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Including Universal Design Through Learning Strategies and Technology in Methods

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Abstract

Preservice teachers, at the beginning of a learning disabilities methods course, were given a survey of their skills at integrating special education technology that is useful for creating universally designed lessons. The survey was developed from a delphi study of beginning assistive technology skills done by Lahm & Nickels (1999). They were also provided with a case study of a student with learning disabilities and asked to make instructional recommendations for this student. The case study was a student who would benefit from technology interventions. Following a learning disabilities methods class that was heavily integrated with technology designed for students with disabilities, preservice teachers were again given the survey and again asked to describe how to facilitate the integration for the case study. Survey results were analyzed using a paired associates t-test while case studies were qualitatively analyzed for the inclusion of technology recommendations.

Including Universal Design Through Learning Strategies and Technology in Methods

Assistive technology can be used to provide for the successful universal design of lessons for individuals with learning disabilities. Recent legislation ensures an opportunity for all students to benefit from assistive technology by ensuring the consideration of assistive technology for all students with disabilities (Blackhurst & Edyburn, 2000). Yet the field of special education technology continues to experience a misunderstanding of what assistive technology is and how to use assistive technology for universally accessible classrooms (Edyburn, 2004). This seems to indicate that assistive technology training for special educators must be added to the pre-service training programs that these teachers receive. Indeed, Ludlow (2001) called for additional training for pre-service teachers in the integration of technology for students with disabilities.

Lahm and Nickels (1999) used a delphi study to identify a list of assistive technology skills that are needed for beginning special education teachers. The delphi study identified necessary technology skills such as knowledge of legislation, characteristics, ability to assess and integrate technology in an ethical manner, and to collaborate with the family of the student receiving the assistive technology recommendation.

Several studies have demonstrated the success of technology integration into teacher education methods classes. Anderson & Anderson (2001) used laptop computers and software used in field experience aids both general education preservice teachers and special education preservice teachers. Qualitative assessment indicated that students felt that use of the technology improved their ability to integrate technology.

Anderson & Petch-Hogan (2001) used laptops and software to integrate technology training into the methods class for preservice field experience. Students were then allowed to use the technology with their students. Using a survey based on a list of competencies developed by Blackhurst, MacArthur, and Byrom (1988), they investigated the effectiveness of assistive technology training and integration into special education field experience.

Anderson & Borthwick (2002) studied the effects of technology integration for a Preparing Teachers for Tomorrow grant. Master of Arts in Teaching students benefited from laptops and software provided. Technology training was provided in a separate class with continuing integration of technology in their classes. Results indicated that students felt that they were better prepared after the technology integration.

In 2005, Anderson & Anderson (2005) used ISTE standards to survey special education preservice teachers who were taking a learning disabilities course that was integrated with technology as part of an alternative certification program. Results indicated that students felt that they benefited from the technology integration. Both technology skills and integration skills were rated significantly higher.

Using the skills identified by the Lahm and Nickel (1999) delphi study, an urban university measured its students' ability to integrate technology for effective universally designed lessons. The methods course for students with learning disabilities was heavily integrated with training on use and integration of assistive technology for students with disabilities. In this study, preservice teachers were asked to rate their assistive technology skills using the delphi study set of skills. In addition, they were qualitatively measured on the impact of

the technology integration in the methods class. Preservice teachers were asked to make general education accommodation recommendations for a case study (Appendix B) of a student with learning disabilities. The study was designed to answer the following research questions:

1. Do students receiving training in special education technology in learning disabilities methods class improve their perception of their knowledge of philosophical, historical, and legal foundations of special education technology?

2. Do students receiving training in special education technology in a learning disabilities methods class improve their perception of their knowledge of the characteristics of learners who benefit from special education technology?

3. Do students receiving training in special education technology in learning disabilities methods class improve their perceptions of their ability to assess, diagnosis, and evaluate of learners who benefit from special education technology?

4. Do students receiving training in special education technology in learning disabilities methods class improve their perceptions of their knowledge of instructional content and practice used for students with learning disabilities when designing universal design?

5. Do students receiving training in special education technology in learning disabilities methods class improve their perceptions of their knowledge planning and managing the teaching and learning environment for students with learning disabilities?

