types of programs that are established at various schools can largely have an affect on the findings from various studies. However, according to the literature review and the case studies presented the following conclusions are to be addressed:

1. *Identify the impact of the agricultural classroom on students with special needs.*

As concluded from the literature review, the agricultural classroom can have a tremendous affect on the future of students with special needs. The skills and knowledge that are

presented in this classroom are a basis for SLD's integration into the workforce after high school. The agricultural classroom addressed skills that will largely have an impact on the individual and the community after completing high school. This is directly related to the material provided by the Department of Education, "inclusiveness is evident when curriculum programs are designed in such a way that the learning needs of all students are catered for; (Inclusive schools, 2006, p.2).

When students with disabilities are provided with alternatives to traditional written tasks, such as oral presentations, role plays, murals, or other creative projects, they are enabled to use their learning strengths (e.g. visual, auditory, tactical, and kinesthetic) rather than their deficits (Hay, Courson, & Cipolla, 1997). The agricultural classroom is fortunate to provide this type of environment. "Classroom and laboratory instruction, SAE's, and student leadership development through participation in FFA and the cornerstone feature of school-based agricultural education programs. Agriculture education is based on a strong philosophy of learning through practice and application, individualized instruction, career leadership development, community-based programs, and exposure to the agricultural industry as a dynamic, hi-tech field of vital importance to individuals and society at large" (Phipps et al., 2008, p. 21).

*2. Determine if the classroom teacher affects the learning of students with special needs in the agricultural education classroom.*

The literature presented has shown that largely the success of the teacher in the agricultural classroom is contributed to administrative support of the faculty and the program. Teachers early in their career suggested that having increased in-service training results in higher confidence levels of self-perceived success teaching students with special needs. According to

Phipps et al. (2008), agricultural educators recognize the importance of making agricultural education accessible to students having a wide range of academic and social skills. They have learned to effectively work with students' possessing special needs by emphasizing individualized instruction; by placing emphasis on agricultural problems experienced by students; and by giving attention to supervised study, laboratory experiences, field trips, SAE and student organizations.

*3. Outline the benefits of having students with special needs in the agricultural classroom for both the SLD student and traditional students.*

Literature has shown that the curriculum followed in the agricultural classroom effectively increased learning for both the SLD and the traditional student. "Students with learning disabilities should be full participants in a cooperative group, bringing their unique experience and strengths to the team," says Jolene Hinrichsen, science associate for the Northwest Regional Educational Laboratory (NWREL) in Portland, Oregon (Jarrett, 1999, p.5). Agricultural classes participate in a variety of events through the FFA which strives to develop premier leadership, personal growth, and career success in its members and is an intra-curricular element of agricultural education in the public schools. It offers individual and chapter programs and activities, through which students develop a variety of skills. (Phipps, Osborne, & et al, 2008). Many SLD students fall behind in the classroom and curriculum revisions are needed. Agricultural resources are limited for staff to use when teaching SLD. This however does not impact the welcome environment that the agricultural classroom provides.

Professional organizations are urging more connection within and between disciplines, as well as links to students' life experiences (Jarrett, 1999). Agricultural education is capable of meeting this need through their supervised agricultural experience program; this program

provides opportunities for students to apply the knowledge and skills learned at school to real-life situations (Phipps, et al, 2008).

*4. Examine the limitations of including SLD students in the agricultural classroom.*

The consensus of the literature reviewed was that agricultural education produces students who can be effective members of society, who have a high level of sufficiency in social skills, and who possess content-rich information (Dailey, et al., 2001).

Specific students will need the special education classroom where there is a small class size, limited distractions, more one-on-one instruction, and an individualized academic program should not be placed in an inclusive environment as this may not be the best classroom to meet their specific needs. (Education Integration, 1998) Agricultural education is a viable curriculum alternative for instruction and experiences leading to transfer of workplace skills. Learning technical and workforce skills is encouraged within the diversity of coursework and experiences in agricultural education, offering students an opportunity to learn a variety of skills (Dailey, et al., 2001).

Other findings included the fact that agricultural education incorporates a combination of diverse teaching methodologies (i.e. hands-on learning, vocational skills training, academic concept development) and technical content (i.e. agriculture, business, science, marketing, economics), with intra-curricular experiential learning and leadership development (Dailey, et al. , 2001). Many of the skills gathered in an agricultural classroom may involve independent work, hands on skills, and safety precautions. This would be a circumstance where a one-on-one instruction would be the best fit for the SLD and not the inclusive environment. The limitations would be in direct relation to the students IEP.

