

THE KNOWLEDGE AND RELEVANCE OF SPECIFIC TEACHING COMPETENCIES
WHEN WORKING WITH LEARNING DISABLED STUDENTS AS PERCEIVED BY
COLLEGE OF AGRICULTURAL AND LIFE SCIENCES TEACHING FACULTY

By

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This document is dedicated to my parents Linda and Buford and my brother Beau for their significant support, sacrifices and unconditional love that enabled me to pursue my dreams

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Abstract of Thesis Presented to the Graduate School
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The primary purpose of this study was to assess instructors perceived knowledge of learning disabilities when using specific instructional methods. Also the study measured the degree to which instructors find specific instructional methods important when working with students with learning disabilities. This study will aid in comparing instructors' perceived knowledge level and the degree to which they find the specific instructional method important when working with students with learning disabilities. The data was collected and analyzed in order to find a set of best practices when working with students with learning disabilities.

The study was designed to utilize the Borich Needs Assessment Model to analyze the competencies of instructors and prior knowledge of teaching methods to utilize when working with learning disabled students in higher education. The independent variables in this study were the instructional competencies that instructors use when working with students with learning disabilities. The dependent variables were instructors' knowledge and its relevance to their job.

This study was administered to instructors ($n = 385$) who taught classes through the College of Agricultural and Life Sciences at the University of Florida in the spring semester of 2010. There are 19 departments in the College of Agricultural and Life Sciences with 13.5% of instructors ranked as lecturer, 29.2% as assistant professor's, 24% as associate professors' and 33% as professors.

The instrument was an anonymous web - based Borich Needs Assessment Model hosted by SurveyMonkey for data collection. The questionnaire was designed to measure instructors attitudes, knowledge, and forms of differentiated instruction used in the classroom and their perceived relevance of it to their specific job. The questionnaire was divided into four parts, (a) the current knowledge level of the instructor based upon teaching methods, (b) the perception of instructors of the relevance to the job in relation to the teaching methods, (c) demographic information, and (d) open-ended questions. The survey was composed of ranking questions, multiple choice items, and open-ended questions. The Borich Needs Assessment Model was used to measure participants perceptions of twelve teaching competencies. Participants used a five-point scale (1= Low Knowledge/Relevance; 5= High Knowledge/Relevance) to rate their level of current knowledge for each competency and the degree to which the competency was or was not relevant to their job.

The data were analyzed using the Statistical Package for the Social Sciences (SPSS). The researcher utilized descriptive statistics to gain a better insight into the data set. The first type of analysis conducted was means, standard deviations, and frequencies. The researcher utilized a one-way analysis of variance (ANOVA) in order to assess the relationship between the independent and dependent variables. The

topics from the Borich Needs Assessment Model were ranked according to the mean rating obtained from the survey. A discrepancy score was obtained for each participant by subtracting the instructor's perceived level of knowledge from the perceived level of relevance for a specific teaching competency. Each discrepancy score was then multiplied by the mean importance level for that specific topic, resulting in a mean-weighted discrepancy score for each participant.

It was expected that the majority of participants in this study would have a concrete knowledge level of the Americans with Disability Act of 1990. Given the laws and regulations to provide accommodations to students, participants were knowledgeable that learning disabled students registered through the University Of Florida Office Of Disability were expected to receive the recommended approved accommodations. Many participants were knowledgeable about the Americans with Disability Act of 1990, but did not know the implications and requirements that students with learning disabilities were entitled to. Section 504 of the Americans with Disability Act "requires all federally funded programs, including educational programs such as state universities, to provide accommodations to all "otherwise qualified" persons who self-identify as having any disability that "substantially limits one or more major life activities." It is critical that instructors become familiar with the Americans with Disability Act of 1990 and the appropriate accommodations that students should receive.

CHAPTER 1 LEARNING DISABILITIES IN HIGHER EDUCATION

Introduction

An instructor's ability to manipulate a student's performance in an educational setting is an evident factor when working students with learning disabilities. Three major factors play leading role's in the achievement of students with learning disabilities: learning styles, teaching techniques, and the curriculum presented to the student (Simmons, Kameenui, & Chard, 1998). Examining instructors efficacy is a key factor in determining the success of the education of students with a learning disability (Simmons, et al., 1998). Instructor efficacy is defined as the belief about the judgment of the instructor "to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated" (Moran & Hoy, 2001, p.783). Instructor efficacy is pivotal to the performance of students based on teacher's methods of teaching for, assessments, and differenation of material to students with learning disabilities (Simmons et al., 1998).

April 16, 1963, was the defining day in categorizing and recognizing the phrase, "learning disabilities," by a group of concerned parents advocating for their children in dire need of support and services that did not exist in the United States (Learning Disability Association of America [LDAA] , 2006). The Children with Specific Learning Disabilities Act passed in 1969 was a federal law acknowledging learning disabilities as a medical condition (LDAA, 2006). Twenty-one years later, the Americans with Disabilities Act of 1990 (ADA) provided students with advocacy regarding their individual diagnoses of a learning disability, giving them the same rights as every other American (LDAA, 2006). Section 504 of the Americans with Disability Act "requires all

federally funded programs, including educational programs such as state universities, to provide accommodations to all "otherwise qualified" persons who self-identify as having any disability that "substantially limits one or more major life activities" (LDAA, 2006). ADA is defined in the same terms as Section 504, but expands the mandate to include both public and private education, employment, transportation, and telecommunications (LDAA, 2006). Both Section 504 and ADA are intended to insure that "persons with disabilities of any type are not discriminated against in such a way as to exclude them from participating in mainstream society" (University of Florida, Dean of Students Office, n.d). An individual diagnosed with a learning disability is significantly impaired when compared to the average person. The accommodations that are offered on a case-by-case basis through the Office of Student Disability can be as follows:

- Extra time for assessments
- Low -distraction testing environment
- Test scribes and readers
- Use of technology for assessments
- Permission to audio record lectures
- Note- taking services, access to professor's PowerPoint presentations, visuals, and education assistants
- Course materials in alterative formats
- Textbooks in alterative formats
- Interpreting / captioning services
- Use of an assistive learning device
- Reduced course loads and math or foreign language course substitutions
- Priority registration (University of Florida, Dean of Students Office, n.d.).

The U. S. Department of Education’s Office of Special Education and Rehabilitative Administration defines learning disabilities as:

A disorder in one or more of the central nervous system processes involved in perceiving, understanding, and/or using concepts through verbal (spoken or written) language or non-verbal means (U.S. Department of Education, 2008).

This disorder manifests itself with a deficit in one or more of the following areas: attention, reasoning, processing, memory, communication, reading, writing, spelling, calculation, coordination, social competence, and emotional maturity (U.S. Department of Education, 2008).

According to a report by the American Council on Education (n.d) , “About 9 percent of all undergraduates in higher education report having a disability, a percentage that has tripled in the last two decades. This amounts to about 1.3 million students” (American Council on Education New Report Focuses on Helping Disabled Students Succeed in College, n.d). Educating oneself on how to manage a learning disability can be a lifelong effort and can be the key to success in order to prosper in the endeavors one will take. Learning disabilities affects children and adults. Research has shown that a person does not “naturally grow out of a learning disability” (LD Online, 2005). Achieving success can be accomplished by encouraging one’s strengths, acknowledging the weaknesses of learning, understanding the educational system, working with professionals, and learning about strategies for dealing with specific difficulties (LD Online, 2005).

According to the National Institute of Health, 15 percent of the U.S. population, or one in seven Americans, have some form of learning disability (LD Online, 2008). Many highly regarded leaders and educators have been diagnosed with a learning disability including Albert Einstein, Walt Disney, General George Patton, Charles Schwab, and

Vice President Nelson Rockefeller all had trouble learning, but ultimately their learning disabilities did not deter them from success (LD Online, 2008).

Common Learning Disabilities

Learning disabilities should not be confused with other disabilities, such as mental retardation, autism, deafness, blindness, and behavioral disorders; none of these conditions are considered to be learning disabilities. In addition, they should not be confused with lack of educational opportunities, such as frequent changes of schools or attendance problems. Further, children who are learning English do not necessarily have a learning disability (LD Online, 2008).

There are five common learning disabilities that are prevalent in school systems today: dyslexia, dyscalculia, dysgraphia, visual and audio processing disorder, and non-verbal learning disorder. Not all learning disabilities have the same symptoms or impede a student's learning process in the same way (LD Online, 2008).

Approximately 80 percent of students with learning disabilities have reading disabilities. Dyslexia is a language-based learning disability that refers to a collection of indicator and results in people having difficulties with specific language skills, reading, spelling, writing and pronouncing words (International Dyslexia Association, 2007).

There are many common areas that can be challenging for a person with dyslexia, such as:

- Learning to speak
- Learning letters and sounds
- Organizing written and spoken language
- Memorizing number facts
- Reading quickly enough to comprehend
- Persisting with and comprehending longer reading assignments
- Spelling

- Learning a foreign language
- Correctly doing math operations (International Dyslexia Association, 2007)

Dyslexia is a lifelong issue, but it can impact a person's life at different rates. As many as 20 percent of the population may have symptoms of dyslexia, but may not qualify to receive accommodations (LD Online, 2008). Dyslexia is likely to run in families and be carried on to future generations (International Dyslexia Association, 2007). Formal evaluation and testing is the only way to diagnose if a student has dyslexia (International Dyslexia Association, 2007).

Dyscalculia is a math-based learning disability involving problem with counting; distinguishing spatial relationships; sorting shapes, sizes, and colors; and dealing with multistep procedures (National Center for Learning Disabilities, 2006). Each person has a variety of different symptoms that would categorize him or her as having dyscalculia.

These may:

- Be good at speaking, reading, and writing, but slow to develop counting and math problem-solving skills
- Have a good memory for printed words, but have difficulty reading numbers or recalling numbers in sequence
- Be good with general math concepts, but frustrated when specific computation and organization skills need to be used
- Have trouble with the concept of time - chronically late, have difficulty remembering schedules, and have trouble approximating how long something will take
- Have a poor sense of direction and be disoriented and easily confused by changes in routine
- Have poor long-term memory of concepts; able to perform math functions one day but unable to repeat them the next day
- Have poor mental math ability, such as trouble estimating grocery costs or counting the number of days until vacation

- Have difficulty playing strategy games like chess, bridge, or role-playing video games
- Have difficulty keeping score when playing board and card games (National Center for Learning Disabilities, 2006).

Dysgraphia is a learning disability that affects writing, motor skills, and processing skills, thus causing poor handwriting, difficulty in spelling, and an inability to gather and apply one's thoughts (National Center for Learning Disabilities, 2006). Some common symptoms of dysgraphia include:

- Illegible handwriting
- Tight, awkward pencil grip and body position
- Avoiding writing or drawing tasks
- Tiring quickly while writing
- Saying words out loud while writing
- Unfinished or omitted words in sentences
- Difficulty organizing thoughts on paper
- Difficulty with syntax structure and grammar
- Large gap between written ideas and understanding demonstrated through speech (National Center for Learning Disabilities, 2006).

Technology can play an immense role to help to improve dysgraphia by allowing students to use computers to complete assignments (National Center for Learning Disabilities, 2006). Assistive technology, such as language-based software, allows students to speak into a microphone with a processor transcribing the words to paper. These types of software can help with the writing process.

Visual and audio processing disorder impairs the ability to recognize and interpret information taken in through the senses of sight and sound. The two most common

forms of visual and audio processing disorder are problems with visual and auditory perception (National Center for Learning Disabilities, 1999).

Visual processing disorder affects the ability to take in information through the eyes and is affected by the way the person interprets the information and how the brain processes the task. Many people who suffer from visual processing disorder have difficulty relating objects and their position in space. Spatial relations can affect both reading and math because the two subjects rely heavily on perceptual accuracy. Confusion of similar letter shapes, numbers, and objects can deter a person from effectively reading what is on a page. For example, the letters “b/d/p/q” can turn out to be tricky for a person to conceptualize (National Center for Learning Disabilities, 1999).

Nonverbal learning disorders cause an individual to have an impaired ability to organize visual-spatial fields, adapt to new or novel situations, and accurately read nonverbal signs and cues. Only about 10 percent of the U.S. population suffers from nonverbal learning disorders. Frequently these disorders go undiagnosed, and individuals are labeled as “behavioral problems” or “emotionally disturbed.” Many individuals who suffer from nonverbal learning disorder have had previous head trauma or a lack of development within their brain (Thompson, 1996). Some signs of nonverbal disorders include:

- Lack of coordination
- Lack of image and poor visual recall
- Difficulty transitioning to a new environment
- Inability to socially interact
- Lack of common sense
- Lack of ability to comprehend nonverbal communication (Thompson, 1996)

Identification of Learning Disabilities

There are 2.7 million individuals within the United States who receive help within public school systems K-12 and universities because of specific learning disabilities (LD Online, 2008). A professional diagnosis of a learning disability allows a psychologist to diagnose the disability and make appropriate accommodations for learning (LD Online, 2005). The individual will be assessed using numerous IQ and aptitude tests in order to identify the specific learning disability (LD Online, 2008). The individual will be provided with documentation that will be submitted to the school system that has the ability to provide specific accommodations. Each school system must then create an Individual Educational Plan (K-12) or a 504 plan (universities) to create a comprehensive diagnostic and educational plan, including specific accommodations that are provided (LD Online, 2005).

Effectively teaching a classroom of students with different learning styles and disabilities can be very challenging. Learning disabilities do not prevent students from learning to use varied teaching techniques that have been found to be very effective when teaching learning disabled students (LD Online, 2008). One step in helping students with learning disabilities in higher education would be to evaluate different teaching methods that are facilitated in the classroom setting in order to see how they can impede or enhance the environment of learning.

Higher Education

College and university students have a wide variation in learning styles and disabilities. There is a need for consistency in the way that higher education institutions teach students with learning disabilities. With appropriate accommodations it is more likely that students with learning disabilities will experience a successful college career

(National Joint Committee on Learning Disabilities, 1999). Successful individuals with learning disabilities tend to be goal-oriented, determined, persistent, and creative (Reiff et al., 1993).

Adult learning is a process that must be facilitated in a manner that allows the individual to be self-directed while the instructor involves the adult participants in an active learning environment (Lieb, 1991;Moats,2001). Motivating an adult learner is the most important process in breaking down the barriers to education, because creating a successful learning environment will enhance and encourage participants to involve themselves in the process (Lieb, 1991;Moats, 2001). Learning is a continual process through life, and people learn at different speeds, which can be increased by stimulation of the senses (Lieb, 1991;Moats, 2001). Enhancing the learning environment in order to present information in a stimulating manner can reach all levels of learners (Lieb, 1991). Positive reinforcement is essential in the learning process, as it encourages students to participate and creates an environment that is conducive to learning (Lieb, 1991;Moats, 2001). An instructor's job is not complete until students have learned and retained the target ideas and concepts. This is vital so that students will be to able to transfer their knowledge to outside situations and use this knowledge in daily life (Lieb, 1991).

Differentiated learning is the process of teaching students who learn at different rates, but are in the same classroom setting. Using differentiation instruction in classrooms is essential for maximizing the diversity of the classroom and students academic levels (Hall, 2002). In a differentiated classroom, the teacher proactively plans and carries out varied approaches to content, process, and product in anticipation of and responses to student differences in readiness, interest, and learning needs. In

order to help students in a differentiated classroom, students must have choices in the way they learn (Tomlinson, 2001). The curriculum should be varied in three areas:

- Content: multiple outlets for students to take in information
- Process: multiple options for interpreting information
- Product: multiple options for expressing what they know about the information (Sacramento City Unified School District, 1995).

When instructors are structuring their curricula it is necessary for the content to match the student's readiness to read and comprehend the material. The course material should challenge students while not discouraging the learning process. Since a classroom is diverse, it is a challenge to appeal to everyone's interest, but by varying the classroom materials, it may peak the curiosity of others. Varying the visual and auditory elements of teaching appeals to all students and creates a more effective learning environment. Approaching the way lecture's are conducted may enhance the learning process by using overhead projectors, movies, and auditory materials for all types of learners (Tomlinson, 2001).

Process is usually looked upon in a school setting as an activity that helps students make sense of the material. Any effective activity is essentially a sense-making process designed to help a student progress from a current point of understanding to a more complex level of understanding (Tomlinson, 2001). It is important for an instructor to realize that each student in the classroom approaches the learning process differently.

Product is the process of evaluating and assessing students knowledge, understanding, and skills after they have been taught basic material. The student has the ability to replicate what they have learned from the curriculum that has been taught

by completing a project or an assignment. Allowing students options on their approach to projects or assignments gives students with different learning backgrounds the ability to demonstrate their knowledge (Tomlinson, 2001).

Differentiated instruction methods allow mixed ability classrooms to appeal to all learning backgrounds. An instructor that has the knowledge to create a curriculum that appeals to adult learning-disabled students will have a higher success rate of students demonstrating the knowledge that they have learned (Tomlinson, 2001).

Purpose of the Study

The primary purpose of this study is to assess an instructor's perceived knowledge of learning disabilities when using specific instructional methods. Also, the study will measure the degree to which instructors find specific instructional methods important when working with students with learning disabilities. This study will aid in comparing instructors perceived knowledge level and the degree to which they find the specific instructional method important when working with students with learning disabilities. The data will be collected and collated in order to find a set of best practices when working with students with learning disabilities.

Objectives

The objectives of this study were:

1. To describe College of Agricultural and Life Sciences instructors self-reported knowledge of learning disability instructional competencies.
2. To describe College of Agricultural and Life Sciences instructors opinions concerning importance of instructional competencies when working with learning disabled students.
3. To compare the knowledge and importance of instructional competencies when working with students with learning disabilities.

4. To compare the College of Agricultural and Life Sciences instructors differences in knowledge and relevance.

Definition of Terms

- Learning disabled student is a student with a learning disability who has filed appropriate documentation with The Disability Resource Center and has been granted the option to participate in accommodations that will enhance learning and understanding of specific subject matter.
- Teaching resources are interactive and supplemental information that is given to students in order to enhance the learning process, such as PowerPoint, Web Ct, study guides, and recording lectures
- An instructor, the person responsible for facilitating the learning process within the classroom.
- Differentiated Instruction is a classroom that appeals to the needs of all students within a classroom by varying instructional strategies and activities.
- IEP (Individual Educational Plan) or 504 Plan, an individualized plan that sets goals and outlines a student's specific disability.
- Americans with Disability Act of 1990 is a law that requires instructions to abide by when making accommodations for students with disabilities

Significance of the Problem

The problem that this study addresses is significant because it will evaluate teaching methods and resources that are useful within the classroom setting. The research can be beneficial for students and teachers alike in order to help accommodate to specific learning environments and disabilities. By performing this, study, it allows researchers to gain insight on specific learning disabilities and environments or methods that can advance learning or become detrimental. Not only do teachers have a legal obligation to provide accommodations for students with learning disabilities, but a moral obligation to provide students enrolled in the class with the resources and knowledge to perform at their optimal level. The results of this study allow the researcher to discover the areas within the teaching environment that are

weak and perhaps allow teachers to tailor their methods of teaching toward students with learning disabilities and disseminate this information to others. This study is needed to create a better learning atmosphere for students with learning disabilities. If teachers recognize teaching tools and styles that are supportive to that environment, they can adjust their teaching styles to accommodate all students. This study will provide insight on how to better design class lectures to complement the needs of students with learning disabilities.

It is anticipated that this study will add to the body of knowledge of enhancing the instruction on learning disabled students in higher education. The research will provide data for instructors to study when developing a curriculum in their specific area of teaching so to encompass all learners. There are many resources available to instructors regarding differentiated instruction strategies, and it is necessary for students to understand the subject that instructors teach. It is anticipated that this study will identify a need for professional development for faculty in order to increase awareness and use of specific teaching competencies when working with learning disabled students.

Limitations of the Study

This study involves a purposive sample of the University of Florida instructors in the College of Agricultural and Life Sciences. Therefore, the results cannot be generalized outside of the college, the institution, or beyond the state. The questionnaire was electronically distributed using web-based software which may limit the way the way individuals answer the questions or completed the questionnaire. Self-reported scores from the questionnaire are based upon truthful and accurate responses

from the survey population. The questionnaire was researcher- developed, which may yield error or bias to the recipients of the questionnaire.

Assumptions

The basic assumptions that the researcher believes remained consistent through this study is the manner in which the study was conducted, that the respondents will answer each question in a truthful manner and accurately. The research survey remained unbiased against the disability and the facts that were collected. Also, this research will be conducted for the sole purpose of determining the effects that teaching methods have on students with learning disabilities. Students learn differently and some accommodations are more beneficial to a select group. An instructor's teaching style may impact the learning of the students. Also instructors may not have been trained in or know much about learning disabilities.