6. Do students receiving training in special education technology in learning disabilities methods class improve their perceptions of their knowledge of communication and collaborative partnerships for students with learning disabilities in designing universally designed instruction?

7. Do students receiving training in special education technology in learning disabilities methods class improve their perceptions of their own professionalism and ethical practices concerning technology used with students with learning disabilities in designing universally designed instruction?

8. Do students receiving training in special education technology in a learning disabilities methods class increase their recommendations for special education technology from pretest to posttest for students with when planning for universal design?

Method

Subjects or Participants

Participants in the study were 16 preservice teachers in the preservice Learning Behavior Specialist I program at Roosevelt University. There are thirteen graduate students, eleven female and two male. There are three undergraduates, two females and one male.

Materials

Materials used in this study were Gateway laptop computer loaded with software that could be used for developing universal instruction for students with learning disabilities. These

programs included Don Johnston's *Co-Writer*, *Draftbuilder*, and *Write OutLoud*, Intellitools *Classroom Suite*, *MathPad Plus*, and *Timeliner*.

Design

This study was a pretest-posttest survey developed from Lahm and Nickel's (1999) special education technology skills identified by their delphi study. The survey was administered the first night and the last night of the learning disabilities methods class. For each skill, students were asked to rate their ability according to a description that was turned into a numerical rating from 1 to 5. Results were analyzed using a paired associates t-test with SPSS software.

Participants were also given a case study (Appendix B) of a student with learning disabilities who would benefit from special education technology interventions. They were asked to make instructional recommendations. Results were qualitatively analyzed for technology recommendations.

Procedure

Students taking an education methods class in the characteristics and approaches of teaching students with learning disabilities were provided with a laptop each night of their class. Each laptop had several programs designed to facilitate instruction for students with learning disabilities, such as *Co-Writer*, *Write OutLoud*, *Classroom Suite*, *Draftbuilder*, *Inspiration*, Microsoft *Word* and Microsoft *Powerpoint*. Students received instruction on using the software for 5 nights during the semester. This instruction was followed with an activity in which they were asked to use the software to respond to an activity designed to facilitate their instruction in educating students with learning disabilities. For example, one activity was to teach the students

how to use *Intellipix Studio*, a class in *Intellitools Classroom Suite*. Then the software was used to develop a slideshow of a student who exhibits the characteristics of a student with learning disabilities. Other activities are found in the syllabus listed in Appendix A.

Results

Results indicated statistically significant improvements on each question of the Lahm and the survey. To answer the first study question, do students receiving training in assistive technology in a learning disabilities methods class improve their perception of their knowledge of philosophical, historical, and legal foundations of special education technology. students were asked to rate their knowledge of legislation, their ability to articulate their philosophy, and to know and use technology terms. Results on all three survey items were statistically significant with p values of .001, .000, and .001 respectively (Table 1).

To answer the second study question, do students receiving training in assistive technology in a learning disabilities methods class improve their perception of their knowledge of characteristics of learners who benefit from special education technology. students were asked to rate their knowledge of the characteristics of learners that can benefit from the use of technology, their knowledge of the impact of technology on students with disabilities, their knowledge of the impact of technology on students with moderate disabilities, and their ability to identify academic and physical demands that are place on students with disabilities using computers. Results on all survey items were statistically significant with p values of .000, .000, 000, and .003 respectively (Table 1).

To answer the third study question, do students receiving training in assistive technology

in a learning disabilities methods class improve their perceptions of their ability to assess, diagnosis, and evaluate learners who benefit from special education technology, students were asked to rate their ability to analyze and summarize student performance data for technology interventions, identify functional needs and limitations to determine the need for a comprehensive assistive technology evaluation. refer for additional evaluation, recognize the need for further evaluation and refer to appropriate professionals, recognize poor outcomes and the need to reevaluate, work with the assistive technology team to identify assistive technologies, define and monitor objectives dealing with technology, observe and measure technology progress, compare actual progress with expected performance, and interview the consumer and caregivers about technology. Results on all survey items were statistically significant with p values of .000, .000, 000, .003. .001, .001, .000, .007, .007, and .001 respectively (Table 1).