This is further proven with by the Department of Education's conclusions that "students' developmental needs are best promoted through a collaborative approach and by focusing on the

students' learning needs rather than on their disability (Inclusive schools, 2006). Needs that may not be able to be met in an inclusive environment.

According to Easterly and Myers (2011), inquiry-based instruction was a beneficial method of instruction, but more research should be done to determine the best way or ways to educate students with special needs in agricultural education, moving towards the ultimate goal of personal growth and practical learning for all students.

According to Janet Jendron (2012), Assistive technology (AT) is any tool that helps students with disabilities complete assignments things more quickly, easily or independently. It can be elaborate and expensive or simple and low-cost. Assistive technology services are supports for using assistive technology devices, such as assistive technology evaluations, equipment maintenance, technical assistance, demonstration or training.

Jendron also states, "Many teachers have consistently worked to provide alternative ways of learning for students who learn in different ways. The impact of technology on education has been profound. Computers have become an essential literacy tool in our society. When assistive technology is appropriately integrated into the classroom, students are provided with multiple means to complete their work and focus on achieving academic standards."

With curriculum redesign, students that have disabilities that interfere with their communication, learning, social relationships or active participation, assistive technology supports their participation in learning experiences in the least restrictive environment. Assistive technology can be the lifeline that increases a student's opportunities for education, social interactions, and meaningful employment.

## **Recommendations**

While agricultural education covers a wide variety of topics and learning methods, research findings need to be implemented. Recommendations for further research are recommended in the following areas; appropriate curriculum redesigns, development of Learning Disabilities to populate a central repository, other assistive technologies to aid the SLD student as well as expanded information on the following. The agricultural classroom is best for students with SLD. All students need an opportunity to thrive in the classroom. Does this also include SLD? Are there positive lasting effects on the traditional student being placed in an inclusive learning environment?

“Over the years, agricultural education has demonstrated its strong resilience and ability to adapt to educational and societal trends and changing student demographics. To sustain its current growth trend, school-based agricultural education must remain engaged in the larger schooling agenda and continue to find innovative ways for effectively teaching the full spectrum students in today’s schools” (Phipps, et al., 2008, p. 21).

Overall educators in the agricultural education field should continue to take opportunities to accommodate all the students in their classroom, including those with special needs. The learning experiences in the FFA and agricultural programs prepare students for leadership and responsibility in the world after high school. Students with special needs are an asset to all programs and should not be overlooked but embraced, because people with special needs are human beings also, and should be taken to consideration. Even though these students may need more help, they have different views than most students who are “normal”. And to witness one of these “special” kids marvel and enjoy agricultural experiences, it just melts the heart.

## REFERENCES

- Anderson, T. J., Barrick, R. K., & Hughes, M. (1992). Responsibilities of teacher education for vocational teacher professional development programs. *Journal of Agricultural Education, 33*(2), 43-50. doi: 10.5032/jae.1992.02043
- Andreason, R., Seevers, B., Dormody, T., & VanLeeuwen, D. (2007). Training needs of New Mexico agricultural education teachers related to inclusion of students with special needs. *Journal of Agricultural Education, 48*(4), 117-129. doi:10.5032/jae.2007.04117
- Background & Overview (2010) *Background and overview of the new Illinois learning standards*. (2010, September). Retrieved from [http://www.isbe.net/common\\_core/pdf/ccs\\_faq.pdf](http://www.isbe.net/common_core/pdf/ccs_faq.pdf)
- Balschweid, M., & Thompson, G. (1999, December). *Integrating science in agricultural education: Attitudes of Indiana agricultural science and business teacher's paper* presented at the 26th Annual National Agricultural Education Research Conference, Orlando, FL.
- Berman, B. (2009). 6 more benefits kids gain from kinesthetic learning. *Family & Parenting*, Retrieved from <http://www.examiner.com/article/6-more-benefits-kids-gain-from-kinesthetic-learning>
- Biddle, S. (2006). Attitudes in Education. *The Science Teacher, 73*(3), 52-56
- Dailey, A. L., Conroy, C. A., & Shelley-Tolbert, C. A. (2001). Using agricultural education as the context to teach life skills. Doi: 10.5032/jae.2001.01011 Retrieved from <http://www.jae-online.org/attachments/article/414/42-01-11.pdf>