Conclusion

Appealing to many learning styles within a classroom is a challenge that an instructor must address on a daily basis. By using differentiated instructional methods within the classroom, teachers can appeal to learners at all levels. The building blocks of a successful educational setting is first understanding the students needs, then appealing to their senses by creating a classroom setting that is conducive to learning, and finally allowing students to demonstrate their knowledge. Understanding learning disabilities and creating a curriculum conducive to learning disabled or not makes the experience of learning a process that all students benefit from.

CHAPTER 2 REVIEW OF LITERATURE

This chapter presents a summary of the pertinent literature related to working with students diagnosed with learning disabilities in higher education. It will concentrate on literature that synthesizes the essence of the model of differential learning for students with learning disabilities, along with a theoretical and conceptual framework for this research. Previous investigations in this area of study have analyzed learning styles, brain research, and multiple intelligences in regard to differentiated instruction.

The purpose of this study is to examine how teaching methods in classrooms can enhance learning for students with learning disabilities in higher education. This study addressed the following objectives:

1. To describe College of Agricultural and Life Sciences instructors' self-reported knowledge of learning disability instructional competencies.
2. To describe College of Agricultural and Life Sciences instructors' opinions of the importance of instructional competencies when working with learning disabled students.
3. To compare the knowledge and importance of instructional competencies when working with students with learning disabilities.
4. To compare the College of Agricultural and Life Sciences instructors' differences in knowledge and relevance.

Theoretical Framework

Vygotsky's Sociocultural Theory of Learning

Differentiated instruction has been closely associated with the Russian psychologist, Lev Vygotsky's (1896-1934) social constructivist learning theory (Crain, 2000). Vygotsky believed that each individual should be looked upon as a single entity in a learning facility (Dahmns, Geonnotti, Passalacqua, Schilk, Wetzel, & Zulkowsky, 2007). Vygotsky stated that "learning is a necessary and universal aspect of the process

of developing culturally organized, specifically human, psychological functions. Learning occurs when individuals are able to execute a higher order of thinking. According to Vygotsky, individual learning occurs through social interactions and language (Vygotsky, 1935; cited in Dahmns et al., 2007).

Vygotsky used psychological tools to trace how a human thinks and behaves. He believed that speech serves as the centerpiece of development, allowing individuals to culturally relate their development to past experiences (Crain, 2000). Speech and social interaction are fundamental to an individual's cognitive development (Berk & Winsler, 1995). Berk and Winsler (1995) quoted Vygotsky, stating that "language plays a crucial role in a socially formed mind because it is our primary avenue of communication and mental contact with others, serves as the major means by which social experience is represented psychologically, and is an indispensable tool for thought (Vygotsky, 1934; 1987, p.12).

According to Vygotsky, individuals with a disability, either physical or psychological, are hindered not because of the disability itself, but by how the defect changes the way an individual partake in activities or their culture (Vygotsky, 1934; Berk & Winsler, 1995). Vygotsky believed that a deficit in interaction in social activities needed for learning, which is likely to occur with students with a learning disability, deters the development of an individual's higher mental function (Vygotsky, 1934; Berk & Winsler, 1995). One of the most important aspects of learning is allowing students to have the needed social interaction between peers and instructors (Vygotsky, 1934; Berk & Winsler, 1995). Individuals with learning disabilities should participate regularly in activities and communicate with others in order to progress (Berk & Winsler, 1995).

The zone of proximal development. Vygotsky believed instructors must prompt the minds of students by directly teaching new concepts and not wait for students to learn on their own (Crain, 2000). He created the concept of the Zone of Proximal Development and defined it as

The distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (Vygotsky, 1935, p.86).

The Zone of Proximal Development allows instructors to have a cohesive ability to measure a student's true potential (Crain, 2000, p. 234). Vygotsky believed that in order for an individual to advance, “educative environments for children must utilize the zone of proximal development” (Berk & Winsler, 1995, p. 104). Consequently, students can only advance through the zone of proximal development if they are guided by an instructor (Vygotsky, 1934; Crain, 2000). Students learn effectively when instructors structure cognitive activities to fit a student's level of potential development, thus advancing actual development (Berk & Winsler, 1995; Wertsch & Rogoff, 1984). Effective instructors who educate within the zone of proximal development must continually evaluate students for evidence of spontaneous interest about the subject matter. The zone of proximal development is dependent upon both students and instructors. First, the student must be ready to learn; Vygotsky believed that instructors cannot focus on the student working alone, but instead visualize how far they can go when offered assistance by an instructor (Vygotsky, 1934; Crain, 2000). The instructor's role as educator becomes purposeful; instructors become mediators for students by guiding them through activities and allowing learners to experience and accomplish their own zone of proximal development (Crain, 2000). Vygotsky believed

that “education is most effective when it is geared to the student’s own interest and inclination, not the teacher’s goals for the future” (Crain, 2000, p 242).

According to Vygotsky, individuals seldom stop to reflect on the activities that are presented. Rather, they become goal-oriented. When instructors facilitate an activity, they can break down the task and allow students to evaluate each step (Berk & Winsler, 1995). The Vygotskian view is “learning is a necessary and universal aspect of the learning process of developing culturally organized, specifically human psychological functions . . . [T]he developmental process lags behind the learning process (Berk & Winsler, 1995, p. 108). According to Berk & Winsler (1995), “The Vygotskian approach to education is one of assisted discovery. In the educational literature, this way of teaching has been referred to in diverse ways as guided performance, responsive teaching, assisted performance, and socratic dialogue, among others (Berk & Winsler, 1995, p. 108).

Differentiated instruction, guided by Vygotsky's theory, creates an alternative to conventional teaching strategies. Students may all reach the same destination but take different paths in order to master the essential skills and content. Tomlinson (1995, 1999) explained that differentiated instruction requires a change in teaching practices and an evolution of classroom culture. Differentiated instruction has the ability to be cohesive if both instructors and learners work together. Instructors can create alternative curriculum strategies that go beyond the text or design activities that students enjoy (Tomlinson, 1999).

Teaching and Learning Theory

When working with students in undergraduate classrooms Chickering and Gamson (1987) defined a set of best practices entitled *Seven Principles of Good*

Practices in Undergraduate Education. The seven principals outline methods for instructors to institute into a classroom in order to enhance the experience that undergraduate students receive. In the bulletin that was produced by the authors they described the following seven principles of good practices for teaching for students in higher education:

- Encourage student-faculty contact
- Encourage cooperation among students
- Encourage active learning
- Give prompt feedback
- Emphasize time on task
- Communicate high expectations
- Respect diverse talents and ways of learning

The set of best practices that Chickering and Gamson expressed allows instructors to acknowledge specific behaviors they can adopt to create a better learning environment for undergraduate students.

Just as instructors learn from their own personal experiences, working with students, and participating in career enhancement programs, these three distinct categories are useful when working with students with learning disabilities (Bransford, Brown, & Cocking, 2000). Instructors gain the most knowledge of others through their own personal experiences. Instructors have the ability to utilize the experience that they have gained from students and can use practical experimentation to determine how these experiences can enhance the learning environment. Instructors gain a vast amount of knowledge by participating in career enhancement programs that can be considered formal, in-service education. Professional development programs can enhance instructors' knowledge levels by allowing them to gain knowledge on up to date methods of teaching (Bransford et al., 2000). Professional development programs

are designed to cover a wide variety of topical learning areas and are created to meet the needs of faculty.

Allowing instructors to sharpen their teaching skills provides them with the ability to foster academic achievement in their classroom setting. The amount of teacher preparedness and the ability to foster in-service training gives instructors the ability to reach a wide array of students with different learning styles.

Differentiated learning in classrooms for students with learning disabilities

Over the years, research supports the notation that not all individuals learn in the same manner. Educators have been forced to re-evaluate instructional practices, assessments, and curricula in order to accommodate different learners' needs. Yet not all educators have responded to the diverse learning style needs and learning disabilities occurring in the student population at large (Tomlinson, 1999). As educators, their sole responsibility is to present each student the opportunity to strive to meet his/her potential. Tomlinson (1999) states, "Developing academically responsive classrooms is important for a country built on twin values of equality and excellence." Silver (2005) writes, "teachers can most effectively engage each and every learner by adapting differentiated approaches" (p. 117).

Brain research

Scientists and researchers have made exciting discoveries related to how the brain processes and stores information (Sousa, 1998). Learning differences and attention deficit disorders have been linked to the brain's anatomy and can dictate performance within the classroom (Semrud-Clikerman et al., 2000). Hardiman (2001) explains that "A basic precept of brain-based research states that learning is best achieved when linked with the learner's previous knowledge and experience or

understanding of a given subject or concept” (p.52). Brain-based research is most effective when used in unison with previous knowledge (Brandt, 1999). Tomlinson and Kalbfleisch (1998) stated, “Brain research suggests three broad and interrelated principles that point clearly to the need for differentiated classrooms, that is, classrooms responsive to students' varying readiness levels, varying interest and varying learning profiles” (p.53). Students respond best if they feel their learning environment is emotionally safe for learning to take place. A student that experiences rejection or failure, or is intimidated will not experience an emotionally safe learning environment. For learning to take place, a student must experience an appropriate level of challenge; also, students must be able to associate the meaning, ideas, and skills in their own manner (Tomlinson & Kalbfleisch, 1998).

Learning styles

Tomlinson (2000) states, “The goals of learning-profile differentiation are to help individual learners understand modes of learning that work best for them and to offer those options so that each learner finds a good learning fit in the classroom. Learning style can be closely linked to environmental and emotional factors. Although instructors do not have the ability to manipulate all factors, they are present to offer learning choices” (p. 26). Identification of student learning styles and assisting students with accommodations to reach their full potential enables instructors to reach a wide array of learners (Green, 1999). McCarthy (1990) “believed that learning style issues lead directly to instructional issues, which lead directly to curriculum issues and their attendant ambiguities about the nature of evaluation” (p.36).

Teachers' attitudes on inclusive teaching

Fuchs and Fuchs. (1995) believed that a long-standing assumption in educational psychology has been that responsive instructional adaptation is related to student's learning. Studies have shown that adjusting curriculum and assessments has allowed students to reach their potential by creating a learning profile (Fuchs & Fuchs, 1995). Teachers report one of the reasons they have a hard time differentiating their classroom is because they do not feel they have enough time to work with students individually (Tomlinson, 2003). Tomlinson (1994; 1999) wrote that differentiated instruction requires a change in teaching practices and an evolution of classroom culture. Students master skills and have a greater readiness to learn when their instructors accommodate learning differences (Tomlinson, 2000). In a differentiated classroom, instructors proactively plan and carry out varied approaches to content, process, and product in anticipation of and response to student differences in readiness, interest, and learning needs (Tomlinson, 2001).

Higher education and learning disabilities

Sharon Lockley stated, "the number of students with dyslexia entering higher education has increased during recent years from 0.74% of all students entering higher education in 1994 to 1.00% in 1996" (Dearing, 1997;Lockley, n.d). Many learning disabilities are identified by students after they have been accepted to the university. As a whole, dyslexic students in higher education account for the largest population of disabilities on campus (Lockley, n.d.).

Although colleges are admitting more students with learning disabilities, well-developed programs to assist these students with professional help are lacking (College Planning for Students with Learning Disabilities, n.d.). "Although the college experience

is often difficult for students with learning disabilities, pacing of a course of study has proved to be an effective programming variable” (Norlander, Shaw, McGuire, Bloomer, & Czajkowski, 1986). A lightened course load of about 3 classes for students with disabilities may help a student be successful in higher education (College Planning for Students with Learning Disabilities, n.d.).

The University of Washington conducted a study of students with disabilities and the challenges they faced when transitioning from a two-year university to a four-year university. Over one hundred (119) students from 19 two-year colleges participated in the study, titled “Do It” (Burgstahler, Crawford, & Acosta, 2001). The top concerns that students with disabilities had were the ability of university student services to meet the needs of diverse types of disabilities, inadequate financial support, housing and transportation, personal and family issues, and differences in academic requirements (Burgstahler et al., 2001). Professionals who guided postsecondary students with disabilities believed that obstacles to successfully transitioning to a four-year university were affected by

- Differences in academic requirements
- Poor study skills
- Inadequate self-advocacy skills
- Inadequate academic preparation
- Financial support
- Lack of mentors with disabilities
- Differences in disabled student services (Burgstahler et al., 2001).

“Forty-six faculty and staff from two- and four-year institutions of higher education from twenty-four states who participated in focused discussions of these issues” (Burgstahle et al., 2001) also reported that transfer students face challenges in the following:

- Moving away from home
- Understanding and working through the transfer process
- Securing financial support
- Meeting the admissions requirements of the four-year institution and specific degree programs
- Adjusting to differences in disability documentation requirements
- Adjusting to differences in the disabled student services offered
- Adjusting to a larger, less personal environment where it is more difficult to make friends and get to know faculty meeting the academic standards of the four-year school (Burgstahler et al., 2001).

The article entitled *College Freshman with Disabilities: A Triennial Statistical Profile* (Henderson, 1995) shared perceptions of how students coming to college straight from high school felt when they were prepared themselves to be thrown into a large institution. The article discussed how students fared after their freshman year in college with a lack of assistance in getting the help need for their specific disability. The study compared students with learning disabilities and their achievement in relation to a two-year college versus a four-year institution. Heiman and Precel (2003) analyzed unusual strategies and devices that professors use to teach to students with learning disabilities. The article compared students without learning disabilities to students with learning disabilities in the way information is presented, as well as written, oral, and/or group activities or assignments. The article also discussed the abilities that student's utilized when performing on tests. They discussed the way the tests were administered and the ability for the professor to create a low-stress testing environment. This article also relates Werner's Theory of Microgenesis (Crain, 2000) to the learning environment

as the development framework that one's brain must go through in order to accomplish certain tasks(Crain, 2000).

Success in college

Some college admissions officers try to predict how well an individual will perform using GPAs, SAT scores and records from high school (Hallahan, Lloyd, Weiss, & Martinez, 2005). Other admission officer's state that there is no way these scores can have a positive or negative influence on how well a student will do in college. "Some who have excelled in high school have not been able to do the same in college. Some who barely scraped by in high school suddenly find their niche in college. College and university officials have developed a relatively uniform set of criteria based on predictive studies involving large numbers of applicants" (p.25). There is little research on predicting students' with learning disabilities success in higher education (Hallahan et al., 2005). Vogel and Adelman (1992) state, "One team of researchers found that, although far from perfect, such things as high school GPA and number of mainstream English courses completed with a grade of C or better were better predictors than standardized test scores" (cited in Hallahan et al., 2005). Other indicators that affect students' success in higher education are "strong grade point averages in college preparatory courses, well-developed reading and mathematical skills, above average intelligence, and extracurricular involvement in high school [which] correlate highly with success in college. Indeed, college admissions counselors, often working with support services coordinators, tend to look at these factors when determining whether to accept a student with a learning disability" (Shapiro & Rich, 1999, p. 128; Hallahan, Lloyd, Weiss, & Martinez, 2005).

Grading and grouping

An inevitable part of the classroom procedure is assessing students' learning and assigning numeric grades. Classrooms that are academically diverse can make it difficult for instructors to assign grades to students who are not to the same level as everyone else. Tomlinson (2001) believes grading comes from the viewpoint of what a teacher believes about teaching and learning. An answer to grading effectively is to let students have many choices and alternatives among which to assess their knowledge of a particular subject matter (Tomlinson, 2001). Tomlinson (2001) believes, "Who I teach should shape how I teach because who the students are shapes how they learn"(p.20). A concrete standard cannot be set from one semester to another; instructors should be flexible in the way they present the material and assess students' knowledge. Grading has become a competitive benchmark for students to determine where they stand in relation to other students (Tomlinson, 2001). Tomlinson (2001) stated, "I need to grade for success in the same way that I teach and assess for success. That doesn't mean students can't be unsuccessful. It means their degree of success must reflect the degrees of their own growth"(p.2).

Concept Map Explanation

Learning can be affected by many factors within the classroom. The conceptual model examines the factors that many students with learning disabilities encounter in higher education. "The more teachers can involve all modalities and learning styles, the more chances they have of engaging learners in using their whole brains" (Gregory & Chapman, 2007, p.24).

Understanding learning styles and incorporating alternative options into the curriculum can reach students at all intellectual levels. Instructors who have the

knowledge and ability to observe students and assess their work gain knowledge on the individual learning profile. Dunn and Dunn (1987) classified learning styles into five categories, auditory, visual, tactile, kinesthetic, and tactile/kinesthetic. Auditory learners absorb spoken and heard materials easily and like to be involved in oral questioning rather than reading. They prefer listening to lectures, stories, and songs and work well with other students in groups or one-on-one activities (Gregory & Chapman, 2007).

Visual learners learn best from information that is seen or read. They prefer illustrations, pictures, and diagrams and graph organizers to help them construct meaning visually, and color has an impact on learning (Gregory & Chapman, 2007).

Tactile learners learn best from handling materials, writing, and drawing and being involved in experiments and experiences (Gregory & Chapman, 2007).

Kinesthetic learners learn best by doing and moving. Physical activity helps them absorb information and makes it more relevant (Gregory & Chapman, 2007).

Tactile/kinesthetic learners learn best by being physically involved in the learning process. They prefer to role play or have a simulation activity that is relevant to the curriculum (Gregory & Chapman, 2007). The ability of an instructor to use a variety of methods in a classroom satisfies more learners and allows the information to be transferred to a greater portion of the brain (Gregory & Chapman, 2007).

The design structure of a classroom can affect the learning of all students. In order for the student to engage in the learning process, they must have an environment that is conducive to learning and taking risks. "Closely related to teachers' behavior is the development of a classroom climate conducive to good thinking (Gregory & Chapman, 2007, p.10). Gregory and Chapman (2007) state, "Classrooms everywhere must foster

an inclusionary climate, it is essential that students bond with one another and with the teacher to form a positive learning community”(p.26). Instructors must be cognizant of the room layout, the room temperature and the noise level, as all of these can threaten students’ learning. The time of day that students attend class can also affect their learning ability (Gregory & Chapman, 2007).

Instructors’ knowledge about learning disabilities can affect the manner in which they teach students within the classroom. The sole responsibility of an instructor is to be assured that all students have the ability to reach their full potential within the classroom setting. Instructors may have the ability to differentiate their classrooms if they have attended workshops, taken classes, or had prior experiences with students with learning disabilities. Instructor preparedness is essential for students to advance academically because they play a pivotal role in the learning process for students. Instructors instill problem-solving skills, self-management skills, and social skills that allow students to progress in the learning environment. In order for instructors to effectively engage students and support learning they must be able to apply sound principles of educating to a student with a learning disability (Gregory & Chapman, 2007).

Tomlinson (2007) states, “In a differentiated classroom, the teacher proactively plans and carries out varied approaches to content, process and product in anticipation of and response to students’ differences in readiness, interest and learning needs” (p.4). The ability of instructors to facilitate flexible teaching routines allows students to enhance their academic success because they are reaching their readiness levels, interests, and preferred modes of learning (Tomlinson, 2007).

Because individuals learn from one another, having flexible grouping allows students to trade knowledge with their peers and build confidence when working in groups. Flexible grouping is defined as allowing students to communicate and interact with other groups based on the student's readiness, interest, and learning style. Students who may be challenged within a group setting have a lesser chance of being left out because they are in need of more help. Flexible grouping allows for students who may be above average or struggling to not be "pegged" by their peers (Tomlinson, 2007).

Coordinating the learning goals of both students and instructors in the beginning of the school year allows both parties to orchestrate how they would like to approach the content of the course. Creating an atmosphere where both students and faculty are held accountable for learning goals allows the learning process to become easier and more coherent (Tomlinson, 2007).

The conceptual model lays out deterrents that students and instructors may encounter in a classroom setting. This framework depicts the importance of creating differentiated classrooms when working with students with special learning needs. Vygotsky's sociocultural theory of learning and differentiated learning come together in the model to depict the essence of creating a classroom atmosphere that is learning conducive for students with learning disabilities.

The framework begins with the instructor's decision to utilize differentiated instruction within the classroom. This process of differentiated learning is not always carried out by instructors because of lack of time, resources or the knowledge of how to cater to all learners. After instructors commit to utilizing differentiated instruction in the

classroom, they focus on the content that they would like the students to learn. The content portion of the framework lays out the basis for what instructor is teaching students and how the student is able to apply it. The process portion of the framework is the ability of a student to make sense of the content that has been presented. The student is then encouraged to analyze the information, apply it, ask questions, or solve problems. The product portion of the framework is the ability of the instructor to utilize activities, test, or lecture to apply the curriculum so that every student has the tools to understand. Last, all these steps to differentiated instruction must be carried out effectively in order for students to reach their goals for learning.