To answer the fourth study question, do students receiving training in assistive technology in a learning disabilities methods class improve their perceptions of their knowledge of instructional content and practice for students with learning disabilities when designing universal design. students were asked to rate their ability to evaluate software and technology for students with learning disabilities, identify appropriate areas of special education curriculum for technology use, design and assess learning activities where technology is appropriate, identify and operate software for students with learning disabilities, use technology to compensate for performance barriers, identify technology that permits access to educational materials, use computer-based productivity tools, teach special education students to use productivity tools, teach students to operate equipment and use software, use productivity tools themselves, solicit

feedback by users, and understand and use proper safety practices. Results on all survey items were statistically significant with p values of .001, .001, 004, .001, .001, .000, .001, .001, .002, .002, .001, .002, .000 and .001 respectively (Table 1).

To answer the fifth study question, do students receiving training in assistive technology in a learning disabilities methods class improve their perceptions of their knowledge in planning and managing the teaching and learning environment for students with learning disabilities, students were asked to demonstrate the proper care of technology systems and related software, use routine maintenance, and organize computer activities to promote positive social interaction. Results on all survey items were statistically significant with p values of .026, .003 and .000 respectively (Table 1).

To answer the sixth study question, do students receiving training in assistive technology in a learning disabilities methods class improve their perceptions of their knowledge of communication and collaborative partnerships for students with learning disabilities in designing universally designed instruction, students were asked to rate their knowledge of the roles that related services personnel assume in providing technology services, recognize the need to refer a consumer to a technology professional, identify assistive technology team members and their roles, design and implement integrated technology classroom activities that involve small group collaboration, collaborate with consumer and team members in planning and implementing the use of assistive and adaptive devices, participate in collaborative projects and activities involving technology, demonstrate effective group process skills, use electronic mail and Web browser applications for communication, and advise general education teachers about

the use of technology systems with special education students. Results on all survey items were statistically significant with p values of .000, .001, .000, .000, .007, .006, .017, .001, .022, and .000 respectively (Table 1).

To answer the seventh study question, do students receiving training in assistive technology in a learning disabilities methods class improve their perceptions of their own professionalism and ethical practices concerning technology used with students with learning disabilities when designing universally designed instruction, students were asked to rate their knowledge of confidentiality of information, their ability to recognize their own skills and knowledge regarding technology and limit individual practice accordingly, maintain a professional development program to ensure the acquisition of knowledge and skills about new developments, demonstrate knowledge of equity, ethical, legal, and human issues related to technology use, adhere to copyright laws. Results on all but one of survey items were statistically significant with p values of .027, .009, .008, .004, .002, and .010 respectively. Students' recognition of their skills failed to demonstrate a significance with a p value of .088.

The nonsignificant result here might be due to the fact that students scored themselves in a similar fashion. On the pretest, perhaps they recognized that they did not know a great deal about technology for universal design. After the semester, they recognized their skills as being better. Both thoughts would have resulted in similar means. This is supported by their case study results, since few mentioned using technology on the prestest and most did one the posttest.

To answer the eighth study question, do students receiving training in assistive technology in a learning disabilities methods class increase their recommendations for assistive technology from pretest to posttest for students with learning disabilities when planning for universal design, students were asked to respond to a case study (Appendix B) of a students with learning disabilities. The case study required the preservice teachers to describe how they would accommodate for these students if they were placed into their classrooms. The student in the case study would benefit from the universally designed software that was learned during the class.

Prior to the class, only 2 student responses included technology suggestions, suggestions for word processing interventions. Following the class and the technology training, 15 out of 16 responses included technology. Three students suggested using *Intellitalk*; two students suggested using *Co-Writer*; three students suggested using computers with writing software and graphic organizing software to organize papers, two students suggested using assistive technology; one student suggested word prediction software, one student suggested *Inspiration*, word prediction, and adaptive technology; one student suggest text to voice software; one student suggest using Microsoft *Word*; and one student suggested using taped textbooks. The final student did not suggest the use of technology.

One student stated that graphic organizers combined with early introduction of content area vocabulary early and use *Co-Writer* with prediction technology would improve content skills. Another student suggested that the use of *Intellitalk* would provide word prediction and talking word processing to help him, along with the ability to access the software, since his fine

motor skills were affected. Clearly students who used the software felt that it would benefit students with learning disabilities in their classrooms.