Department of Education, (2006). *Inclusive schools and effective schools*. Retrieved from State Government Victoria website:

[http://www.eduweb.vic.gov.au/edulibrary/public/stuman/wellbeing/Inclusive\\_Schools\\_and\\_Effective\\_Schools-December\\_2006.pdf](http://www.eduweb.vic.gov.au/edulibrary/public/stuman/wellbeing/Inclusive_Schools_and_Effective_Schools-December_2006.pdf)

Easterly, R. G., Myers, B. E. (2011). Inquiry-based instruction for students with special needs in school based agricultural education. *Journal of Agricultural Education*, 52(2), 36-46.  
doi:10.5032/jae.2011.02036

Eaton, D. W. (1994). New directions in agricultural education: The impact in public schools. *Dissertation Abstracts International*, 55(11), 44-52.

Elbert, C. & Baggett, C. (2003). Teacher competence for working with disabled students as perceived by secondary level agricultural instructors in Pennsylvania. *Journal of Agricultural Education*, 44(1). 105-115. doi: 10.5032/jae.2003.01105

Encyclopedia of Education. (2002). Mock, Devery R.; Jakubecy, Jennifer J.; Kauffman, James M.; Sindelar, Paul T.; Brownwell L, Mary T.; Ackerman, Paul; Jaeger, Robert; Smith, Anne. "Special Education." Retrieved November 28, 2012 from Encyclopedia.com:  
<http://www.encyclopedia.com/doc/1G2-3403200572.html>

Giustino, J. J., III, & Straquadine, G. S. (1994, December). *Assessing the impact of the biological science teaching endorsement on Utah's secondary agricultural education enrollment and course offerings: 1988 to 1993*. Paper presented at the 21st Annual National Agricultural Education Research Meeting, Dallas, TX.

Harvey, M. (2001). The efficacy of vocational education for students with disabilities concerning post school employment outcomes: a review of the literature. Retrieved from  
<http://scholar.lib.vt.edu/ejournals/JITE/v38n3/harvey.html>

- Hay, G.H., Courson, F.H., & Cipolla, J.M. (1997). Strategies for success in inclusive classrooms. *Readings & Writings Quarterly*, 13, 19-100. doi:10.1080/1057356970130109
- Hillison, J. (1998). The role of the agricultural education teacher educator, yesterday, today, and tomorrow. *Journal of Agricultural Education*, 39(1), 1-7. doi:10.5032/jae.2004.03044
- Institute of educational sciences; national center for educational statistics. (2011). Retrieved from <http://nces.ed.gov/programs/coe/>
- Jarrett, D. (1999, March). *Northwest regional educational laboratory*. Retrieved from [http://educationnorthwest.org/webfm\\_send/753](http://educationnorthwest.org/webfm_send/753)
- Jendron Janet. (2012, October 9). *South carolina assistive technology program*. Retrieved from <http://www.sc.edu/scatp/cdrom/atused.html>
- Johnson, E. (2006, April). *National research center on learning disabilities*. Retrieved from [http://www.nrcld.org/sea/presentations\\_worksheets/big1/Section4.pdf](http://www.nrcld.org/sea/presentations_worksheets/big1/Section4.pdf)
- Karmaza, E. (2008). *Life skills development program for kids in residential care using psychodrama*. Retrieved from [http://www.childcentre.info/public/Life\\_skills\\_development\\_program\\_for\\_kids\\_MINI.pdf](http://www.childcentre.info/public/Life_skills_development_program_for_kids_MINI.pdf)
- Katz, J., & Mirenda, P. (2002). Including students with developmental disabilities in general education classrooms: Educational benefits. *International Journal of Special Education*, 17(2), 14-24. Retrieved from <http://www.internationaljournalofspecialeducation.com/articles.cfm?y=2002&v=17&n=2>
- Kinder, D., Kubina, R., & Marchand–Martella, N. E. (2005). Special education and direct instruction: An effective combination. *Journal of Direct Instruction*, 5(1), 1–36. Retrieved from [http://www.adihome.org/articles/JDI\\_05\\_01\\_01.pdf](http://www.adihome.org/articles/JDI_05_01_01.pdf).doi:10.5032/jae.2011.02036