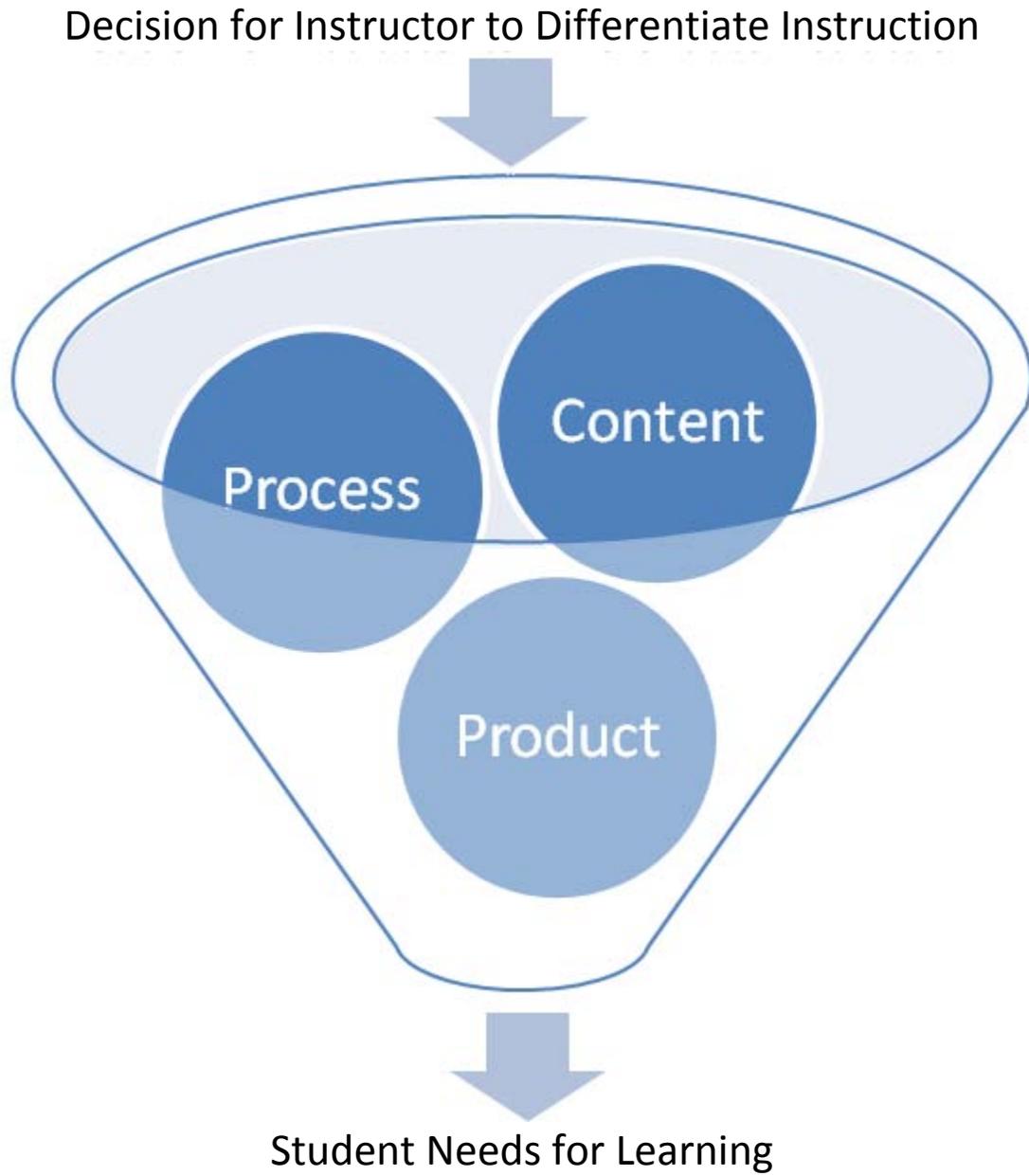


Figure 2-1. Instructional competencies regarding learning disabilities.

CHAPTER 3 METHODS

Chapter 1 described learning disabilities in higher education and the importance of creating a classroom that is conducive to all learners. In addition, it provided the background for studying the perceived knowledge and understanding of teaching methods that are used in a classroom setting when working with students with learning disabilities. The first chapter gave further information about the significance of the study and identified its purpose. The chapter concluded by defining key terms and stating the assumptions and limitations of the study.

Chapter 2 presented a summary of the theoretical foundations and the conceptual framework on which this study was based. The specific areas that Chapter 2 discussed included higher education, brain-based research, grading, and differentiated instruction.

Chapter 3 outlines the research methodology developed to answer the research questions on which the study was based. Additionally, this chapter concentrates on the research design, procedure, sample population, instrumentation, data collection, and data analysis.

The primary purpose of this study is to determine the perceptions of college instructors about the use of teaching methods to enhance learning for students with learning disabilities. In order to do so, it was essential to evaluate instructors' perceptions of the effectiveness of selected teaching methods and resources, the frequency of use of accommodations for students with learning disabilities as perceived by instructors, and instructors' awareness of the accommodation strategies recommended for learning disabled students.

Research Design

The research design was a descriptive survey utilizing the Borich Needs Assessment Model. The Borich Needs Assessment Model is used to analyze teaching methods by examining “what are the measured behaviors, skills, and the competencies of the trainee and ‘what they should be’ as the goals of the program” (Borich, 1980; Barrick, Ladewig, & Hedges, 1983). The researcher can use the discrepancies between two poles of interest as an index of the importance of differentiated instruction. As part of the process, the researcher will rank the specific discrepancies, prioritizing which methods of teaching are valuable for students with learning disabilities (Borich, 1980).

To guarantee that the instrument considered the construct properly, validity and reliability were two issues the researcher addressed. Ary, Jacobs, Razavieh, & Sorensen (2006) described validity as “the most important consideration in developing and evaluating measuring instruments” (p. 243). In addition, prior research has suggested that there are two categories of validity: internal validity and external validity (Campbell & Stanley, 1963, cited by Ary et al., 2006).

Campbell and Stanley (1966) stated that there are eight relevant variables that have been known pose a threat to the internal validity of the study and overall research design. The eight variables are: history, maturation, testing, instrumentation, statistical regression, differential selection, mortality, and the interaction of all of these threats (Campbell & Stanley, 1966). The instrument that was used to conduct the study was researcher-developed, thus cause a threat to internal validity. The internal threats of history, maturation, testing, and mortality were controlled through the selection of a census of instructors in the College of Agricultural and Life Sciences. A panel of experts consisting of faculty members at the University of Florida located within the

College of Agricultural and Life Sciences assessed the instrument to ensure face validity.

The researcher also examined the instrument for content validity to determine if there were threats prior to mass distribution. Content validity is the amount to which the data from an instrument are representative of some defined domain (Ary et al., 2006). In this study, content validity threats were controlled through the expert panel's examination of the instrument prior to the survey's distribution. The researcher conducted a pilot test of the Borich Needs Assessment Model with a small group of 20 instructors from the College of Agricultural and Life Sciences Teachers College to identify vague questions or wording that was unclear prior to disseminating the survey instrument. After the pilot test was conducted, a panel of experts analyzed the results and made necessary changes to the survey.

Criterion validity was the second threat to validity; it was examined to correctly understand the answers to the instrument's questions and referred to correctly measure the construct (Ary et al., 2006). To guarantee that this validity error would not negatively impact the survey, the panel of experts considered empirical evidence from the literature to ensure the criterion-related and content validity of the instrument.

Ary et al., (2006) stated that there are six threats to external validity that could pose a threat to a study. The six variables were (1) selection, which was controlled by providing everyone with the same questionnaire,(2) setting, which was controlled by providing participants with an online survey and every participant took it in a different setting, (3) the researcher did not conduct a pre-test, (4) subject effects was controlled by using a census,(5) experimenter effects was controlled by conducting a pilot study,

and (6) the novelty effect (Ary, et al., 2006). Selection was explained by Ary et al., (2006) :“An effect found with certain kinds of subjects might not apply if other kinds of subjects were used. Researchers should use a large, random sample of participants” (p.318). A subject effect could occur because the specific subject matter may affect the way that participants respond to the questionnaire.

Population

This study was administered to instructors who taught classes at the College of Agricultural and Life Sciences, University of Florida, in the spring semester of 2010. There were 19 departments in the College of Agricultural and Life Sciences represented with 13.5% of instructors ranked as lecturer, 29.2% as assistant professor, 24% as associate professor, and 33% as professor. Of the instructors that participated in the study, 18.8% taught graduate level courses, 18.7% taught undergraduate courses, and 60% taught both graduate and undergraduate courses. There was a sample population of 385 instructors who were eligible to participate in the survey regarding the effectiveness of teaching methods when working with students with learning disabilities.

Data Collection

The initial step in instituting this study was to be granted approval from the University of Florida’s Institutional Review Board IRB 02 for non-medical Projects. After the proposal was approved (UFIRB Protocol number 2009-U-1059), the researcher was allowed to proceed with the study (see Appendix A).

After completing the pilot test, instructors’ contact information was gathered through the College of Agricultural and Life Sciences teaching faculty and listserv. A web questionnaire was utilized in order to gain data from the selected population. The

researcher utilized Dillman's Tailored Design (Dillman ,2007), methods for circulation of the survey which is described as follows.

An e-mail correspondence was sent to each instructor through the College of Agricultural and Life Sciences at the University of Florida on January 14, 2010. The primary purpose of the correspondence was to inform the recipients they were requested to help with an important survey (Dillman, 2007). The second contact was made on January 19, 2010. In the second e-mail, the web-based questionnaires were distributed to the sample population by means of electronic mail. Subsequent to sending out the second correspondence, it was noted that there a number of participants in the study had yet to take part in the questionnaire. Consequently, another e-mail was sent to the participants on January 25, 2010. On February 1, 2010, e-mail was sent expressing gratitude to the participants who completed the survey. Potential participants who did not complete the survey were sent a reminder. The process yielded a response rate of 30 percent (n = 120 out of 385 possible participants).

Instrumentation

The questionnaire instrument was an anonymous web-based Borich Needs Assessment Model hosted by SurveyMonkey for data collection. The questionnaire was designed to measure instructors' attitudes, knowledge, and forms of differentiated instruction used in the classroom and their perceived relevance of the methods. The questionnaire was divided into four parts (a) The current knowledge level of the instructor based upon teaching methods, (b) the perception by the instructors of the relevance to the job in relation to their current teaching methods, (c) demographic information, and (d) open-ended questions. The survey was composed of ranking questions (Likert), multiple choice items, and open-ended questions (see Appendix B).

The Borich (1980) model of needs assessment was used to measure participant's perceptions of 12 teaching competencies. Participants used a five-point scale (1 = Low Knowledge/ Relevance to 5 = High Knowledge/ Relevance) to rate their level of current knowledge for each competency and the degree to which the competency was or was not relevant to their job. The teaching competencies were adapted from Differentiated Instructional Strategies for Student Success Gregory and Chapman (2007).

To ensure internal instrument consistency and reliability within the web-based survey, the researcher grouped questions together that measured the same concept. In order for the researcher to ensure that external validity was maximized, the questions were designed to be universal to other subjects and populations. The instruments yielded alpha values of $r = .822$ and $r = .839$, respectively. Ary et al. (2006) explained internal validity as a matter of whether the changes that occur in the dependent variable are a direct consequence of manipulation of the independent variable and not by any other variable.

There was a non-response of 265 individuals who did not complete the survey making it essential to gauge for whether non-responders possibly biased the data results (Ary et al., 2006). The researcher analyzed the non-response error, calculated by dividing the sample in half comparing early to late responders. Ary et al. (2006) assert that non-respondents are often similar to late respondents; meaning that by examining the responses of non-responders, the researcher should be able to estimate the responses of late respondents. The researcher looked at the two groups to determine if there was a significant difference in the rate of response. Ary et al. (2006) stated:

“If no significant differences appear between early and late respondents, and late respondents are believed to be typical of non-respondents, then [it] can be assumed the respondents are an unbiased sample of the recipients and can thus generalize to the total group” (p. 439).

Data Analysis

The data was analyzed using the Statistical Package for the Social Sciences (SPSS). The researcher utilized descriptive statistics to gain a better insight into the data set and respondents. The first analyses conducted were means, standard deviations, and frequencies. The researcher utilized a one-way analysis of variance (ANOVA) in order to assess the relationship between the independent and dependent variables. The topics from the Borich Needs Assessment Model were ranked according to the mean rating obtained from the survey (Barrick, Ladewig, & Hedges ., 1983.) A discrepancy score was obtained for each participant by subtracting participants' perceived level of knowledge from the perceived level of relevance for a specific teaching competency. Each discrepancy score was then multiplied by the mean importance level for that specific topic resulting in a weighted discrepancy score for each participant. The survey produced two relative weight scores determined from the following formulas:

Weighted Knowledge Score = (Importance Mean – Knowledge Mean) multiplied by Importance Mean;

Weighted Application Score = (Importance Mean – Application Mean) multiplied by Importance Mean.

The two relative weight scores were ranked in order with the topic with the greatest positive relative weight scores being assigned the highest priority (Barrick et al. 1983).

Summary

This chapter outlined the methods used to institute the study in order to observe the objectives. It described the study's research design, population, procedures, instrumentation, and data analysis. This study was quantitative, non-experimental, and cross-sectional, and utilized descriptive census survey methodology. The independent variables consisted of age, gender, and number of years teaching.

CHAPTER 4 RESULTS AND DISCUSSION

Chapter 1 outlined the basis for conducting this study. The purpose of this research study was presented, along with specific research questions and hypotheses. Key terms were defined, assumptions were outlined, and limitations were stated.

Chapter 2 provided a theoretical and conceptual framework for studying this topic. A background on Vygotsky's theory, higher education, brain-based research, grading and differentiated instruction was provided. Relevant literature and research were consulted to support the research for this thesis.

Chapter 3 outlined the research methodology employed in this study. The research design, procedures, population and sample, instrumentation, data collection, and data analysis were presented.

The independent variables in this study were student's learning disabilities, instructor's knowledge regarding learning disabilities, and instructional competencies of instructors. The dependent variables were instructors self-reported scores in regard to their competencies. The design of this study was identified as casual- comparative. The attributes of this design and threats to validity were outlined previously in Chapter 3.

This chapter presents the findings obtained by this study. The results address the objectives of this study in determining the knowledge and importance of instructional competencies when working with learning disabled students.

The total possible targeted sample in this study consisted of undergraduate instructors who taught classes in the College of Agricultural and Life Sciences at the University of Florida in the spring semester of 2010 ($n = 385$). As outlined in Chapter 3, data for this study were collected at one time point. The survey consisted of a Borich

Needs Assessment Model that measured attitudes, knowledge, and forms of differentiated instruction used in the classroom and their perceived relevance of the methods. This instrument was administered online using a web-based form to collect the data. The response rate for this study was 30 % ($n = 119$). Previous studies have yielded a similar response rate as low as this study (Wadsworth, 2001).

Prior to data analysis, post hoc reliability analysis was established for each instrument that was created or modified by the researcher. Instruments measuring constructs through Likert-type items were tested for internal consistency using split-half reporting coefficients. This instrument analyzed the reliability using SPSS. The instruments yielded alpha values of $r = 0.822$ and $r = 0.839$, respectively.

Teaching Competencies

The ten teaching competences that were used to assess an instructor's knowledge level were based on a variety of differentiated learning processes. The first teaching competence was "providing opportunities for auditory learners to listen and speak within the classroom," which encompassed the ability for instructors to allow students to listen and speak within the classroom setting. The second teaching competence that was used was "providing opportunities for visual learners to gain information from reading, observing, and viewing the curriculum." Instructors who utilize this effectively provide students with handouts, PowerPoint print-outs, and notes. The third teaching competence was "providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum." The premise for this is that students have the ability to be hands-on with materials that are relevant to the specific subject matter. The fourth teaching competency was "communicating expectations that are clearly understood by the learner." The premise for this competency is that students

are provided with detailed rubrics or a syllabus that provide guidelines for students to reach their goals. The fifth teaching competency was “providing students with learning disabilities accommodations which can enhance the learning atmosphere.” The premise for this competency was to gauge instructor’s knowledge level of the importance of carrying out this process. The sixth teaching competency was “providing appropriate printed notes and resource to students in advance.” Allowing students time to review the information prior to lecture which can facilitate better classroom discussion. The seventh teaching competency was “providing students the ability to collaborate with peers.” The premise of this teaching competency was that students learn from one another. The eighth teaching competency was “using motivational strategies in the classroom to engage students with learning disabilities.” The premise of this teaching competency was to use positive affirmations, provide extra credit, and make the learning process a positive experience. The ninth teaching competency was “providing students with learning disabilities the ability to discuss personal needs.” The premise behind this competency was instructors will have a better insight on what works for students and what does not. The last teaching competency was “discussing the legal requirements for students with learning disabilities in class and on course syllabus.” The premise behind this competency was to understand the instructor’s knowledge level and relevance of the importance of providing accommodations.

Instructors Academic Ranking

Of the 119 participants in the study, 33% ($n = 32$) were ranked as professor, 13.5% ($n = 13$) were ranked as lecturer. Twenty-three participants (24%) were ranked as associate professors and 29 % ($n = 28$) as assistant professors (see Figure 4-1).

Of the 119 participants in the study, 32.3% ($n = 29$) taught classes of 5-20 students (small), 34 (37.8%) participants stated they taught a medium- sized class with 21-40 students, 27 (30%) participants stated that they taught a large class of 71+ students (see Figure 4-2). Of the 119 participants in the study, 88.9% ($n = 80$) stated they taught a lab-based class, 10 (11.1%) participants stated that they taught a lab-based class (see Figure 4-3).

Number of years teaching

Twenty-two participants in this study stated that they have been teaching for 0-5 years (See Figure 4-5), 20 participants stated they had been teaching for 6-10 years, 17 participants stated that they had been teaching for 11-15 years, 6 participants stated that they had been teaching for 16-21 years, 18 participants in this study stated that they had been teaching for 22-30 years, and 9 participants had been teaching for 31 years or more. The average years of teaching for the participants was 14.83 ($n = 93$, $SD = 10.53$).

Objectives

- **Objective One.** To describe College of Agricultural and Life Sciences instructors' self-reported knowledge of learning disability instructional competencies.

Knowledge level of the Americans with Disability Act. Of the 119 participants in the study, 2.6% of the population ($n = 3$) had never heard of the Americans with Disability Act(ADA), 40 participants (34.5%) had little knowledge of the ADA, 62 participants (53.4%) were somewhat familiar with the ADA, and 11 participants (9.5%) were very familiar with the ADA (see Figure 4-6). The mean score for participants knowledge level of the ADA was 2.70 ($SD = 0.68$) on a scale of 1 to 4.

Responsibility of providing accommodations to students with learning disabilities. Of the 119 participants in this study, 93.9% of instructors ($n = 107$, $SD = 0.21$) believed that it was their responsibility to provide accommodations to students with learning disabilities through the American with Disabilities Act of 1990. Seven participants (6.1%) did not agree with the statement and five participants did not respond to this question. The mean score for participants was 1.06 ($SD = 0.24$).

Sixteen participants (16.8%) in this study self-reported a high knowledge level of the statement that providing accommodations to students with learning disabilities can enhance learning (see Table 4-1), 26 participants (27.4%) believed they had average knowledge, 19 participants (20%) had little knowledge, and 11 participants (11.6%) stated they had no knowledge that providing accommodations to students with learning disabilities can enhance the learning process. Twenty-three participants (20%) did not respond to this question. The mean score was 3.14 ($SD = 1.25$) on a scale of 1 to 5.

Providing opportunities for auditory learners to listen and speak within the classroom. Six participants (6.3%) in this study had a self-reported high knowledge level about providing opportunities for auditory learners to listen and speak within the classroom to enhance the learning environment (see Table 4-1), 18 participants (18.8%) believed they had an average knowledge level, 32 (33.3%) had little knowledge, and 19 participants (19.8%) stated they had no knowledge about providing opportunities for auditory learners to listen and speak within the classroom to enhance the learning environment. Twenty-three participants (20%) did not respond to this question. The mean score was 2.61 ($SD = 1.19$) on a scale of 1 to 5.