Results from this study demonstrated significant increases in how students felt that their universal design technology skills improved. They reported significant increases in their knowledge of legislation, characteristics, and assessment skills involving special education technology. They report significant increases in their ability to develop universally designed lessons and manage these lessons. They reported increases in their ability to collaborate concerning technology and in their own professionalism concerning technology. Finally, when asked to report on a case study, they demonstrated an ability to apply these skills to an actual student.

Discussion

In this study, sixteen students were given a pretest and posttest survey of their special education technology skills as identified by Lahm and Nickels (1999). In addition, they were given a case study of a student with learning disabilities in which they were asked to identify strategies for making the classroom universally accessible to him. Results were positive for all skills except one, while the case study results demonstrated that students were thinking of technology as a tool of universal access. The nonsignificant result was likely due to students perceiving themselves as deficient at the start of the semester and more proficient at the completion of the semester, so they rated themselves very close on both surveys.

These results support earlier studies demonstrating the benefits in technology expertise when training is integrated into teacher education methods classes. Anderson and Petch-Hogan

(2001) studied the effects of integrating special education technology into a field experience methods class. Although this study involved field experience, the training was integrated into a class, as in this study. Also supported were the studies by Anderson and Anderson (2001) and Anderson and Borthwick (2002). In each of these studies, technology was integrated into the classroom in both special and general education and results were positive.

Results of this study demonstrate the benefits of technology integration into the methods courses. It seems to be an advantageous method for training preservice teachers to use and integrate technology in their classrooms. Students who are taught to use special education software and then apply it to an activity within the methods classes feel more able to use and integrate special education technology. With this knowledge and expertise, they can use these skills to develop their own universally designed lessons.

Limitations to this study include the low numbers of students involved in the study. Results might be different with larger numbers of students. In addition, students were a mixed group. Results might be different if these methods were only used with undergrads or graduates.

Future research might include following these students into the classroom to investigate technology usage. Since this class has a field experience component, use of the technology in the field experience could be added and researched for its effectiveness as Anderson and Petch-Hogan (2001) did. A measure of the effectiveness of the technology on students could also be done, by studying student progress when they use the technology.

This study investigated the effectiveness of integrating technology into a learning disabilities class. The study resulted in significant increases in participants' perception of their

ability to develop universally designed lessons and manage these lessons. Through a case study, this research demonstrated that these universal design skills could be applied to their own students.

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Table 1

Average Ages Sexual Information was Acquired Compared with the Youngest and Oldest Ages Subjects Believed the Information Should be Acquired

Knowledge and Skill Competence	Pretest Mean	Posttest Mean	p value	significance
Knowledge				
Legislation and regulations related to technology and their implications for special	2.38	3.88	.001	*
Skills				
Articulate a philosophy and goals for using technology in special education.	2.73	3.93	.000	*
Use technology-related terminology appropriately in written and oral communications.	2.38	3.88	.001	*
Characteristics of Learners				
Knowledge				
Characteristics of exceptional learners that influence the use of technology.	3.13	4.27	.000	*
Impact of technology on exceptional learners.	3.00	4.53	.000	*
Impact of technology on exceptional learners with moderate disabilities.	2.87	4.27	.000	*

Skills				
Identify the academic and physical demands placed on the student by computer software and related technology materials.	2.67	3.93	.003	*
Assessment, Diagnosis, and Evaluation				
Skills				
Analyze, summarize, and report student performance data to aid instructional decision-making regarding technology.	2.47	4.07	.000	*
Identify functional needs, screen for functional limitations, and identify if the need for a comprehensive assistive technology evaluation exists.	2.44	4.06	.000	*
Refer for additional evaluation regarding technology if adequate data are not available for plan development.	2.00	4.13	.000	*
Recognize the need for further evaluation regarding technology, and refer to other professionals when appropriate.	2.60	4.27	.003	*
Recognize poor outcomes regarding technology needs, and reevaluate and reinitiate the process as needed.	2.60	3.87	.001	*