- Lehrer, J. (1998, March 24). *Online focus*. Retrieved from  
[http://www.pbs.org/newshour/bb/education/jan-june98/specialed\\_3-24.html](http://www.pbs.org/newshour/bb/education/jan-june98/specialed_3-24.html)
- Merriam-Webster. (1988). *Dictionary of the American Language*. Chicago: Merriam-Webster Publishers. Retrieved from website: [www.merriam-webster.com/info/faq.htm](http://www.merriam-webster.com/info/faq.htm)
- Organization, N. F. (2012). *Parents and supporters*. Retrieved from  
<https://www.ffa.org/myffa/Pages/parentssupporters.aspx>
- Pavri, S. & Luftig, I. (2001). The social face of inclusive education: Are students with learning disabilities really included in the classroom?. Retrieved from  
[http://www.idonline.org/article/The\\_Social\\_Face\\_of\\_Inclusive\\_Education:\\_Are\\_Students\\_with\\_Learning\\_Disabilities\\_Really\\_Included\\_in\\_the\\_Classroom?](http://www.idonline.org/article/The_Social_Face_of_Inclusive_Education:_Are_Students_with_Learning_Disabilities_Really_Included_in_the_Classroom?)
- Pense, S., Calvin, J., Watson, D., & Wakefield, D. (2012). Incorporating learning objects in a curriculum re-design to meet needs of students with specific learning disabilities in Illinois agricultural education programs. *Journal of Agricultural Education*, 53(4), 112-123. doi: 10.5032/jae.2012.04112
- Pense, S. L., Watson, D. G., & Wakefield, D. B. (2010). Learning disabled student's needs met through curriculum redesign of the Illinois agricultural education core curriculum. *Journal of Agricultural*, 50(2), 115-126. doi: 10.5032/jae.2010.02115
- Pense, S. (2009). Circular needs of students with specific learning disabilities in Illinois secondary agricultural education programs. *Journal of Agricultural Education*, 50(2), 87-99. DOI: 10.5032/jae.2009.02087 Retrieved from  
[http://www.jae-online.org/attachments/article/59/Pense\\_50\\_2\\_8799.pdf](http://www.jae-online.org/attachments/article/59/Pense_50_2_8799.pdf)
- Phipps, L. J., Osborne, E. W., Dryer, J. E., Ball, A. L., (2008). *Handbook on agricultural education in public schools*. (Sixth ed. ed.). Clifton Park, NY: Delmar Learning.

“Preparing for inclusion”. (2004) Retrieved from:

<http://www.uni.edu/coe/inclusion/preparing/parents.html>

Roberts, T. G., & Ball, A. L. (2009). Secondary agricultural science as content and context for teaching. *50*(1), 81-91. doi:10.5032/jae.2009.01081. Retrieved from

[http://www.jae.online.org/attachments/article/74/Roberts\\_Bell\\_50\\_1\\_81-91.pdf](http://www.jae.online.org/attachments/article/74/Roberts_Bell_50_1_81-91.pdf)

(Scans) *Report of the Secretary's Commission of Achieving Necessary Skills* (1991)

Washington, DC : U.S. Department of Labor Retrieved from U.S. Government Printing website: <http://wdr.doleta.gov/SCANS/whatwork/whatwork.pdf>

*Special education*. (2008, August 22). Retrieved from

<http://www.doe.mass.edu/sped/links/learndisability.html>

Smith, D. D. (2007). *Introduction to special education: Making a difference (6th ed.)*. Boston, MA: Pearson.

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

Summit, Washington DC. Retrieved from <http://www.ld.org/research/index.cfm>

Tsang, M. C. (2002). Economic analysis of educational development in developing nations. *Encyclopedia of Education, 2nd edition.*, Retrieved from

[http://www.tc.columbia.edu/centers/coce/pdf\\_files/d6.pdf](http://www.tc.columbia.edu/centers/coce/pdf_files/d6.pdf)

USDE (2011) *Us legal definitions*. (2012, January 26) Retrieved from

<http://www.nysedregents.org/USHistoryGov/112/ushg12012-rg2.pdf>

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