Comparing the mean scores for the statement “providing opportunities for auditory learners to listen and speak within the classroom enhances the learning environment” by academic ranking revealed 12 participants were lecturers ($\mu = 3.16$, $SD = 1.02$), 28 were assistant professors ($\mu = 3.03$, $SD = 1.10$), 23 were associate professors ($\mu = 2.43$, $SD = 1.16$), and 32 were professors ($\mu = 2.40$, $SD = 1.24$) (see Table 4-2).

Comparing the mean scores for the statement “providing opportunities for auditory learners to listen and speak within the classroom enhances the learning environment” by class- size taught, found that 28 ($\mu = 2.42$, $SD = 1.16$) stated they taught a small course (5-20 students), 34 ($\mu = 2.67$, $SD = 1.17$) stated that they taught a medium-size course (21-70 students), and 27 ($\mu = 2.85$, $SD = 1.29$) taught a large course (71 plus students) (see Table 4-2).

Comparing the mean scores for the statement “providing opportunities for auditory learners to listen and speak within the classroom enhances the learning environment” by the number of years that an instructor had been in the teaching revealed that 22 participants ($\mu = 2.95$, $SD = 1.09$) stated they had been teaching for 0 to 5 years (see Table 4-2), 20 participants ($\mu = 2.60$, $SD = 1.19$) stated that they had been teaching for 6 to 10 years, 17 participants ($\mu = 2.52$, $SD = 1.23$) stated that they had been teaching for 11 to 15 years, while 6 participants ($\mu = 1.83$, $SD = 0.98$) stated that they had been teaching for 16 to 21 years. Eighteen participants ($\mu = 2.61$, $SD = 1.28$) stated that they had been teaching for 22 to 30 years, and 9 participants ($\mu = 2.66$, $SD = 1.15$) had been teaching 31 years or more.

By academic ranking, partial Eta squared was 0.57, indicating a large effect, showing that academic ranking accounted for 57% of the variance in self-perceived

knowledge level. By class size the partial Eta squared was 0.48, indicating a large effect, showing that class size accounted for 48% of the variance in self-perceived knowledge level.

Providing opportunities for visual learners to get information from reading, observing, and viewing curriculum. Twelve participants (12.5%) in this study had a self-reported high knowledge level that providing opportunities for visual learners to read, observe and view the curriculum within the classroom enhances the learning environment (see Table 4-3), 22 participants (22.9%) believed they had an average knowledge level, 32 (33.3%) had little knowledge, 14 participants (14.6%) stated they had no knowledge, 23 participants (20%) did not respond to this question. The mean score was 3.00 ($SD = 1.24$) on a scale of 1 to 5.

The mean scores for the statement “providing opportunities for visual learners to read, observe, and view the curriculum within the classroom enhances the learning environment” compared by academic ranking was 12 participants were lecturers ($\mu = 3.58$, $SD = 1.24$), 28 were assistant professors ($\mu = 3.21$, $SD = 1.16$), 23 were associate professors ($\mu = 2.86$, $SD = 1.25$), and 32 were professors ($\mu = 2.68$, $SD = 1.28$) (see Table 4-4).

The mean scores for the statement “providing opportunities for visual learners to read, observe, and view the curriculum within the classroom enhances the learning environment” compared to class size was 28 ($\mu = 2.75$, $SD = 1.26$) stated they taught a small course (5-20 students), 34 ($\mu = 3.05$, $SD = 1.22$) stated that they taught a medium-size course (21-70 students), and 27 ($\mu = 3.18$, $SD = 1.33$) taught a large course (71 plus students) (see Table 4-4).

The mean scores for the statement “providing opportunities for visual learners to read, observe, and view the curriculum within the classroom enhances the learning environment” compared to the number of years an instructor had been teaching was 22 participants ($\mu = 3.18$, $SD = 1.12$) stated that have been teaching for 0 to 5 years (see Table 4-4), 20 participants ($\mu = 3.0$, $SD = 1.25$) stated that they have been teaching for 6 to 10 years. 17 participants ($\mu = 3.0$, $SD = 1.41$) stated that they have been teaching for 11 to 15 years, while 6 participants ($\mu = 2.16$, $SD = 0.98$) stated that they have been teaching for 16 to 21 years. Eighteen participants ($\mu = 2.88$, $SD = 1.27$) stated that they have been teaching for 22 to 30 years and 9 participants ($\mu = 3.11$, $SD = 1.53$) have been teaching 31 or more years.

By academic ranking, the partial Eta squared was 0.63, indicating a large effect, showing that academic ranking accounted for 63% of the variance in self-perceived knowledge level. By class size, the partial Eta squared was 0.65, indicating a large effect, showing that class size accounted for 65% of the variance in self-perceived knowledge level.

Providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum. Eight participants (8.4%) in this study had a self-reported high knowledge level that providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum can enhance the learning environment (see Table 4-5). Four participants (4.2%) believed they had an average knowledge level, 25 (26.3%) had little knowledge, and 26 participants (27.4%) stated they had no knowledge that providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the

curriculum can enhance the learning environment. Thirty-two participants (20%) did not respond to this question. The mean score was 2.26 ($SD=1.21$) on a scale of 1 to 5.

The mean scores for the statement “providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum can enhance the learning environment” compared by academic ranking was twelve participants were lecturers ($\mu = 2.75$, $SD = 1.42$), 27 were assistant professors ($\mu = 2.51$, $SD = 1.08$), 23 were associate professors ($\mu = 2.13$, $SD = 1.25$), and 32 were professors ($\mu = 2.0$, $SD = 1.16$) (see Table 4-6).

The mean score for the statement, “providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum can enhance the learning environment” compared to class size was 27 participants ($\mu = 1.88$, $SD = 1.01$) stated they taught a small course (5-20 students), 34 participants ($\mu = 2.35$, $SD = 1.22$) stated that they taught a medium-size course (21-70 students), and 27 participants ($\mu = 2.48$, $SD = 1.31$) taught a large course (71 plus students)(see Table 4-6).

The mean scores for the statement “providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum can enhance the learning environment” compared to the number of years that an instructor had been teaching was 21 participants ($\mu = 2.38$, $SD = 1.20$) stated that have been teaching for 0 to 5 years, 20 participants ($\mu = 2.5$, $SD = 1.23$) stated that they have been teaching for 6 to 10 years, 17 participants ($\mu = 2.23$, $SD = 1.30$) stated that they have been teaching for 11 to 15 years and 6 participants ($\mu = 1.66$, $SD = 1.03$) stated they have been teaching for 16 to 21 years. Eighteen participants ($\mu = 2.22$, $SD = 1.26$) stated that they have

been teaching for 22 to 30 years, 9 participants ($\mu = 2.00$, $SD = 1.32$) have been teaching 30 years or more (see Table 4-6).

By academic ranking, the partial Eta squared was 0.70, indicating a large effect, showing that academic ranking accounted for 70% of the variance in self-perceived knowledge level. By class size, the partial Eta squared was 0.14, indicating a small effect, showing that class size accounted for 14% of the variance in self-perceived knowledge level.

Communicating expectations that are clearly stated and are understood by the learner can enhance the learning environment. Thirty-five (35.4%) participants in this study had a self-reported high knowledge level that communicating expectations that are clearly stated and are understood by the learner can enhance the learning environment (see Table 4-7). Forty-five participants (46.9%) believed they had an average knowledge level, 11 (11.5%) had little knowledge, 5 participants (5.2%) stated they had no knowledge that communicating expectations that are clearly stated and are understood by the learner can enhance the learning environment. Thirty-two participants (20%) did not respond to this question. The mean score was 4.06 ($SD = 1.0$) on a scale of 1 to 5.

The mean scores for the statement “communicating expectations that are clearly stated and are understood by the learner can enhance the learning environment” compared to academic ranking was 12 participants were lecturers ($\mu = 4.41$, $SD = 0.66$), 27 were assistant professors ($\mu = 4.07$, $SD = 0.78$), 23 were associate professors ($\mu = 4.21$, $SD = 0.90$), and 32 were professors ($\mu = 3.81$, $SD = 1.28$) (see Table 4-8).

The mean score for the statement “communicating expectations that are clearly stated and are understood by the learner can enhance the learning environment” compared to instructor’s class size was 28 participants ($\mu = 3.89$, $SD = 1.19$) stated they taught a small course (5-20 students), 33 participants ($\mu = 3.90$, $SD = 0.84$) stated that they taught a medium-size course (21-70 students), and 27 participants ($\mu = 4.40$, $SD = 0.97$) taught a large course (71 plus students) (see Table 4-8).

The mean scores for the statement “communicating expectations that are clearly stated and are understood by the learner can enhance the learning environment” compared to the number of years that an instructor had been teaching was 21 participants ($\mu = 4.19$, $SD = 0.81$) stated that have been teaching for 0 to 5 years (see Table 4-8), 20 participants ($\mu = 4.25$, $SD = 0.71$) stated they have been teaching for 6 to 10 years., 17 participants ($\mu = 3.78$, $SD = 1.43$) stated they have been teaching for 11 to 15 years, six participants ($\mu = 3.66$, $SD = 1.36$) stated that they have been teaching for 16 to 21 years. Eighteen participants ($\mu = 4.11$, $SD = 0.67$) stated that they have been teaching for 22 to 30 years, while 9 participants ($\mu = 4.00$, $SD = 1.32$) have been teaching for 30 years or more.

Sixteen participants (16.8%) in this study had a self-reported high knowledge level that providing students with learning disabilities accommodation can enhance learning (see Table 4-9), 26 participants (27.4%) believed they had an average knowledge level, 19 participants (20%) had little knowledge, and 11 participants (11.6%) stated they had no knowledge that providing accommodations can enhance the learning process for students with learning disabilities. Twenty-three participants (20%) did not respond to this question. The mean score was 3.14 ($SD = 1.25$) on a scale of 1 to 5.

The mean scores for the knowledge level of providing students with learning disabilities accommodation can enhance learning compared to the academic ranking was twelve participants were lecturers ($\mu = 3.16$, $SD = 1.19$), 27 were assistant professors ($\mu = 3.11$, $SD = 1.31$), 23 were associate professors ($\mu = 3.09$, $SD = 1.30$) and 32 were professors ($\mu = 3.81$, $SD = 1.28$) (see Table 4-10).

The mean score for the statement “providing students with learning disabilities accommodation can enhance” learning compared to the class size was 28 participants ($\mu = 2.75$, $SD = 1.17$) stated they taught a small course (5-20 students), 33 participants ($\mu = 2.75$, $SD = 1.17$) stated that they taught a medium-sized course (21-70 students), and 27 participants ($\mu = 3.51$, $SD = 1.34$) taught a large course (71 plus students) (see Table 4-10).

The mean scores for the statement “communicating expectations that are clearly stated and are understood by the learner can enhance the learning environment” compared by the number of years that an instructor has been teaching was 21 participants ($\mu = 2.66$, $SD = 1.15$) stated they had been teaching for 0 to 5 years (see Table 4-10), 20 participants ($\mu = 3.2$, $SD = 1.36$) stated that they have been teaching for 6 to 10 years, 17 participants ($\mu = 3.29$, $SD = 1.59$) stated that they have been teaching for 11 to 15 years and 6 participants ($\mu = 2.66$, $SD = 1.63$) stated that they have been teaching for 16 to 21 years. Eighteen participants ($\mu = 3.55$, $SD = 1.14$) stated that they have been teaching for 22 to 30 years, 9 participants ($\mu = 3.11$, $SD = 1.36$) have been teaching 31 years or more.

By academic ranking, the partial Eta squared was 0.59, indicating a medium effect, showing that academic ranking accounted for 59% of the variance in self-

perceived knowledge level. By class size, the partial Eta squared was 0.58, indicating a medium effect, showing that class size accounted for 58% of the variance in self-perceived knowledge level.

Motivational strategies. Seven participants (7.4%) self-reported that they were knowledgeable that using motivational strategies in the classroom to engage students with learning disabilities can enhance learning (See Table 4-11), 13 participants (13.7%) were somewhat familiar with motivational strategies, and 24 participants (25.3%) had little knowledge. Twenty-three participants (24.2%) had no knowledge level about motivational strategies enhancing the learning process. Twenty-three participants (20%) did not respond to this question. The mean score was 2.54 ($SD = 1.20$) on a scale of 1 to 5.

The mean score for the statement “using motivational strategies in the classroom to engage students with learning disabilities can enhance learning” compared by the academic ranking of participants, was 12 participants were lecturers ($\mu = 3.00$, $SD = 1.41$), 27 participants were assistant professors ($\mu = 3.41$, $SD = 1.0$), 23 participants were associate professors ($\mu = 2.39$, $SD = 1.07$), and 32 were professors ($\mu = 3.09$, $SD = 1.30$) (see Table 4-12).

The mean score for the statement “using motivational strategies in the classroom to engage students with learning disabilities can enhance learning” compared by class size was 28 participants ($\mu = 2.53$, $SD = 1.20$) stated they taught a small course (5-20 students), 23 participants ($\mu = 2.35$, $SD = 1.04$) stated that they taught a medium-size course (21-70 students), and 27 participants ($\mu = 3.66$, $SD = 1.41$) taught a large course (71 plus students) (see Table 4-12).

The mean scores for the statement “using motivational strategies in the classroom to engage students with learning disabilities can enhance learning” compared by the number of years that an instructor has been teaching was 21 participants ($\mu = 2.28$, $SD = 1.89$) stated that have been teaching for 0 to 5 years), (see Table 4-12), 20 participants ($\mu = 2.45$, $SD = 0.99$) stated that they have been teaching for 6 to 10 years, 17 participants ($\mu = 2.35$, $SD = 1.27$) stated that they have been teaching for 11 to 15 years, while 6 participants ($\mu = 2.16$, $SD = 1.47$) stated that they have been teaching for 16 to 21 years. Eighteen participants ($\mu = 4.83$, $SD = 1.20$) stated that they have been teaching for 22 to 30 years, while 9 participants ($\mu = 2.88$, $SD = 1.36$) have been teaching for 31 years or more.

By academic ranking, the partial Eta squared was 0.15, indicating a small effect, showing that academic ranking accounted for 15% of the variance in self-perceived knowledge level. By class size, the partial Eta squared was 0.07, indicating a small effect, showing that class size accounted for 7% of the variance in self-perceived knowledge level.

Providing opportunities to discuss personal needs. Twenty-five participants (26.3%) stated that they were highly knowledgeable in regard to how important to both instructor and student to providing opportunities for students with learning disabilities to discuss personal needs (See Table 4-13), 25 participants (26.3%) were somewhat familiar with its importance, and 18 participants (18.9%) had an average knowledge level of the importance of discussing personal needs. Twelve (12.6%) participants had little knowledge of the importance of discussing personal needs with learning disabled students, and 15 participants (15.8%) had no knowledge of its importance. Twenty-three

participants (20%) did not respond to this question. The mean score was 3.34 ($SD = 1.40$) on a scale of 1 to 5.

The mean score for the statement “providing opportunities for students with learning disabilities to discuss personal needs is important to both instructor and students” compared by the academic ranking was twelve participants were lecturers ($\mu = 3.58$, $SD = 1.56$), 27 participants were assistant professors ($\mu = 3.48$, $SD = 1.22$), 23 were associate professors ($\mu = 3.43$, $SD = 1.44$) and 32 were professors ($\mu = 3.21$, $SD = 1.46$) (see Table 4-14).

The mean score for the statement “providing opportunities for students with learning disabilities to discuss personal needs is important to both instructor and student” compared by class size was 28 participants ($\mu = 2.64$, $SD = 1.36$) stated they taught a small course (5-20 students), 33 participants ($\mu = 3.5$, $SD = 1.35$) stated that they taught a medium-size course (21-70 students), and 27 participants ($\mu = 3.77$, $SD = 1.36$) taught a large course (71 plus students) (see Table 4-14).

The mean scores for the statement “providing opportunities for students with learning disabilities to discuss personal needs is important to both instructor and student” compared to the number of years that an instructor has been teaching was 21 participants ($\mu = 3.28$, $SD = 1.33$) stated that have been teaching for 0 to 5 years (see Table 4-14), 20 participants ($\mu = 3.40$, $SD = 1.35$) stated that they have been teaching for 6 to 10 years, 17 participants ($\mu = 3.176$, $SD = 1.70$) stated that they have been teaching for 11 to 15 years, while 6 participants ($\mu = 3.50$, $SD = 1.97$) stated that they have been teaching for 16 to 21 years. Eighteen participants ($\mu = 3.44$, $SD = 1.33$)

stated that they have been teaching for 22 to 30 years, while 9 participants ($\mu = 3.22$, $SD = 1.21$) have been teaching 31 or more years.

By academic ranking, the partial Eta squared was 0.07, indicating a small effect, showing that academic ranking accounted for 7% of the variance in self-perceived knowledge level. By class size, the partial Eta squared was 0.06, indicating a small effect, showing that class size accounted for 6% of the variance in self-perceived knowledge level.

Discussing the legal requirements for learning disabled students. Fifteen participants (15.6%) had a self-reported score that they were knowledgeable of the importance of discussing the legal requirements for students with learning disabilities in class or in a course syllabus can be beneficial for students (See Table 4-15), 15 participants (15.6%) were somewhat familiar, and 24 participants (24%) had an average knowledge level of the importance of discussing the legal requirements for learning disabled students, 15 participants (15.6%) had little knowledge level and 28 (29.2%) participants had no knowledge of the importance of discussing the legal requirements for learning disabled students. Twenty-three participants (20%) did not respond to this question. The mean score was 2.79 ($SD = 1.43$) on a scale of 1 to 5.

The mean score of the statement “the importance of discussing the legal requirements for students with learning disabilities in class or on a course syllabus can be beneficial for students” compared by academic ranking was 12 participants were lecturers ($\mu = 3.00$, $SD = 1.20$), 27 were assistant professors ($\mu = 3.10$, $SD = 1.37$), 23 were associate professors ($\mu = 2.78$, $SD = 1.65$), and 32 were professors ($\mu = 2.21$, $SD = 1.31$) (see Table 4-16).

The mean score for the statement “providing opportunities for students with learning disabilities to discuss personal needs is important to both instructor and student” compared by class size was 28 participants ($\mu = 2.46$, $SD = 1.47$) stated they taught a small course (5-20 students), 33 participants ($\mu = 2.88$, $SD = 1.38$) stated that they taught a medium-size course (21-70 students), and 27 participants ($\mu = 2.74$, $SD = 1.53$) taught a large course (71 plus students) (see Table 4-16).

The mean scores for the statement “providing opportunities for students with learning disabilities to discuss personal needs is important to both instructor and student” compared by the number of years that an instructor had been teaching was 21 participants ($\mu = 2.90$, $SD = 1.34$) stated that have been teaching for 0 to 5 years (see Table 4-16), 21 participants ($\mu = 3.05$, $SD = 1.67$) stated they had been teaching for 6 to 10 years, 17 participants ($\mu = 2.33$, $SD = 1.75$) stated they had been teaching for 11 to 15 years, while 6 participants ($\mu = 3.50$, $SD = 1.97$) stated they had been teaching for 16 to 21 years, 18 participants ($\mu = 1.95$, $SD = 0.99$) stated they had been teaching for 22 to 30 years and 9 participants ($\mu = 2.55$, $SD = 1.50$) had been teaching 30 years or more.

By academic ranking, the partial Eta squared was 0.12, indicating a small effect, showing that academic ranking accounted for 12% of the variance in self-perceived knowledge level. By class size, partial Eta squared was 0.05, indicating a small effect, showing that class size accounted for 5% of the variance in self-perceived knowledge level.

- **Objective Two.** To describe how College of Agricultural and Life Sciences instructors perceived importance of instructional competencies when working with learning disabled the students.

Providing opportunities for auditory learners to listen and speak within classroom and its relevance to the instructor’s job. Twenty-three (24%) self-reported that providing opportunities for auditory learners to listen and speak within the classroom was relevant to their job (see Table 4-17), 24 participants (25%) stated that they have average knowledge level, , while 23 participants (24%) had little knowledge that providing auditory learners the ability to speak and listen within the classroom to enhance learning. Fifteen participants (15.6%) stated that providing auditory learners the ability to speak and listen within the classroom enhance’s learning had any relevance to their job. Twenty-three participants (20%) did not respond to this question. The mean score was 3.30 ($SD = 1.36$) on a scale of 1 to 5.

The mean score of participants on providing opportunities for auditory learners to listen and speak within the classroom as relevant to their job compared by academic ranking was twelve participants were lecturers ($\mu = 3.25$, $SD = 1.28$), twenty-seven were assistant professors ($\mu = 3.71$, $SD = 1.18$), twenty-three were associate professors ($\mu = 3.52$, $SD = 1.34$) and thirty-two were professors ($\mu = 3.81$, $SD = 1.49$).