Work with assistive technology team members to identify assistive technologies, both hardware and software, that can help individuals meet the demands placed upon them in their environments.	2.60	3.87	.001	*
Define measurable objectives to monitor progress toward achieving stated goals regarding technology.	2.73	4.13	.000	*
Observe and measure consumer's performance with the assistive technology after a period of initial use.	2.40	3.73	.007	*
Compare actual performance with anticipated performance and the goals stated in the intervention plan.	2.40	3.73	.007	*
Interview the consumer, the family, and caregivers to determine if the technology solution meets their present and future needs.	1.67	2.60	.001	*
Instructional Content and Practice				
Knowledge				
Procedures for evaluating	1.80	3.53	.001	*

computer software and other technology materials for their potential application in special education programs.				
Skills				
Identify elements of the special education curriculum for which technology applications are appropriate and ways they can be implemented.	2.87	4.20	.001	*
Design, deliver, and assess student learning activities that integrate computers/technology for a variety of student populations.	2.47	3.67	.004	*
Design student learning activities that foster equitable, ethical, and legal use of technology by students.	2.47	3.73	.001	*
Identify and operate software that meets educational objectives for students in multiple educational environments.	2.27	3.80	.001	*
Use computers to support various stages of the learning process and to facilitate student reporting	2.60	4.27	.000	*

of educational achievements.				
Use technology to compensate for learning and performance barriers.	3.00	4.33	.001	*
Identify and use assistive technologies that can provide access to educational materials that are otherwise inaccessible to some individuals.	2.87	4.13	.001	*
Use computer-based productivity tools to develop classroom materials.	2.60	4.00	.002	*
Teach special education students to use productivity software programs to perform tasks such as word processing, database management, graphics production and telecommunications.	2.60	4.00	.002	*
Teach special education students to operate equipment and run associated educational programs.	2.67	4.07	.001	*
Use productivity tools for word processing, database management, and spreadsheet applications.	2.60	4.00	.002	*
Solicit accurate feedback from end-users and others	1.93	3.93	.000	*

having experience with technology.				
Understand proper mechanical and electrical safety practices, or direct their use in the assembly and integration of the technology at a defensible level of competence.	2.20	3.60	.001	*
Planning and Managing the Teaching and Learning Environment				
Skills				
Demonstrate the proper care of technology systems and related software; use simple diagnostics to determine problems that arise, and perform routine maintenance.	2.47	3.60	.026	*
Arrange and manage the classroom environment to facilitate the use of technology.	3.00	4.07	.003	*
Managing Student Behavior and Social Interaction Skills				
Skills				
Organize computer activities to promote positive social interaction.	3.07	4.53	.000	*

Communication and Collaborative Partnerships				
Knowledge				
Roles that related services personnel assume in providing technology services to special education students.	2.40	3.87	.000	*
Skills				
Recognize the need (how, when, where) to refer a consumer to another professional regarding technology	2.60	4.20	.001	*
Identify assistive technology team members and their roles.	2.40	3.87	.000	*
Design and implement integrated technology classroom activities that involve teaming and/or small group collaboration.	2.40	3.73	.000	*
Collaborate with consumer and other team members in planning and implementing the use of assistive and adaptive devices.	2.60	3.80	.007	*
Participate in collaborative projects and activities involving technology.	2.87	3.93	.006	*
Demonstrate effective group process skills.	3.20	4.13	.017	*

Communicate effectively including listening, speaking, and writing on technology issues.	2.87	4.07	.001	*
Use electronic mail and Web browser applications for communication and for research to support instruction.	3.87	4.60	.022	*
Advise general education teachers about the use of technology systems with special education students who are mainstreamed into their classes.	2.60	4.07	.000	*
Professionalism and Ethical Practices				
Knowledge				
Confidentiality of information	4.07	4.73	.027	*
Limits of expertise—recognize and seek outside expertise.	3.60	4.73	.009	*
Skills				
Recognize own skills and knowledge regarding technology and limit individual practice accordingly.	3.60	4.33	.088	*
Maintain a professional	2.77	3.60	.008	*

development program to ensure the acquisition of knowledge and skills about new developments in technology as they become available.				
Identify activities and resources to support professional growth related to technology.	2.40	3.80	.004	*
Demonstrate knowledge of equity, ethical, legal, and human issues related to technology use in special education.	2.80	4.00	.002	*
Adhere to copyright laws about duplication and distribution of software and other copyrighted technology materials.	3.47	4.40	.010	*