The mean score for the statement “providing opportunities for auditory learners to listen and speak within the classroom is relevant to my job” compared by class size was 28 participants ($\mu = 3.25$, $SD = 1.20$) stated they taught a small course (5-20 students), 33 participants ($\mu = 3.76$, $SD = 1.39$) stated that they taught a medium-size course (21-70 students), and 27 participants ($\mu = 3.07$, $SD = 1.26$) taught a large course (71 plus students) (see Table 4-18).

The mean scores for the statement “providing students with learning disability accommodations can enhance learning is relevant to my job” compared by number of years that an instructor had been teaching was twenty-one participants ($\mu = 3.63$, $SD = 1.09$) stated that had been teaching for 0 to 5 years (see Table 4-17). Twenty participants ($\mu = 3.35$, $SD = 1.08$) stated they had been teaching for 6 to 10 years, 17 participants ($\mu = 3.88$, $SD = 1.21$) stated they had been teaching for 11 to 15 years, while six participants ($\mu = 3.33$, $SD = 1.36$) stated they had been teaching for 16 to 21 years. Eighteen participants ($\mu = 2.94$, $SD = 1.62$) stated they had been teaching for 22 to 30 years, and 9 participants ($\mu = 2.77$, $SD = 1.39$) had been teaching for 31 years or more.

By academic ranking ,the partial Eta squared was 0.06, indicating a small effect, showing that academic ranking accounted for 6% of the variance in self-perceived relevance level. By class size, the partial Eta squared was 0.08, indicating a small effect, showing that class size accounted for 8% of the variance in self-perceived relevance level.

Providing opportunities for visual learners to gain information from reading, observing, and viewing curriculum. Twenty-five (26%) respondents self-reported that providing opportunities for visual learners to gain information from reading, observing, and viewing curriculum was relevant to their job (see Table 4-19). Thirty participants (31.1%) stated that they have average knowledge in regard to providing opportunities for visual learners to gain information from reading, observing, and viewing curriculum to enhance learning, while 23 participants (24%) had little knowledge that these activities can enhance learning. Eleven participants (11.5%) stated that providing these

opportunities had no relevance to their job. Twenty-three participants (20%) did not respond to this question. The mean score was 3.53 ($SD = 1.27$) on a scale of 1 to 5.

The mean score for the statement “providing opportunities for visual learners to gain information from reading, observing, and viewing curriculum” as being relevant to their job compared by academic ranking was 12 participants were lecturers ($\mu = 3.58$, $SD = 1.08$), 27 were assistant professors ($\mu = 3.89$, $SD = 1.10$), 23 were associate professors ($\mu = 3.76$, $SD = 1.24$), and 32 were professors ($\mu = 3.03$, $SD = 1.40$) (see Table-4-20).

The mean score for the statement “providing opportunities for visual learners to gain information from reading, observing, and viewing curriculum” as being relevant to their job compared by class size was 28 participants ($\mu = 3.60$, $SD = 1.10$) stated they taught a small course (5-20 students), 33 participants ($\mu = 3.91$, $SD = 1.31$) stated that they taught a medium-size course (21-70 students), and 27 participants ($\mu = 3.22$, $SD = 1.21$) taught a large course (71 plus students) (see Table 4-20).

The mean scores for the statement “providing opportunities for visual learners to gain information from reading, observing, and viewing curriculum” as relevant to their job compared by the number of years that an instructor had been teaching was 21 participants ($\mu = 4.0$, $SD = 1.12$) stated they had been teaching for 0 to 5 years (see Table 4-20), 20 participants ($\mu = 3.5$, $SD = 1.0$) stated they had been teaching for 6 to 10 years, 17 participants ($\mu = 4.05$, $SD = 1.44$) stated they had been teaching for 11 to 15 years, while 6 participants ($\mu = 3.33$, $SD = 1.36$) stated that they had been teaching for 16 to 21 years. Eighteen participants ($\mu = 3.16$, $SD = 1.42$) stated that they had been

teaching for 22 to 30 years, while 9 participants ($\mu = 2.88$, $SD = 1.53$) had been teaching for 31 years or more

By academic ranking, the partial Eta squared was 0.04, indicating a small effect, showing that academic ranking accounted for 4% of the variance in self-perceived relevance level. By class size, the partial Eta squared was 0.03, indicating a small effect, showing that class size accounted for 3% of the variance in self-perceived relevance level.

Providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum-relevance level. Fifteen (15.8%) of the respondents self-reported that providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum was relevant to their job (see Table 4-21). Thirty participants (13.7%) stated that they had an average knowledge level whereas 20 participants (21.1%) had little knowledge that providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum was relevant to their job and 29 participants (30.5%) stated this had no relevance to their job. Twenty-three participants (20%) did not respond to this question. The mean score was 2.64 ($SD = 1.44$) on a scale of 1 to 5.

The mean score for the statement “providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum” as relevant to their job compared by academic ranking was 12 participants were lecturers ($\mu = 2.74$, $SD = 1.05$), 27 were assistant professors ($\mu = 2.96$, $SD = 1.37$), 23 were associate professors ($\mu = 2.86$, $SD = 1.63$), and 32 were professors ($\mu = 2.18$, $SD = 1.44$) (see Table 4-22).

The mean score for the statement “providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum” as relevant to one’s job compared by class size was 28 participants ($\mu = 2.55$, $SD = 1.42$) stated they taught a small course (5-20 students), 33 participants ($\mu = 3.05$, $SD = 1.43$) stated that they taught a medium-sized course (21-70 students), and 27 participants ($\mu = 2.44$, $SD = 1.36$) taught a large course (71 plus students) (see Table 4-22).

The mean scores for participants providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum compared by the number of years that an instructor had been teaching was twenty-one participants ($\mu = 2.66$, $SD = 1.12$) stated they had been teaching for 0 to 5 years, 20 participants ($\mu = 2.90$, $SD = 1.33$) stated they had been teaching for 6 to 10 years, 17 participants ($\mu = 3.17$, $SD = 1.59$) stated they had been teaching for 11 to 15 years, 6 participants ($\mu = 2.66$, $SD = 1.63$) stated they had been teaching for 16 to 21 years, 18 participants ($\mu = 2.55$, $SD = 1.46$) stated they had been teaching for 22 to 30 years, and 9 participants ($\mu = 1.77$, $SD = 1.39$) had been teaching for 31 years or more

By academic ranking, the partial Eta squared was 0.03, indicating a small effect, showing that academic ranking accounted for 3% of the variance in self-perceived relevance level. By class size, the partial Eta squared was 0.08, indicating a small effect, showing that class size accounted for 8% of the variance in self-perceived relevance level.

Providing students with learning disabilities accommodation can enhance learning. Thirty-six participants (37.9%) self-reported that knowledge of providing students with learning disabilities accommodation to enhance learning was relevant to

their job (see Table 4-23), 24 participants (25.3%) stated that they have an average knowledge level, , whereas 16 participants (16.8%) had little knowledge. Eight participants (8.4%) stated that providing accommodations to enhance the learning process for students with learning disabilities had no relevance to their job. Twenty-three participants (20%) did not respond to this question. The mean score was 3.72 ($SD = 1.30$) on a scale of 1 to 5.

The mean score for the statement “providing accommodations to students with learning disabilities can enhance learning” as relevant to their job compared by academic ranking was twelve participants were lecturers ($\mu = 3.16$, $SD = 1.11$), 27 participants were assistant professors ($\mu = 4.03$, $SD = 1.22$), 23 participants were associate professors ($\mu = 3.86$, $SD = 1.35$), and 32 were professors ($\mu = 3.53$, $SD = 1.36$) (see Table 4-24).

The mean score for the statement “providing accommodations to students with learning disabilities can enhance learning” as relevant to their job compared by class size was 28 participants ($\mu = 3.57$, $SD = 1.35$) stated they taught a small course (5-20 students), 33 participants ($\mu = 4.02$, $SD = 1.11$) stated that they taught a medium-size course (21-70 students), and 27 participants ($\mu = 3.81$, $SD = 1.24$) taught a large course (71 plus students) (see Table 4-24).

The mean scores for the statement “providing accommodations to students with learning disabilities can enhance learning” as relevant to their job compared by number of years that an instructor had been teaching was 21 participants ($\mu = 3.57$, $SD = 1.32$) stated that had been teaching for 0 to 5 years (see Table 4-24), 20 participants ($\mu = 3.55$, $SD = 1.23$) stated they had been teaching for 6 to 10 years, 17 participants ($\mu =$

4.47, $SD = 0.87$) stated they had been teaching for 11 to 15 years, 6 participants ($\mu = 3.38$, $SD = 1.47$) stated they had been teaching for 16 to 21 years, 18 participants ($\mu = 3.72$, $SD = 1.27$) stated they had been teaching for 22 to 30 years, and 9 participants ($\mu = 3.55$, $SD = 1.23$) had been teaching for 31 years or more

By academic ranking, the partial Eta squared was 0.08, indicating a small effect, showing that academic ranking accounted for 8% of the variance in self-perceived relevance level. By class size, the partial Eta squared was 0.03, indicating a small effect, showing that class size accounted for 3% of the variance in self-perceived relevance level.

Using a Variety of Motivational Strategies within the Classroom- Relevance to Job. Nineteen participants (20%) believed that using motivational strategies in the classroom to engage students with learning disabilities to enhance learning was relevant to their job (See Table 4-24), 23 participants (24.2%) were somewhat familiar, and 23 participants (24.2%) had an average knowledge level in regard to motivational strategies. Twelve participants (12.6%) believed that providing motivational strategies within the classroom was relevant to their job and 19 participants (20%) believed that it had no relevance to their job. Twenty-three participants (20%) did not respond to this question. The mean score was 3.11 ($SD = 1.40$) on a scale of 1 to 5.

The mean score for the statement “using motivational strategies in the classroom to engage students with learning disabilities is relevant to my job” compared by academic ranking was 12 participants were lecturers ($\mu = 3.16$, $SD = 1.52$), 27 were assistant professors ($\mu = 3.03$, $SD = 1.22$), 23 were associate professors ($\mu = 3.39$, $SD = 1.40$), and 32 were professors ($\mu = 2.93$, $SD = 1.54$) (see Table 4-24).

The mean score for the statement “using motivational strategies in the classroom to engage students with learning disabilities is relevant to my job” compared by class size was 28 participants ($\mu = 2.96$, $SD = 1.42$) stated they taught a small course (5-20 students), 33 participants ($\mu = 3.08$, $SD = 1.37$) stated they taught a medium-size course (21-70 students), and 27 participants ($\mu = 3.47$, $SD = 1.39$) taught a large course (71 plus students) (see Table 4-24).

The mean scores for the statement “using motivational strategies in the classroom to engage students with learning disabilities is relevant to my job compared by number of years that an instructor had been teaching was 21 participants ($\mu = 2.90$, $SD = 1.41$) stated they had been teaching for 0 to 5 years (see Table 4-23). Twenty participants ($\mu = 3.90$, $SD = 1.16$) stated they had been teaching for 6 to 10 years, 17 participants ($\mu = 3.76$, $SD = 1.52$) stated they had been teaching for 11 to 15 years, 6 participants ($\mu = 3.16$, $SD = 1.72$) stated they had been teaching for 16 to 21 years, 18 participants ($\mu = 2.88$, $SD = 1.40$) stated they had been teaching for 22 to 30 years and 9 participants ($\mu = 3.22$, $SD = 1.39$) had been teaching for 31 years or more

By academic ranking, the partial Eta squared was 0.06, indicating a small effect, showing that academic ranking accounted for 6% of the variance in self-perceived relevance level. By class size, the partial Eta squared was 0.03, indicating a small effect, showing that class size accounted for 3% of the variance in self-perceived relevance level.

Providing opportunities to discuss personal needs-relevance to job. Thirty-three participants (34.7%) believed that providing opportunities for students with learning disabilities to discuss personal needs was relevant to their job (See Table 4-

25), 26 participants (27.4%) believed that providing opportunities was somewhat relevant to their jobs, while 11 participants (11.6%) believed that the relevance was ranked at an average level. Thirteen participants (13.7%) had little knowledge level that providing opportunities to discuss personal needs was relevant their job, 12 participants (12.6%) believed that providing opportunities for individuals to discuss personal needs was not relevant to their job, and 23 participants (20%) did not respond to this question. The mean score was 3.58 ($SD = 1.41$) on a scale of 1 to 5.

The mean score for the statement “providing opportunities for students with learning disabilities to discuss personal needs” as relevant to their job compared by academic ranking was 12 participants were lecturers ($\mu = 3.10$, $SD = 1.44$), 27 participants were assistant professors ($\mu = 4.02$, $SD = 1.16$), 33 participants were associate professors ($\mu = 3.70$, $SD = 1.43$), and 32 participants were professors ($\mu = 2.64$, $SD = 1.38$) (see Table 4-26).

The mean score of participants who believed that providing opportunities for students with learning disabilities to discuss personal needs was relevant to their job compared by class size was 28 participants ($\mu = 2.10$, $SD = 1.44$) stated they taught a small course (5-20 students), 33 participants ($\mu = 4.02$, $SD = 1.16$) stated that they taught a medium-sized course (21-70 students), and 27 participants ($\mu = 3.70$, $SD = 1.43$) taught a large course (71 plus students).

The mean for the statement “providing opportunities for students with learning disabilities to discuss personal needs” as relevant to their job compared by number of years that an instructor had been teaching was 21 participants ($\mu = 3.66$, $SD = 1.35$) stated they had been teaching for 0 to 5 years (see Table 4-26), 20 participants ($\mu =$

3.40, $SD = 1.31$) stated they had been teaching for 6 to 10 years, 17 participants ($\mu = 3.88$, $SD = 1.57$) stated they had been teaching for 11 to 15 years, 6 participants ($\mu = 3.83$, $SD = 1.60$) stated they had been teaching for 16 to 21 years, 18 participants ($\mu = 3.66$, $SD = 1.41$) stated they had been teaching for 22 to 30 years and 9 participants ($\mu = 3.11$, $SD = 1.36$) had been teaching for 31 years or more

By academic ranking, the partial Eta squared was 0.07, indicating a small effect, showing that academic ranking accounted for 7% of the variance in self-perceived relevance level. By class size, the partial Eta squared was 0.04, indicating a small effect, showing that class size accounted for 4% of the variance in self-perceived relevance level.

Discussing the legal requirements for students with learning disabilities in class or on course syllabus-relevance to job. Twenty-five participants (26.3%) believed that discussing the legal requirements for students with learning disabilities in class or in a course syllabus to be beneficial for students and was relevant to their job (see Table 4-26). Ten participants (10.5%) believed that discussion was somewhat relevant to their job, whereas 25 participants (26.3%) believed that it had an average relevance to their jobs. Ten participants (10.5%) believed that had little relevance to their jobs, and 20 participants (21.1%) believed that it had no relevance to their job. Twenty-three participants (20%) did not respond to this question. The mean score was 3.15 ($SD = 1.47$) on a scale of 1 to 5.

The mean score for the statement “discussing the legal requirements for students with learning disabilities in class or in a course syllabus” to be relevant to their job compared by academic ranking was 12 participants were lecturers ($\mu = 3.16$, $SD =$

1.46), 27 participants were assistant professors ($\mu = 3.46$, $SD = 1.34$), 23 participants were associate professors ($\mu = 3.39$, $SD = 1.58$), and 32 participants were professors ($\mu = 2.64$, $SD = 1.40$) (see Table 4-30).

The mean score for the statement “discussing the legal requirements for students with learning disabilities in class or on a course syllabus” was relevant to their job compared by class size was 28 participants ($\mu = 2.85$, $SD = 1.43$) stated they taught a small course (5-20 students), 33 participants ($\mu = 3.44$, $SD = 1.52$) stated that they taught a medium-size course (21-70 students), and 27 participants ($\mu = 3.30$, $SD = 1.34$) taught a large course (71 plus students) (see Table 4-30).

The mean scores for the statement “providing opportunities for students with learning disabilities to discuss personal needs” to be relevant to their job compared by the number of years that an instructor had been teaching was 21 participants ($\mu = 3.22$, $SD = 1.47$) stated they had been teaching for 0 to 5 years (see Table 4-30). Twenty participants ($\mu = 3.35$, $SD = 1.22$) stated they had been teaching for 6 to 10 years, 17 participants ($\mu = 3.82$, $SD = 1.59$) stated they had been teaching for 11 to 15 years, 6 participants ($\mu = 3.33$, $SD = 1.86$) stated they had been teaching for 16 to 21 years. Eighteen participants ($\mu = 2.33$, $SD = 1.18$) stated they had been teaching for 22 to 30 years, and 9 participants ($\mu = 3.25$, $SD = 1.48$) have been teaching for 31 years or more.

By academic ranking, the partial Eta squared was 0.04, indicating a small effect, showing that academic ranking accounted for 4% of the variance in self-perceived relevance level. By class size, the partial Eta squared was 0.06, indicating a small

effect, showing that class size accounted for 6% of the variance in self-perceived relevance level.

- **Objective Three.** To compare the knowledge and importance of instructional competencies when working with students with learning disabilities.

Providing opportunities for auditory learners to listen and speak within the classroom. Mean weighted discrepancy scores were used to compare instructor's self-perceived knowledge and relevance to their job on specific teaching competencies. Instructors rated their knowledge regarding the chance to provide opportunities for auditory learners to listen and speak within the classroom at just below the average ($\mu = 2.67$, $SD = 1.19$). Instructors rated the relevance to their job in accordance with providing opportunities for auditory learners to listen and speak within the classroom just above the average relevance level ($\mu = 3.30$, $SD = 1.37$). The mean weighted knowledge-relevance discrepancy score was 0.25 for providing opportunities for auditory learners (see Table 4-31).

Providing opportunities for visual learners to get information from reading, observing, and viewing the curriculum. Instructors rated their knowledge regarding providing opportunities for visual learners to gather information from reading, observing, and viewing the curriculum within the classroom at just above average ($\mu = 3.35$, $SD = 1.24$). Instructors rated the relevance to their job in accordance with providing opportunities for visual learners to gather information from reading, observing, and viewing the curriculum at just below average ($\mu = 2.63$, $SD = 1.27$). The mean weighted knowledge-relevance discrepancy score was 1.10 for providing opportunities for visual learners (see Table 4-31).

Providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum. Instructors rated their knowledge regarding to providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum within the classroom at just below average ($\mu = 2.63$, $SD = 1.21$). Instructors rated the relevance to their job in accordance with providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum within the classroom at just below the average ($\mu = 2.65$, $SD = 1.41$). The mean weighted knowledge-relevance discrepancy score was 1.09 for providing opportunities for tactile learners (see Table 4-31).

Communicating expectations that are clearly stated and understood by the learner. Instructors rated their knowledge of communicating expectations that are clearly stated and understood by the learner at above average ($\mu = 4.06$, $SD = 0.99$). Instructors rated the relevance to their job of communicating expectations that are clearly stated and understood by the learner at above average ($\mu = 4.39$, $SD = 1.05$). The mean weighted knowledge-relevance discrepancy score was 0.07 for communicating clear expectations (see Table 4-31).

Providing students with learning disabilities accommodations that can enhance the learning atmosphere. Instructors rated their knowledge of providing students with learning disabilities accommodations that can enhance the learning atmosphere at average ($\mu = 3.14$, $SD = 1.25$). Instructors rated the relevance to their job of providing students with learning disabilities accommodations at above average ($\mu = 3.72$, $SD = 1.30$). The mean weighted knowledge-relevance discrepancy score for

providing accommodations to students with learning disabilities was 0.21 (see Table 4-28).

Providing appropriate printed notes and resources to students in advance.

Instructors rated their knowledge of providing students with appropriate printed notes and resources in advance at below average ($\mu = 2.83$, $SD = 1.28$). Instructors rated the relevance to their job of providing students with appropriate printed notes and resources in advance at above average ($\mu = 3.56$, $SD = 1.42$). The mean weighted knowledge discrepancy score for providing resources to students in advance was 0.03 (see Table 4-31).

Using a variety of motivational strategies in the classroom to engage students with learning disabilities. Instructors rated their knowledge of using a variety of motivational strategies in the classroom to engage students with learning disabilities at below average ($\mu = 2.54$, $SD = 1.20$). Instructors rated using a variety of motivational strategies in the classroom to engage students with learning disabilities at an above average ($\mu = 3.11$, $SD = 1.40$). The mean weighted knowledge-relevance discrepancy score for using motivational strategies to engage a student with learning disabilities was 0.20 (see Table 4-31).

Providing opportunities for students with learning disabilities to discuss personal needs. Instructors rated their knowledge of providing opportunities for students with learning disabilities to discuss personal needs at above average ($\mu = 3.34$, $SD = 1.40$). Instructors rated the relevance to their job of providing opportunities for students with learning disabilities to discuss personal needs at above average ($\mu = 3.57$, $SD = 1.41$). The mean weighted knowledge-relevance discrepancy score for providing

opportunities for students with learning disabilities to discuss personal needs was 0.03 (see Table 4-31).

Discussing the legal requirements for students with learning disabilities in class and on course syllabus. Instructors rated their knowledge of the importance of discussing the legal requirements for students with learning disabilities in class and on a course syllabus at below average ($\mu = 2.72$, $SD = 1.43$). Instructors rated the relevance to their job of discussing the legal requirements for students with learning disabilities in class and on a course syllabus at above average ($\mu = 3.15$, $SD = 1.46$). The mean weighted knowledge-relevance discrepancy score for discussing legal requirements with students with disabilities was 0.10 (see Table 4-32).

- **Objective 4.** To compare the College of Agricultural and Life Sciences instructors differences in knowledge and relevance.

An Analysis of Variance (ANOVA) was used to determine if a statistically significant difference existed in mean instructional competencies (see Table 4-29). The statistical analysis indicated that a statistically significant difference existed in the mean when providing opportunities for visual learners to get information from reading, observing, and viewing curriculum when comparing the academic ranking to the relevance of the instructors job level ($F_{(13.14,140.47)} = 2.83$, $p < 0.042$). Also, there was a statistically significant difference between the knowledge level of applying the concept of providing students with the ability to discuss personal needs and the academic ranking of instructors $F_{(20.17,164.70)} = 5.77$, $p < 0.05$). Another statistically significant difference that was found was the relevance level to an instructors job of providing opportunities for students with learning disabilities to discuss personal needs compared

to the class size $F_{(14.88, 166.31)} 4.07, p < 0.02$). There were no other statistically significant differences to report.

Summary

This chapter presents the findings of this study. The findings were structured around the objectives. The objectives were:

1. To describe College of Agricultural and Life Sciences instructors' self-reported knowledge of learning disability instructional competencies.
2. To describe College of Agricultural and Life Sciences instructors' self-reported sense of the importance of instructional competencies when working with learning disabled students.
3. To compare instructors' knowledge and sense of the importance of instructional competencies when working with students with learning disabilities.
4. To compare the College of Agricultural and Life Sciences instructors' differences in knowledge and sense of relevance.

The findings offered in this chapter will be discussed in greater detail in Chapter 5. In addition, implications, conclusions, and recommendations will also be presented.

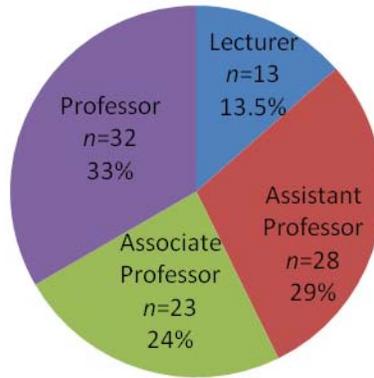


Figure 4-1. Instructor's academic ranking

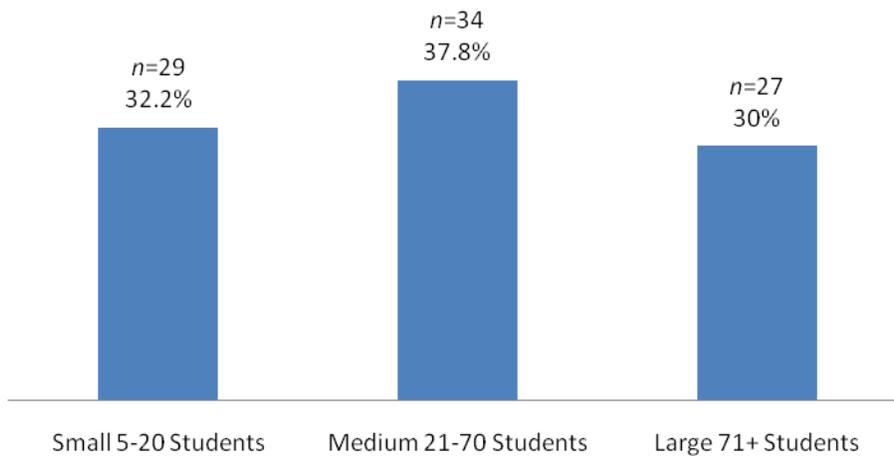


Figure 4-2. Class size teaching for

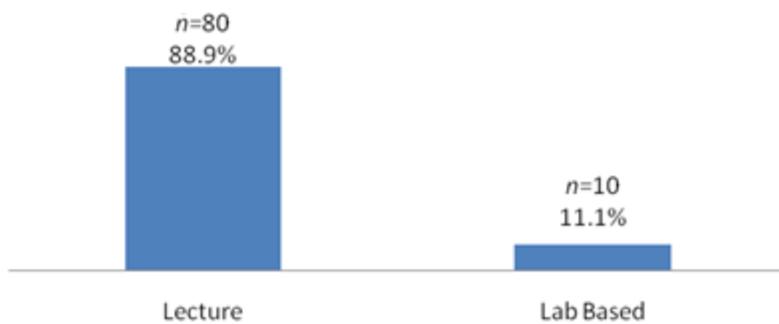


Figure 4-3. Type of course of teaching for

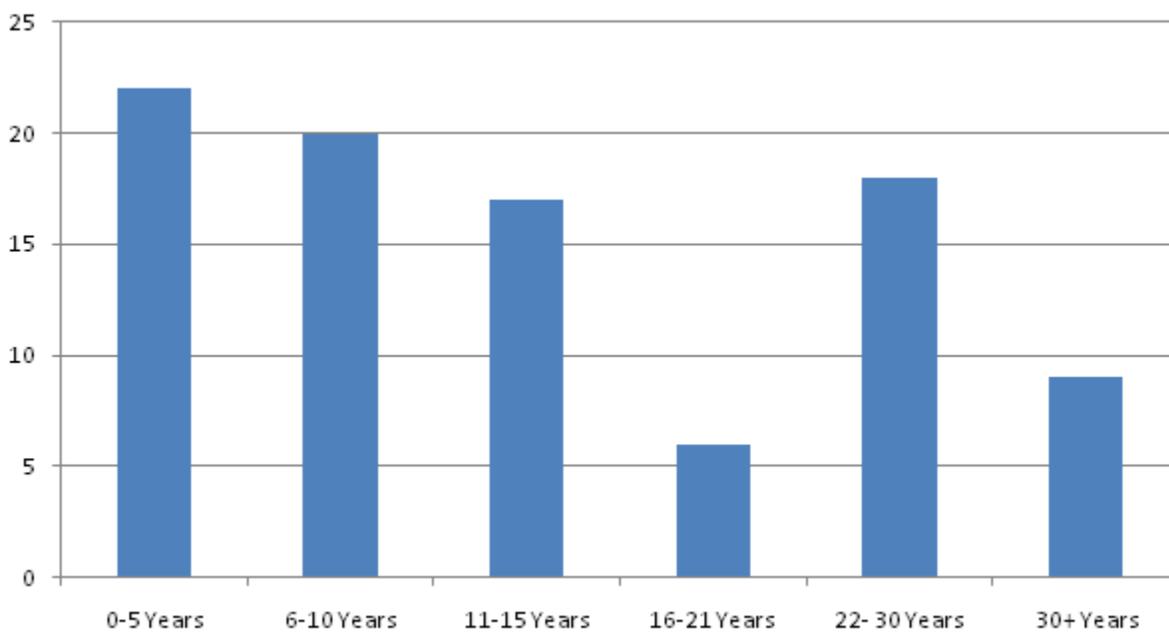


Figure 4-4. Number of years in the teaching profession

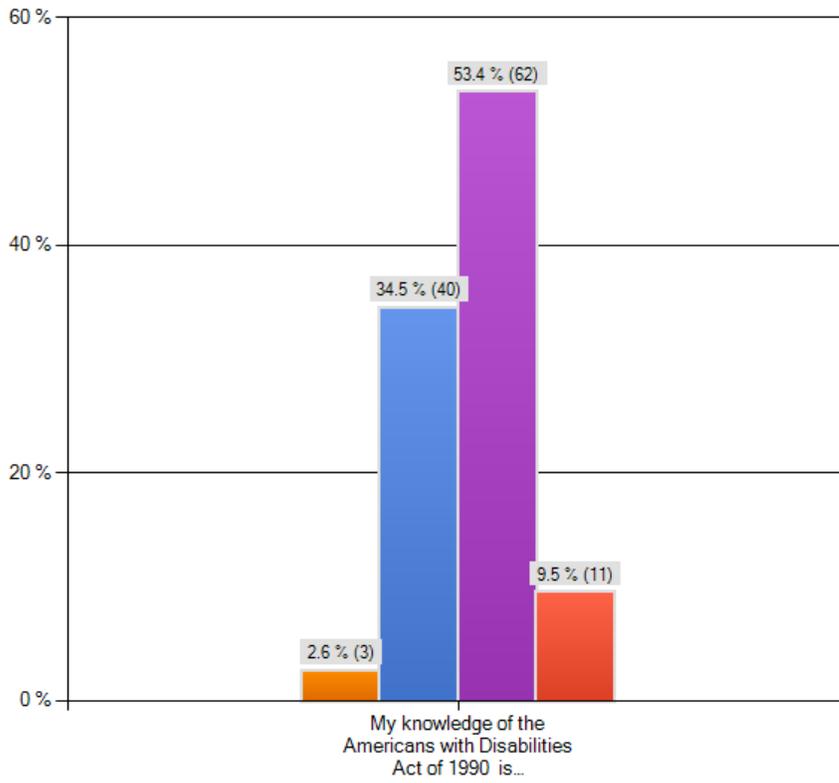


Figure 4-4. Knowledge level of the Americans with Disability Act

Table 4-1. Providing opportunities for auditory learners to listen and speak within the classroom

Knowledge level	n	%	Cumulative%
No knowledge level	6	6	6
Little knowledge	18	18.8	24.8
Average knowledge level	32	33.3	58.1
Somewhat familiar	19	19.8	77.9
Very familiar	21	21.9	100

Table 4-2. Providing opportunities for auditory learners to listen and speak within the classroom compared by demographics

	Academic ranking				Class size			Number of years in the teaching profession					
	Lecturer	Assistant professor	Associate professor	Professor	Small 5-20	Medium 21-70	Large 70+	0-5	6-10	11-15	16-21	22-30	30+
μ	3.166	3.03	2.43	2.40	2.42	2.67	2.85	2.95	2.80	2.52	1.93	2.61	2.66
SD	.02	1.10	1.16	1.24	1.16	1.73	1.20	1.09	1.96	1.23	0.98	1.28	1.50

Table 4-3. Visual learners to gain information from reading, observing, and viewing curriculum

Knowledge level	<i>N</i>	%	Cumulative%
No knowledge level	12	12.5	12.5
Little knowledge	22	22.9	35.4
Average knowledge level	32	33.3	58.7
Somewhat familiar	14	14.6	83.3
Very familiar	16	16.7	100

Table 4-4. Mean scores of the statement “allowing learners to get information from reading, observing, and viewing curriculum compared to demographics

	Academic ranking				class size			Number of years in the teaching profession					
	Lecturer	Assistant professor	Associate professor	Professor	Small 5-20	Medium 21-70	Large 70+	0-5	6-10	11-15	16-21	22-30	30+
μ	3.58	3.21	2.86	2.68	2.75	3.05	3.18	3.31	3.20	3.0	2.16	2.88	3.11
SD	1.24	1.16	1.25	1.28	1.26	1.22	1.33	1.29	1.25	1.41	0.98	1.27	1.53

Table 4-5. Providing opportunities for tactile learners to examine, manipulate, and handle materials that references the curriculum

Knowledge level	N	%	Cumulative %
No knowledge level	32	33.7	33.7
Little knowledge	26	27.4	61.1
Average knowledge level	25	26.3	87.4
Somewhat familiar	4	4.2	91.6
Very familiar	4	8.4	100

Table 4-6. Mean scores for the statement “providing opportunities for tactile learners to examine, manipulate, and handle materials that references the curriculum “ compared to demographics

	Academic ranking				Class size			Number of years in the teaching profession					
	Lecturer	Assistant professor	Associate professor	Professor	Small 5-20	Medium 21-70	Large 70+	0-5	6-10	11-15	16-21	22-30	30+
μ	2.75	2.51	2.13	2.00	1.88	2.32	2.23	2.38	2.50	2.23	1.66	2.22	2.00
<i>SD</i>	1.42	1.08	1.25	1.16	1.01	1.22	1.20	1.12	1.23	1.30	1.03	1.26	1.32

Table 4-7. Communicating expectations that are clearly stated and understood by the learner can enhance the learning environment

Knowledge level	<i>N</i>	%	Cumulative %
No knowledge level	5	5.2	5.2
Little knowledge	1	1	6.2
Average knowledge level	11	11.5	17.7
Somewhat familiar	45	46.9	64.6
Very familiar	34	35.4	100

Table 4-8. Mean score of the statement “communicating expectations that are clearly stated and understood by the learner can enhance the learning environment” compared to demographics

	Academic ranking				Class size			Number of years in the teaching profession					
	Lecturer	Assistant professor	Associate professor	Professor	Small 5-20	Medium 21-70	Large 70+	0-5	6-10	11-15	16-21	22-30	30+
μ	4.41	3.11	4.07	4.21	3.89	3.90	4.40	4.19	4.25	3.76	3.66	4.11	4.00
SD	0.66	1.31	0.78	0.90	1.19	0.84	0.97	0.81	0.71	1.43	1.33	0.67	1.32

Table 4-9. Providing students with learning disabilities accommodation can enhance learning

Knowledge level	<i>N</i>	%	Cumulative %
No Knowledge level	11	11.6	11.6
Little knowledge	19	20	31.6
Average knowledge level	26	27.4	59
Somewhat familiar	23	24.2	83.2
Very familiar	16	16.8	100

Table 4-10. Mean scores of the statement “providing students with learning disabilities accommodations” compared to demographics

	Academic ranking				Class size			Number of years in the teaching profession					
	Lecturer	Assistant professor	Associate professor	Professor	Small 5-20	Medium 21-70	Large 70+	0-5	6-10	11-15	16-21	22-30	30+
μ	3.166	3.11	3.26	3.09	2.75	3.14	3.51	2.66	3.20	3.30	2.66	3.55	3.11
SD	1.19	1.31	1.25	1.30	1.17	1.18	1.34	1.54	1.36	1.60	1.63	1.49	1.23

Table 4-11. Using a variety of motivational strategies in the classroom to engage students with learning disabilities

Knowledge level	<i>n</i>	%	Cumulative %
No knowledge level	23	24.2	24.2
Little knowledge	24	25.3	49.5
Average knowledge level	28	29.5	79
Somewhat familiar	13	13.7	92.7
Very familiar	7	7.3	100

Table 4-12. Mean score of the statement “using a variety of motivational strategies in the classroom to engage students with learning disabilities” compared to demographics

	Academic ranking				Class size			Number of years in the teaching profession					
	Lecturer	Assistant professor	Associate professor	Professor	Small 5-20	Medium 21-70	Large 70+	0-5	6-10	11-15	16-21	22-30	30+
μ	3.00	2.40	2.39	2.62	2.53	3.44	2.66	2.28	2.45	2.35	2.16	2.83	2.80
SD	1.41	1.00	1.07	1.38	1.20	1.39	1.41	1.89	1.00	1.27	1.47	1.20	1.36

Table 4-13. Providing opportunities to discuss personal needs

Knowledge level	N	%	Cumulative %
No knowledge level	15	15.8	15.8
Little knowledge	12	12.6	28.4
Average knowledge level	18	18.9	47.3
Somewhat familiar	25	26.3	73.6
Very familiar	25	26.3	100

Table 4-14. Mean scores of the statement “providing opportunities for students with learning disabilities to discuss personal needs” compared to demographics

	Academic ranking				Class size			Number of years in the teaching profession					
	Lecturer	Assistant professor	Associate professor	Professor	Small 5-20	Medium 21-70	Large 70+	0-5	6-10	11-15	16-21	22-30	30+
μ	3.58	3.48	3.43	3.03	2.64	3.50	3.77	3.23	3.45	3.17	3.50	3.44	3.22
SD	1.56	1.22	1.44	1.46	1.37	1.35	1.36	1.33	1.35	1.74	2.0	1.38	1.20

Table 4-15. Discussing the legal requirements for students with learning disabilities in class or on course syllabus

Knowledge level	N	%	Cumulative %
No knowledge level	28	29.2	29.2
Little knowledge	15	15.6	44.8
Average knowledge level	23	24.0	68.8
Somewhat familiar	15	15.6	84.4
Very familiar	15	15.6	100

Table 4-16. Mean discussing the legal requirements for students with learning disabilities in class or on course syllabus

	Academic ranking				Class size			Number of years in the teaching profession					
	Lecturer	Assistant professor	Associate professor	Professor	Small 5-20	Medium 21-70	Large 70+	0-5	6-10	11-15	16-21	22-30	30+
μ	3.00	3.10	2.78	2.21	2.46	2.88	2.74	2.90	3.10	3.05	2.33	1.94	2.55
SD	1.20	1.37	1.65	1.31	1.47	1.38	1.53[1.35	1.48	1.67	1.75	100	1.50

Table 4-17. Providing opportunities for auditory learners to listen and speak within classroom-relevance to instructor's job

Relevance level	N	%	Cumulative %
Not relevant	15	15.6	15.6
Little relevance	11	11.5	27.0
Average relevance level	23	24	51.1
Somewhat relevant	24	25	76
Very relevant	23	24	100

Table 4-18. Mean score of the statement “providing opportunities for auditory learners to listen and speak within classroom-relevance to instructor's job” compared to demographics

	Academic ranking				Class size			Number of years in the teaching profession					
	Lecturer	Assistant professor	Associate professor	Professor	Small 5-20	Medium 21-70	Large 70+	0-5	6-10	11-15	16-21	22-30	30+
μ	3.25	3.71	3.52	2.81	3.25	3.76	3.07	3.63	3.35	3.88	3.33	2.94	2.77
SD	1.28	1.18	1.34	1.49	1.20	1.39	1.26	1.25	1.08	1.21	1.36	1.62	1.39

Table 4-19. Providing opportunities for auditory learners to listen and speak within classroom-relevance to instructor's job

Relevance level	N	%	Cumulative %
Not relevant	11	11.5	11.5
Little relevance	7	7.3	18.8
Average relevance level	23	24	42.8
Somewhat relevant	30	31.3	74.1
Very relevant	25	26	100

Table 4-20. Mean score of the statement “providing opportunities for auditory learners to listen and speak within classroom-relevance to instructor's job” compared to demographics

	Academic ranking				Class size			Number of years in the teaching profession					
	Lecturer	Assistant professor	Associate professor	Professor	Small 5-20	Medium 21-70	Large 70+	0-5	6-10	11-15	16-21	22-30	30+
μ	3.58	3.89	3.78	3.03	3.60	3.91	3.22	4.0	3.50	4.08	3.33	3.16	2.88
SD	1.08	1.10	1.24	1.40	1.10	1.31	1.21	1.12	1.0	1.14	1.36	1.42	1.53

Table 4-21. Providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum, - relevance level

Relevance level	N	%	Cumulative %
Not relevant	29	30.5	30.5
Little relevance	18	18.9	49.4
Average relevance level	20	21.1	70.5
Somewhat relevant	13	13.7	84.2
Very relevant	15	15.8	100

Table 4-22. Means score of the statement “providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum, - relevance level” compared to demographics

	Academic ranking				Class size			Number of years in the teaching profession					
	Lecturer	Assistant professor	Associate professor	Professor	Small 5-20	Medium 21-70	Large 70+	0-5	6-10	11-15	16-21	22-30	30+
μ	2.75	2.96	2.86	2.18	2.55	3.05	2.44	2.66	2.90	3.17	2.66	2.55	1.77
SD	1.05	1.37	1.63	1.44	1.42	1.43	1.36	1.31	1.33	1.59	1.63	1.46	1.39

Table 4-23. Providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum- relevance level” compared to demographics

Relevance level	N	%	Cumulative %
Not relevant	8	8.4	8.4
Little relevance	11	11.6	20
Average relevance level	16	16.8	36.8
Somewhat relevant	24	25.3	62.1
Very relevant	36	37.9	100

Table 4-24. Mean score of the statement “providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum,- relevance level” compared to demographics

	Academic ranking				Class size			Number of years in the teaching profession					
	Lecturer	Assistant professor	Associate professor	Professor	Small 5-20	Medium 21-70	Large 70+	0-5	6-10	11-15	16-21	22-30	30+
μ	3.16	4.03	3.86	3.53	3.57	4.02	3.81	3.57	3.55	4.47	3.38	3.72	3.55
SD	1.11	1.22	1.35	1.36	1.35	1.11	1.24	1.32	1.23	0.87	1.47	1.27	1.23

Table 4-25. Using a variety of motivational strategies in the classroom to engage students with learning disabilities-
relevance to job

Relevance level	<i>N</i>	%	Cumulative %
Not relevant	19	20	20
Little relevance	23	24.2	44.2
Average relevance level	22	23.2	67.4
Somewhat relevant	12	12.6	80
Very relevant	19	20.0	100

Table 4-26. Mean score of the statement “providing using a variety of motivational strategies in the classroom to engage students with learning disabilities-relevance to job” compared to demographics

	Academic ranking				Class size			Number of years in the teaching profession					
	Lecturer	Assistant professor	Associate professor	Professor	Small 5-20	Medium 21-70	Large 70+	0-5	6-10Y	11-15	16-21	22-30	30+
μ	3.16	4.03	3.86	3.53	3.57	4.02	3.81	2.90	2.90	3.76	3.16	2.88	3.22
<i>SD</i>	1.11	1.22	1.35	1.36	1.35	1.11	1.24	1.41	1.16	1.52	1.72	1.40	1.39

Table 4-27. Providing opportunities for students with learning disabilities to discuss personal needs- relevance to job

Relevance level	<i>N</i>	%	Cumulative %
Not relevant	12	12.6	12.6
Little relevance	13	13.7	26.3
Average relevance level	11	11.6	37.9
Somewhat relevant	26	27.4	65.3
Very relevant	33	34.7	100

Table 4-28. Mean score for the statement “providing opportunities for students with learning disabilities to discuss personal needs- relevance” to job” compared to demographics

	Academic ranking				class size			Number of years in the teaching profession					
	Lecturer	Assistant professor	Associate professor	Professor	Small 5-20	Medium 21-70	Large 70+	0-5	6-10	11-15	16-21	22-30	30+
μ	3.50	3.77	3.82	3.21	3.10	4.02	3.70	3.66	3.40	3.83	3.66	3.11	3.60
<i>SD</i>	1.31	1.21	1.52	1.49	1.47	1.16	1.43	1.35	1.31	1.60	1.41	1.36	1.39

Table 4-29. Discussing the legal requirements for students with learning disabilities in class or on course syllabus-relevance to job

Relevance level	<i>N</i>	%	Cumulative %
Not relevant	20	21.1	21.1
Little relevance	10	10.5	31.6
Average relevance level	25	26.3	57.9
Somewhat relevant	15	15.8	73.7
Very relevant	25	26.3	100

Table 4-30. Mean score for the statement “discussing the legal requirements for students with learning disabilities in class or on course syllabus” compared to demographics

	Academic ranking				Class size			Number of years in the teaching profession					
	Lecturer	Assistant professor	Associate professor	Professor	Small 5-20	Medium 21-70	Large 70+	0-5	6-10	11-15	16-21	22-30	30+
μ	3.16	3.46	3.39	2.64	2.85	3.44	3.30	3.22	3.35	3.82	3.33	2.33	3.25
<i>SD</i>	1.46	1.34	1.58	1.40	1.43	1.52	1.34	1.47	1.22	1.59	1.86	1.18	1.48

Table 4-31. Instructional competency of instructors- knowledge level vs. relevance to job

Instructional competency	Knowledge level mean	Relevance to job mean	Mean weighted discrepancy score (MWDS)
Visual learners to get information from reading, observing, and viewing the curriculum	3.35(<i>SD</i> = 1.24)	2.63(<i>SD</i> = 1.27)	1.10
Auditory learners to listen and speak within the classroom	2.67 (<i>SD</i> = 1.19)	3.30(<i>SD</i> = 1.37)	0.25
Providing accommodations that can enhance the learning atmosphere	3.14(<i>SD</i> = 1.25)	3.72(<i>SD</i> = 1.30)	0.21
Using motivational strategies in the classroom to engage students with learning disabilities	2.54(<i>SD</i> = 1.20)	3.11(<i>SD</i> = 1.40)	0.20
Discussing the legal requirements for students with learning disabilities in class and on course syllabus	2.72(<i>SD</i> = 1.43)	3.15(<i>SD</i> = 1.46)	0.10
Tactile learners to examine, manipulate, and handle materials that reference the curriculum	2.63(<i>SD</i> = 1.21)	2.65(<i>SD</i> = 1.41)	0.09
Communicating expectations that are clearly stated and understood by the learner	4.06(<i>SD</i> = 0.99)	4.39(<i>SD</i> = 1.05)	0.07
Providing opportunities for students with learning disabilities to discuss personal needs	3.34 (<i>SD</i> = 1.40)	3.57(<i>SD</i> = 1.41)	0.03
Providing students with learning disabilities opportunities to collaborate with peers	2.83(<i>SD</i> = 1.28)	3.06(<i>SD</i> = 1.42)	0.03
Providing appropriate printed notes and resources to students in advance	3.69(<i>SD</i> = 1.18)	3.56(<i>SD</i> = 1.38)	0.01

Table 4-32. College of agricultural and life sciences instructors differences in knowledge and relevance

Instructional competencies	Academic ranking knowledge level			Academic ranking relevance level			Class size knowledge level			Class size relevance level		
	<i>F</i>	<i>df</i>	<i>p</i>	<i>f</i>	<i>df</i>	<i>p</i>	<i>f</i>	<i>df</i>	<i>p</i>	<i>f</i>	<i>df</i>	<i>p</i>
Auditory learners to listen and speak within the classroom	2.52	3	0.63	2.50	3	0.64	0.85	2	0.42	0.86	2	0.42
Visual learners to get information from reading, observing, and viewing the curriculum	1.93	3	0.12	2.83	3	0.04	1.36	2	0.26	1.69	2	0.19
Tactile learners to examine, manipulate, and handle materials that reference the curriculum	1.66	3	0.179	1.74	3	0.16	1.35	2	0.26	0.91	2	0.4
Communicating expectations that are clearly stated and understood by the learner	1.37	3	0.20	2.45	3	0.06	2.23	2	0.11	2.70	2	0.07
Providing accommodations which can enhance the learning atmosphere	0.08	3	0.96	1.59	3	0.20	0.43	2	0.65	2.64	2	0.70
Providing printed notes and resources to students in advance	0.42	3	0.73	2.38	3	0.07	0.84	2	0.43	2.70	2	0.07
Providing opportunities to collaborate with peers	0.75	3	0.52	1.78	3	0.15	0.55	2	0.57	3.48	2	0.03
Using a variety of motivational strategies in the classroom to engage students	0.84	3	0.47	0.487	3	0.69	0.75	3	0.52	1.12	3	0.34

Table 4-32. Continued

Providing opportunities for students to discuss personal needs	5.77	2	0.05	6.18	2	0.03	1.53		0.21	4.07	2	0.02
Discussing the legal requirements for students with learning disabilities in class and on course syllabus	2.23	3	0.09	1.92	3	0.13	0.99	2	0.37	2.54	2	0.84

CHAPTER 5 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Purpose of the Study

The purpose of this study was to measure how teaching methods in college classrooms can enhance learning for students with learning disabilities. The study assessed instructors' perceived knowledge of learning disabilities when using specific instructional methods. Also, the study measured the degree to which instructors found specific instructional methods important when working with students with learning disabilities. This study aided in compared instructors' perceived knowledge level and the degree to which they find a specific instructional method important when working with learning disabled students.

Objectives

This study was guided by four objectives:

- To describe College of Agricultural and Life Sciences instructors' self-reported knowledge of learning disability instructional competencies.
- To describe College of Agricultural and Life Sciences instructors' self-reported sense of the importance of instructional competencies when working with learning disabled students.
- To compare instructors knowledge and sense of the importance of instructional competencies when working with students with learning disabilities.
- To compare the College of Agricultural and Life Sciences instructors' differences in knowledge and sense of relevance.

Methods

The study was designed to utilize the Borich Needs Assessment Model to analyze the competencies of instructors and prior knowledge of teaching methods to utilize when working with learning disabled students in higher education (Barrick, Ladewig, & Hedges, n.d.). The independent variables in this study were the instructional

competencies that instructors' use when working with students with learning disabilities. The dependent variables were instructors' knowledge and the relevance to their job.

This study was administered to instructors ($n = 385$) that taught classes through the College of Agricultural and Life Sciences at the University of Florida in the spring semester of 2010. There are 19 departments in the College of Agricultural and Life Sciences with 13.5% of instructors ranked as lecturer, 29.2% as assistant professor's, 24% as associate professors, and 33% as professors.

The instrument was an anonymous web-based Borich Needs Assessment Model hosted by SurveyMonkey for data collection. The questionnaire was designed to measure instructors' attitudes, knowledge, and forms of differentiated instruction used in the classroom and their perceived of these relevance to their specific job. The questionnaire was divided into four parts: (a) the current knowledge level of the instructor based upon teaching methods, (b) the perception of instructors' relevance to the job in relation to the teaching methods, (c) demographic information, and (d) open-ended questions. The survey was composed of ranking questions, multiple choice items, and open-ended questions. The Borich (1980) model of needs assessment was used to measure participants' perceptions of twelve teaching competencies. Participants used a five-point scale (1= Low knowledge/ relevance; 5= High knowledge/ relevance) to rate their current level of knowledge for each competency and the degree to which the competency was or was not relevant to their job.

The data was analyzed using the Statistical Package for the Social Sciences (SPSS). The researcher utilized descriptive statistics to gain a better insight of the data set. The first analysis conducted was means, standard deviations, and frequencies of

the variables. The researcher utilized a one-way analysis of variance (ANOVA) in order to assess the relationship between the independent and dependent variables. The topics from the Borich Needs Assessment Model were ranked according to the mean rating obtained from the survey (Barrick, Ladewig, & Hedges, n.d.) A discrepancy score was obtained for each participant by subtracting the instructor's perceived level of knowledge from the perceived level of relevance for a specific teaching competency. Each discrepancy score was then multiplied by the mean importance level for that specific topic, resulting in a mean-weighted discrepancy score for each participant. The survey produced two relative weight scores determined from the following formulas:

Weighted Knowledge Scores= (Importance Mean – Knowledge Mean) x
Importance Mean (Barrick, Ladewig, & Hedges, n.d.)

Weighted Application Score= (Importance Mean – Application Mean) x Importance
Mean (Barrick, Ladewig, & Hedges, n.d.)

The two relative -weight scores were ranked in order with the topic with the greatest positive relative weight scores with highest priority (Barrick, Ladewig, & Hedges, n.d.).

Summary of Findings

The findings of this study are summarized using the objectives presented in Chapter 1.

Objectives

- **Objective 1:** To describe College of Agricultural and Life Sciences instructors' self-reported knowledge of learning disability instructional competencies.

The first objective was to be able to describe the sample population's self-reported knowledge of learning disability instructional competencies. The sample consisted of

faculty member who taught class through the College of Agricultural and Life Sciences at the University of Florida in the spring semester of 2010 ($n = 385$). NINETY-THREE percent of participants ($n = 107$) were familiar with the Americans with Disability Act of 1990, stating that they were familiar that it was their responsibility to provide students with learning disabilities accommodations. Only six percent ($n = 7$) were not familiar with the Americans with Disability Act of 1990, stating that it was their responsibility to accommodate students with learning disabilities . The greatest percentage of the participants stated that they taught medium-sized class with approximately 21 to 70 students ($n = 34, 37.8\%$). Participants also reported that 88.9% ($n = 80$) taught a lecture- based course, while 11.1% ($n = 10$) taught a lab- based course. The average number of years of college teaching experience was 14.84. Participants were asked to rate their knowledge level in regard to the Americans with Disability Act on a scale of 1 to 4; the mean was 2.70 ($SD = 0.68$).

Participants in this study were also asked to indicate their self-perceived knowledge level on a scale of 1 to 5 in regard to the statement “accommodating to students with learning disabilities can enhance learning.” The mean score was 3.14 ($SD = 1.25$). The mean score for the statement “accommodating to students with learning disabilities can enhance learning” compared to class size was 3.13 ($SD = 1.25$). The mean score for the statement “accommodating to students with learning disabilities can enhance learning” compared to academic ranking was 3.14 ($SD = 1.26$). The mean score for the statement “accommodating to students with learning disabilities can enhance learning” compared to the number of years that an instructor had been teaching was 3.12 ($SD = 1.26$).

Also, participants were asked to indicate their self-perceived knowledge level on a scale of 1 to 5 in regard to the statement “using motivational strategies in the classroom to engage students with learning disabilities can enhance learning.” The mean score was 2.54 ($SD = 1.20$). The mean score for the statement “using motivational strategies in the classroom to engage students with learning disabilities can enhance learning” compared to class size was 2.50 ($SD = 1.20$). The mean score for the statement “using motivational strategies in the classroom to engage students with learning disabilities can enhance learning” compared to academic ranking was 2.55 ($SD = 1.21$). The mean score for the statement “, “using motivational strategies in the classroom to engage students with learning disabilities can enhance learning” compared to the number of years that an instructor has been teaching was 2.94 ($SD = 1.96$).

Participants were asked to rate their knowledge level in regard to the teaching competency that providing opportunities for auditory learners to listen and speak within the classroom enhances the learning environment was rated on a scale of 1 to 5 with a mean of 2.61 ($SD = 1.19$). The mean score for providing opportunities for auditory learners to listen and speak within the classroom compared to the class size was 2.65 ($SD = 1.20$). The mean score for providing opportunities for auditory learner to listen and speak within the classroom compared to academic ranking was 2.69 ($SD = 1.18$). The mean score for providing opportunities for an auditory learner to listen and speak within classroom compared the number of years that an instructor has been teaching was 2.67 ($SD = 1.21$).

Participants in this study were also asked to indicate their self-perceived knowledge level on a scale of 1 to 5 in regard to the statement “providing opportunities

for students with learning disabilities to discuss personal needs is important to both instructor and student.” The mean score was 3.34 ($SD=1.40$). The mean score for the statement “providing opportunities for students with learning disabilities to discuss personal needs is important to both instructor and student” compared to the class size was 3.31 ($SD = 1.42$). The mean score for the statement “providing opportunities for students with learning disabilities to discuss personal needs is important to both instructor and student” compared to academic ranking was 2.03 ($SD = 1.46$). The mean score for the statement “providing opportunities for students with learning disabilities to discuss personal needs is important to both instructor and student” compared to the number of years that an instructor has been teaching was 3.23 ($SD = 1.42$).

Participants in this study were also asked to indicate their self-perceived knowledge level on a scale of 1 to 5 in regard to the statement “the importance of discussing the legal requirements for students with learning disabilities in class or in the course syllabus can be beneficial for students.” The mean score was 2.79 ($SD=1.43$). The mean score for the statement “the importance of discussing the legal requirements for students with learning disabilities in class or in the course syllabus can be beneficial for students” compared to the class size was 2.70 ($SD = 1.45$). The mean score for the statement “the importance of discussing the legal requirements for students with learning disabilities in class or in the course syllabus can be beneficial for students” compared to academic ranking was 2.21 ($SD = 1.31$). The mean score for the statement “the importance of discussing the legal requirements for students with learning disabilities in class or on course syllabus can be beneficial for students”

compared to the number of years that an instructor has been teaching was 2.71 ($SD = 1.45$).

- **Objective Two:** Describe how College of Agricultural and Life Sciences instructors perceived the importance of instructional competencies when working with learning disabled students.

This objective sought to describe College of Agricultural and Life Sciences instructors' self-reported perceived importance of instructional competencies when working with learning disabled students. Participants in this study were asked to indicate their self-perceived relevance level to their jobs on a scale of 1 to 5 in regard to the statement "accommodating to students with learning disabilities can enhance learning." The mean score was 3.72 ($SD = 1.30$). The mean score for the statement, "accommodating to students with learning disabilities can enhance learning" compared to the class size was 3.82 ($SD = 1.22$). The mean score for the statement, "accommodating to students with learning disabilities can enhance learning" compared to academic ranking was 3.53 ($SD = 1.36$). The mean score for the statement, "accommodating to students with learning disabilities can enhance learning" compared to the number of years that an instructor has been teaching was 3.76 ($SD = 1.26$).

Participants in this study were asked to indicate their self-perceived relevance level to their jobs on a scale of 1 to 5 in regard to the statement "using motivational strategies in the classroom to engage students with learning disabilities can enhance learning." The mean score was 3.14 ($SD = 1.39$). The mean score for the statement "using motivational strategies in the classroom to engage students with learning disabilities can enhance learning" compared to the class size was 3.10 ($SD = 1.41$). The mean score for the statement "using motivational strategies in the classroom to engage students with learning disabilities can enhance learning" compared to academic

ranking was 3.53 ($SD = 1.36$). The mean score for the statement “using motivational strategies in the classroom to engage students with learning disabilities can enhance learning” compared the number of years that an instructor has been teaching was 3.10 ($SD = 1.40$).

Also, participants in this study were asked to indicate their self-perceived relevance level to their jobs on a scale of 1 to 5 in regard to the statement “providing opportunities for students with learning disabilities to discuss personal needs.” The mean score was 3.58 ($SD = 1.41$). The mean score for the statement “providing opportunities for students with learning disabilities to discuss personal needs “compared to class size was 3.6 ($SD = 1.38$). The mean score for the statement “providing opportunities for students with learning disabilities to discuss personal needs “compared to academic ranking was 3.56 ($SD = 1.41$). The mean score for the statement “using motivational strategies in the classroom to engage students with learning disabilities can enhance learning” compared the number of years that an instructor has been teaching was 3.60 ($SD = 1.39$).

Finally, participants in this study were asked to indicate their self-perceived relevance level to their jobs on a scale of 1 to 5 in regard to the statement “discussing the legal requirements for students with learning disabilities in class or in the course syllabus can be beneficial for students.” The mean score was 3.15 ($SD = 1.47$).

- **Objective Three:** To compare the knowledge and importance of instructional competencies when working with students with learning disabilities.

This objective sought to compare the knowledge and importance of instructional competencies when working with students with learning disabilities. Mean weighted

discrepancy scores were used to compare instructors' self-perceived knowledge and relevance to their job of specific teaching competencies.

Instructors rated their knowledge level ($\mu = 2.63$, $SD = 1.21$) and relevance level ($\mu = 2.65$, $SD = 1.41$) in regard to providing opportunities for visual learners to gather information from reading, observing, and viewing the curriculum within the classroom with a mean-weighted discrepancy score of 1.10.

Instructors had a self-reported knowledge level ($\mu = 2.63$, $SD = 1.21$) and relevance level ($\mu = 2.65$, $SD = 1.41$) of the importance of providing opportunities for tactile learners to examine, manipulate, and handle materials that reference the curriculum within the classroom with a mean-weighted discrepancy score of 1.09.

Instructors rated their knowledge level ($\mu = 2.67$, $SD = 1.19$) and relevance level ($\mu = 3.30$, $SD = 1.37$) in regard to providing opportunities for auditory learners to listen and speak within the classroom, their mean-weighted discrepancy score was 0.25.

Instructors had a self-reported knowledge level ($\mu = 3.14$, $SD = 1.25$) and relevance level ($m = 3.72$, $SD = 1.30$) of the importance of the teaching competencies that accommodating to learning disabled students can enhance the learning atmosphere; the mean-weighted discrepancy score was 0.21.

Instructors had a self-reported knowledge level ($m = 2.72$, $SD = 1.43$) and relevance level ($m = 3.15$, $SD = 1.46$) of the importance of discussing the legal requirements for students with learning disabilities in class and in the course syllabus. The mean-weighted discrepancy score was 0.10.

Instructors had a self-reported knowledge level ($m = 2.63$, $SD = 1.21$) and relevance level ($m = 2.65$, $SD = 1.41$) of allowing tactile learners to examine,

manipulate, and handle materials that reference the curriculum. The mean-weighted discrepancy score was 0.09.

Instructors had a self-reported knowledge level ($\mu = 4.06$, $SD = 0.99$) and relevance level ($\mu = 4.39$, $SD = 1.05$) of communicating expectations that are clearly stated and understood by the learner. The mean-weighted discrepancy score was 0.07.

Instructors had a self-reported knowledge level ($m = 2.83$, $SD = 1.40$) and relevance level ($\mu = 3.57$, $SD = 1.41$) of providing opportunities for students with learning disabilities to discuss personal needs. The mean-weighted discrepancy score was 0.03.

Instructors had a self-reported knowledge level ($\mu = 2.83$, $SD = 1.28$) and relevance level ($\mu = 3.06$, $SD = 1.42$) that providing students with learning disabilities opportunities to collaborate with peers can enhance the learning environment. The mean-weighted discrepancy score was 0.03.

Instructors had a self-reported knowledge level ($\mu = 3.69$, $SD = 1.18$) and relevance level ($\mu = 3.56$, $SD = 1.38$) of providing appropriate printed notes and resources to students in advance can enhance the learning environment the mean-weighted discrepancy score was 0.01.

- **Objective Four:** To compare the College of Agricultural and Life Sciences instructors' differences in knowledge and relevance.

An Analysis of Variance (ANOVA) was used to determine if a statistically significant difference existed in the instructional competencies. The statistical test indicated that a statistically significant difference existed in the mean when providing opportunities for visual learners to gain information from reading, observing, and viewing curriculum when comparing the academic ranking to the relevance of the

instructors job level ($F_{(13.14,140.47)} = 2.83, p < 0.042$). Also, there was a statistically significant difference between the knowledge level of applying the concept of providing students with the ability to discuss personal needs and the academic ranking of instructors ($F_{(20.17,164.70)} = 5.77, p < 0.05$). Another statistical significant difference that was the relevance level of an instructors job of providing opportunities for students with learning disabilities to discuss personal needs compared to the class size ($F_{(14.88,166.31)} = 4.07, p < 0.02$). There were no other statistically significant differences to report.

Conclusion

The sample used in this study was self-selected, not randomly drawn from the population. With this limitation in mind, and based on the findings of this study, the following conclusions were drawn:

1. Participants in this study were concrete in the idea that it was their responsibility to provide students with learning disabilities accommodation through the Americans with Disability Act of 1990. They also expressed a weak degree of self-perceived knowledge that providing students with accommodations based on certain learning competencies can enhance the learning environment. Over the years, the percentage of learning-disabled students has tripled as have the amount of accommodations that students are receiving within universities. The belief behind this notation is that individuals have become more knowledgeable about seeking help because of their specific learning disabilities.
2. Participants in this study were mainly concrete when asked about the importance of applying specific teaching competencies in their job when working with learning disabled students. They also expressed a degree of high self-perceived knowledge when communicating expectations that are clearly stated and understood by the learner, providing accommodations can enhance the learning atmosphere, and visual learner gain information by viewing and applying the material.
3. Participants in this study had a discrepancy in self-reported knowledge level and relevance to their particular job that providing opportunities for visual learners to get information from reading, observing, and viewing the curriculum. Allowing auditory learners to listen and speak within the classroom is important when working with learning disabled students. Also, there was a discrepancy in the self-reported knowledge level and relevance to those providing accommodations that they can enhance the learning atmosphere and use motivational strategies

in the classroom to engage students with learning disabilities can enhance the learning environment.

4. Participants in this study self-reported knowledge level and relevance level were compared to three demographics. Class size, academic rank, and the length of time teaching played pivotal roles in the explanation of the use of the teaching competencies. Many individuals who reported that they taught large courses did not use differential learning within their curriculum. The amount of time an individual been in the teaching profession also hindered the use of differential learning within their curriculum.

Discussion and Implications

- **Objective One:** To describe College of Agricultural and Life Sciences instructors' self-reported knowledge of learning disability instructional competencies.
- **Conclusion:** Participants in this study were concrete in the idea that it was their responsibility to provide students with learning disabilities accommodation through the Americans with Disability Act of 1990. They also expressed a weak degree of self-perceived knowledge that providing students with accommodations based on certain learning competencies can enhance the learning environment.

It was expected that the majority of participants in this study would have concrete knowledge of the Americans with Disability Act(ADA) of 1990. Given the laws and regulations to accommodate learning disabled students, participants were knowledgeable that learning disabled students who registered with the UF Office of Disability were expected to receive the approved accommodations recommended. Many participants knew about the ADA, but did not know the implications and the requirements and benefits that students with learning disabilities were entitled to. Section 504 of the ADA“ requires all federally funded programs, including educational programs such as state universities, to provide accommodations to all ‘otherwise qualified’ persons who self-identify as having any disability that "substantially limits one or more major life activities.” (Learning Disability Association of America, 2006) It is

critical that instructors become familiarize with the ADA and the appropriate accommodations that students should receive.

Encouraging students with learning disabilities to communicate their needs in regard to their specific learning disability is imperative. Instructors who provide students with the required accommodations and use specific teaching competencies within their classroom allow students to have the best chance for success. One of the most important aspects in education is allowing students to have needed social interaction between peers and instructors (Berk & Winsler, 1995). Individuals with learning disabilities should participate regularly in activities and communicate with others in order to progress (Berk & Winsler, 1995). The findings of this current study are consistent with the studies that found using Vygotsky's Learning Theory.

Instructors' knowledge levels in regard to specific teaching competencies fit a wide array of spectra in the importance of providing learning disabled students with specific accommodations. It was expected that the majority of participants in this study would have a concrete understanding of learning styles, because visual learners grasp information through reading, observing, and viewing the curriculum, auditory learners grasp information by speaking and listening within the classroom, and tactile learners excel when they have the ability to examine, manipulate, and handle materials that reference the curriculum. Given the wide array of participants who teach courses through the College of Agricultural and Life Sciences, it is reasonable to expect that there would be a varied response rate on the ability of instructors to cater to specific learning styles. McCarthy (1990) "believed that learning style issues lead directly to instructional issues, which lead directly to curriculum issues and their attendant

ambiguities about the nature of evaluation. The findings of this current study are consistent with the studies that found using differentiated learning can enhance the learning process (McCarthy,1990).

- **Objective Two:** To describe College of Agricultural and Life Sciences instructors self-reported sense of the importance of instructional competencies when working with learning disabled students.
- **Conclusion:** Participants in this study were mainly concrete when asked about the importance of applying specific teaching competencies in their job when working with learning disabled students. They also expressed a degree of high self-perceived relevance when communicating expectations that are clearly stated and understood by the learner, providing accommodation can enhance the learning atmosphere, visual learners gain information by viewing and applying the material.

It was reasonable to assume that instructors who educate students at the University of Florida would have a high level of self-perceived relevance when asked about specific teaching competencies. The findings of this study support the premise that instructors had a low knowledge level in regard to specific competencies, but believed that the competencies were particularly relevant when working with learning disabled students. That catering to specific learning style is imperative when working with a large student population, many instructors found a great deal of relevance to their specific job, participants of the study had a high level of self-perceived relevance that communicating expectations to students with learning disabilities can enhance the learning atmosphere. This premise, as indicated by the self-reported knowledge level of instructors, was supported throughout the study. Educators have been forced to re-evaluate instructional practices, assessments, and curriculum in order to accommodate different learners' needs (Tomlinson, 1999). It is possible that some instructors do not deviate from their traditional teaching methods to differentiate within the classroom

because of lack of time and the effort involved in revising curriculum. This research is consistent with a study done at the University of Hong Kong (Mantak, Peter, & Gunter).

- **Objective Three:** To compare the knowledge and importance of instructional competencies when working with students with learning disabilities.
- **Conclusion:** Participants in this study showed a discrepancy in self-reported knowledge level and relevance to their particular job that providing opportunities visual learners to get information from reading, observing, and viewing the curriculum, allowing auditory learners to listen and speak within the classroom is important when working with learning disabled students. Also there was a discrepancy in the self-reported knowledge level and relevance to those who provide accommodations that can enhance the learning environment by motivational strategies in the classroom to engage students with learning disabilities.

There was a large discrepancy in many knowledge levels and self-reported relevance levels of particular teaching competences. With a lack of knowledge in regard to specific teaching competencies and the high self-reported relevance level, it is imperative to create a workshop for instructors to familiarize themselves with specific teaching competencies. The link between relevance level and knowledge level seems to be severed, and in order to enhance the instruction within the classroom instructors must familiarize themselves with the specific teaching competencies.

It is interesting that instructors rated their knowledge of providing visual, auditory, and tactile learners with the tools to get information from reading, observing, listening, and viewing the curriculum as high, while rating its relevance level as low. This would imply that instructors recognize that using a wide array of teaching methods is necessary, but they do not feel that it is important to incorporate them into the lecture.

Instructors had a moderate knowledge level that providing accommodations for learning disabled students can enhance learning, rating their relevance level as high. This would imply that instructors recognized the importance of providing

accommodations but were not necessary knowledgeable about how to provide for students.

Recommendations for Practitioners

Based on the finding of this study, the following recommendations are made for practitioners:

1. Providing instructors with professional development courses that allow them to learn the fundamental of teaching techniques when working with learning disabled students: (a) learn to engage in classroom activities, (b) the basics of teaching critical thinking to learning disabled students, (c) effective lecturing, (d) demonstrating appropriate questioning and examination techniques.
2. Because students' learning styles and achievement levels vary in many ways, instructors should continue to use differentiated instruction and a varied approach of instructional competencies when working with learning disabled students.
3. Because an increase in motivation to use specific teaching competencies relates to an increase in student achievement, instructors who use differentiated instruction reach a wide-array of learners, thus leading to higher achievement and student success.

Recommendations for Further Research

Based upon the findings of this study, the following recommendations for further research are made:

1. It would be valuable to replicate this study in other colleges of agriculture at other land-grant universities.
2. It would also be useful to evaluate the instructor's written curriculum along with the syllabus in order to gather information on how instructors are using the specific competencies.
3. Since faulty members were addressed within this study, it would be useful to evaluate belief of students with learning disabilities on instructional competencies.
4. Using qualitative data and observing classroom activities would allow the researcher to observe specific teaching competencies in use.
5. It would be valuable to analyze instructors' ability to differentiate learning through distance learning and varied sizes of classes.

6. It would be valuable to analyze specific disciplines and majors to gather more information on instructors' ability to differentiate instruction and compare the data by majors.

Upon completion of this study, the researcher reflected on the process. As such, if replicating this process, several things would have been done differently. First, a single questionnaire was used to assess instructor's self-perceived knowledge and relevance of specific teaching competencies. This instrument provided valuable data, but it be deemed more useful if the researcher were to ask what course instructors taught and to provide a copy of their course syllabus. By evaluating the course syllabus, the research could have evaluated the curriculum and the methods that students were evaluated on.

APPENDIX A DATA COLLECTION INSTRUMENT

1. Informed Consent

Dear IFAS Faculty Member:

I am a graduate student in the Department of College of Agricultural and Life Sciences at the University of Florida, conducting research on the effects of teaching methods in college classrooms and how they can enhance learning for students with learning disabilities in higher education. The primary purpose of this study is to measure how teaching methods in college classrooms can enhance learning for students with learning disabilities in higher education. To better target the activities of the College of Agricultural and Life Sciences Instructors, we are conducting a study of instructor's best practices methods when instructing students with learning disabilities. I am asking you to participate in this survey because you have been identified as a faculty member in IFAS.

It will take you about 20 minutes to complete the questionnaire. You can begin answering questions by clicking the "I Accept" button below. You will not have to answer any question you do not wish to answer. Only Dr. Nicole Stedman and I will have access to the data. Your identity will be kept confidential to the extent provided by law and your identity will not be revealed in the final manuscript or in any reports. Once all data is collected, all variables that could reveal your identity will be removed from the data. Your individual responses will never be made public, only aggregated data will be used in reporting the results of this research.

There are no anticipated risks, compensation or other direct benefits to you as a participant in this study. You are free to withdraw your consent to participate and may discontinue your participation in the study at any time without consequence.

If you have any questions about this research protocol, please contact me at _____ or _____ . Questions or concerns about your rights as a research participant rights may be directed to the

IRB02 office, University of Florida,
Box 112250, Gainesville, FL 32611; (352) 392-0433.

When you are ready to begin the questionnaire, click the "I Accept" button below. By clicking the button, you give us permission to report your responses anonymously in the research manuscripts.

Thank you in advance for your participation,

Sallie Ann Sims
Graduate Students

*** 1. By clicking on "I agree to participate" below I am saying that I have read the procedure described above and voluntarily agree to participate in the study. You may print a copy of this question for your record.**

I Agree

No, I do not wish to participate at this time

2. American Disability Act

Please answer questions to the best of your ability.

*** 1. Please rate your knowledge level**

	Never heard of it	Little knowledge	Somewhat familiar	Very familiar
My knowledge of the Americans with Disabilities Act of 1990 is...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. American Disability Act

1. It is my responsibility to provide students with Learning disabilities accommodations through the American Disabilities Act of 1990.

Yes

No

4. Default Section

1. For the following topics, please rate your current knowledge and the degree to which you find the topic is relevant to your job when instructing students with learning disabilities.

	What is your current knowledge level?	How relevant is this to your job?
Providing opportunities for auditory learners to listen and speak within the classroom.	<input type="text"/>	<input type="text"/>
Providing opportunities for visual learners to get information from reading, observing and viewing the curriculum.	<input type="text"/>	<input type="text"/>
Providing opportunities for tactile learners to examine, manipulate and handle materials that reference the curriculum.	<input type="text"/>	<input type="text"/>
Communicating expectations that are clearly stated and understood by the learner.	<input type="text"/>	<input type="text"/>
Providing students with learning disabilities accommodations which can enhance the learning atmosphere.	<input type="text"/>	<input type="text"/>
Providing appropriate printed notes and resources to students in advance.	<input type="text"/>	<input type="text"/>
Providing students with learning disabilities opportunities to collaborate with peers.	<input type="text"/>	<input type="text"/>
Using a variety of motivational strategies in the classroom to engage students with learning disabilities.	<input type="text"/>	<input type="text"/>
Providing opportunities for	<input type="text"/>	<input type="text"/>

students with learning disabilities to discuss personal needs.

Discussing the legal requirements for students with learning disabilities in class and on course syllabus.

5. Demographics

Please answer a few demographic questions

1. What is your highest degree?

- Bachelor's
- Master's
- Doctorate

6.

1. What is your academic ranking?

- Lecturer
- Assistant Professor
- Associate Professor
- Professor

2. Type of course instructing?

- Graduate Level
- Undergraduate Level
- Both Graduate Level and Undergraduate Level

1. Size of course instructing?

- Small 5-20 students
- Medium 21-70 students
- Large 71 + students

2. What type of course are you instructing?

- Lecture
- Lab Based

3. Indicate your appointment percentage (should total 100)

Teaching	<input type="text"/>
Research	<input type="text"/>
Extension	<input type="text"/>

4. Where is your primary work location?

- Main Campus
- REC

8.

1. How many years of college teaching experience do you have?

Years I have taught

2. Were you a graduate teaching assistant?

Yes

No

3. Do you have "other" teaching experience (Formal or Non-formal) that has helped you prepare for your current teaching role?

Yes

No

Other (please specify)

4. Have you ever attended a workshop about teaching students with learning disabilities?

Yes

No

Other (please specify)

5. Do you have personal experience with a learning disability? If you answered Yes please explain.

Yes

No

Other (please specify)

6. What challenges might students with learning disabilities face within your selected course?

7. What accommodations might they require?

APPENDIX B
CORRESPONDENCE

Email Reminder 1

January 14, 2010

Dear IFAS Faculty Members,

A few days from now you will receive an e-mail with a request to fill out a brief questionnaire via Survey Monkey for an important research project being conducted by Sallie Ann Sims a graduate student in the Department of Agricultural Education and Communication at the University of Florida.

The primary purpose of this study is to measure how teaching methods in college classrooms can enhance learning for students with learning disabilities in higher education.

I am writing you in advance because we have found many people like to know ahead of time that they will be contacted. The study is an important one that will help gain a better insight on the knowledge educators have of learning disabilities within the classroom setting.

Thank you for your time and consideration. It's only with the generous help of people like you that our research can be successful.

Sincerely,

Sallie Ann Sims

Graduate Student

Email Reminder 2

Colleagues,

Last week I sent you a pre-notice about this research project being conducted by Sallie Ann Sims, a graduate student in Agricultural Education and Communication. She is now in the data collection phase of her project.

Please take a few minutes and complete Sallie Ann's survey at: <https://www.surveymonkey.com/s/BJJ5B7J>

Thank you in advance for helping with this important project.

Grady

Email Reminder 3

Colleagues,

From Sallie Ann Sims, a graduate student in Agricultural Education and
Communication:

Last week a questionnaire seeking your opinions about knowledge of learning disabilities within the classroom setting was sent to you via e-mail. We are asking that all IFAS Faculty Members take a few minutes to complete the questionnaire.

If you have already completed and returned the questionnaire to us, please accept our sincere thanks. If not, please do so today. We are especially grateful for your help because it is only by asking people like you to share your experiences that we can understand how faculty instructs students with learning disabilities.

If you did not receive a questionnaire you may use the link below to complete the questionnaire.

<https://www.surveymonkey.com/s/BJJ5B7J>

Sallie Ann Sims

Graduate Student

Department of College of Agricultural and Life Sciences

University of Florida

Email Reminder 4

Colleagues,

From Sallie Ann Sims:

During the last few weeks we have sent you several emails seeking your opinions about knowledge of learning disabilities within the classroom setting.

The study is drawing to a close, and this is the last contact that will be made with the IFAS Faculty Members.

We are sending this final contact because of our concern that people who have not responded may have had different experiences than those who have. Hearing from everyone in this small sample helps assure that the survey results are as accurate as possible.

We also want to assure you that your response to this study is voluntary, and if you prefer not respond that's fine.

Finally, we appreciate your willingness to consider our request as we conclude this effort to better understand your job. Thank you very much.

Link to Survey: <https://www.surveymonkey.com/s/BJJ5B7J>

Sincerely,

Sallie Ann Sims

Graduate Student

APPENDIX C IRB APPROVAL

Dear IFAS Faculty Member:

I am a graduate student in the Department of College of Agricultural and Life Sciences at the University of Florida, conducting research on the effects of teaching methods in college classrooms and how they can enhance learning for students with learning disabilities in higher education. The primary purpose of this study is to measure how teaching methods in college classrooms can enhance learning for students with learning disabilities in higher education. To better target the activities of the College of Agricultural and Life Sciences Instructors, we are conducting a study of instructor's best practices methods when instructing students with learning disabilities. I am asking you to participate in this survey because you have been identified as a faculty member in IFAS.

It will take you about 20 minutes to complete the questionnaire. You can begin answering questions by clicking the "I Accept" button below. You will not have to answer any question you do not wish to answer. Only Dr. Nicole Stedman and I will have access to the data. Your identity will be kept confidential to the extent provided by law and your identity will not be revealed in the final manuscript or in any reports. Once all data is collected, all variables that could reveal your identity will be removed from the data. Your individual responses will never be made public, only aggregated data will be used in reporting the results of this research.

There are no anticipated risks, compensation or other direct benefits to you as a participant in this study. You are free to withdraw your consent to participate and may discontinue your participation in the study at any time without consequence.

If you have any questions about this research protocol, please contact me at _____ or _____. You may also contact my supervising faculty member, Dr. Nicole Stedman, 352-392-0502 x.247 or nstedman@ufl.edu.

Questions or concerns about your rights as a research participant rights may be directed to the IRB02 office, University of Florida, Box 112250, Gainesville, FL 32611; (352) 392-0433.

When you are ready to begin the questionnaire, click the "I Accept" button below. By clicking the button, you give us permission to report your responses anonymously in the research manuscripts.

Thank you in advance for your participation,

Sallie Ann Sims
Graduate Student
Department of Agricultural Education

Approved by
University of Florida
Institutional Review Board 02
Protocol # 2009-U-1059
For Use Through 10-13-2010

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BIOGRAPHICAL SKETCH

Sallie Ann Sims was born in Roanoke, Virginia. She grew up in Annapolis, Maryland and moved to Vero Beach, Florida in 1999 with her family. Ms. Sims graduated from Saint Edward High School in 2003.

Ms. Sims received her Bachelor of Science degree in agriculture from the University of Florida in 2007, with a major in Food and Resource Economics. Upon graduation she was employed with the Pepsi Bottling Group in the Management Training program.

Ms. Sims returned to the University of Florida to complete a Master of Agriculture degree, with a specialization in leadership development. She enjoyed the research on learning disabilities because she was diagnosed with a dyslexia and ADHD as child. While completing her master's, she served as a graduate teaching and research assistant.