Appendix A

ROOSEVELT UNIVERSITY
COURSE SYLLABUS – SPED 346/446 (4 Credit Hours)
CHARACTERISTICS AND METHODS OF TEACHING STUDENTS WITH PERCEPTION AND OTHER SPECIFIC LEARNING DISABILITIES

COURSE CATALOG DESCRIPTION:
Perception deficits and their impact on the learning process. Autism, traumatic brain injury, and specific learning disabilities. Emphasis on inclusion and the adaptation and modification of curriculum; current research. Prerequisites/co requisites: SPED 319/419.

COURSE GOALS:
In this course, the students will acquire a comprehensive overview of individuals with perception and other specific learning disabilities across the lifespan. The students will learn about the identification, characteristics, theories, service delivery models, assessment, and effective teaching strategies for students with specific learning disabilities. Emphasis is placed on integrating assessment, learning-teaching process, and instructional modifications. Included in the instruction of this course will be instruction in several University of Kansas Strategies which can be used in future classrooms.

COUR**SE OBJECTIVES:**
1. To understand the historical and theoretical context of the field of learning disabilities.
    College of Education Conceptual Framework reference:
        Expert participation in specialized ways of knowing.
2. To become familiar with common definitions and identification procedures for students with specific learning disabilities, attention deficit hyperactivity disorder, autism, and traumatic brain injury.
    College of Education Conceptual Framework reference:
        Exercising an ethic of care
        Passion for the educator's craft
3. To develop an understanding of the characteristics of students with learning disabilities, attention deficit hyperactivity disorder, autism, and traumatic brain injury.
    College of Education Conceptual Framework reference:
        Expert participation in specialized ways of knowing

4. To understand how perception and specific learning disabilities impact cognitive, academic, social, and vocational functioning.
    College of Education Conceptual Framework reference:
        Inviting and engaging human diversity
        Adaptive decision-making

5. To become familiar with major assessment and service delivery approaches in the field of special education.

College of Education Conceptual Framework reference:

Exercising an ethic of care
Passion for the educator's craft
Adaptive decision-making
Expert participation in specialized ways of knowing

6. To become proficient in instructional planning for students with specific learning disabilities, including curricula and instructional modifications.

College of Education Conceptual Framework reference:

Inviting and engaging human diversity
Adaptive decision-making

7. To become familiar with effective teaching methods for students with specific learning disabilities in the areas of oral language, reading, written expression, mathematics, study skills, and learning strategies.

College of Education Conceptual Framework reference:

Inviting and engaging human diversity
Engaging and developing multiple critical literacies

8. To be able to create learning environments for promoting social competence, active learning, and transition to adulthood.

College of Education Conceptual Framework reference:

Passion for the educator's craft
Advocating social change

REQUIRED TEXTBOOKS:

Lerner, J. & Kline, F. (2005). Learning disabilities: Theories diagnosis and teaching strategies. Boston, MA: Houghton-Mifflin.

The following books will be ordered from the University of Kansas through me.

Lenz, B.K., Schumaker, J.B., Deschler, D.D., Beals, V.L., (1996). The word identification strategy. Lawrence, KS: University of Kansas.

Mercer, C.D. & Miller, S.P. (2003). Strategic math series. Lawrence, KS: Edge Enterprises.

Schumaker, J.B. & Sheldon, J.B. (1998). Fundamentals in the sentence writing strategy. Lawrence, KS: University of Kansas.

Schumaker, J.B., Denton, P.H., Deschler, D.D. (1984). The paraphrasing strategy. Lawrence, KS: The University of Kansas.

Schumaker, J.B., Deschler, D.D., Nolan, S.M., Alley, G.R. (1994). The self-

questioning strategy. Lawrence, KS: University of Kansas.
Schumaker, J.B., Deschler, D.D., Zemitzsch, A., Warner, M.M. (1993). The visual imagery strategy. Lawrence, KS: University of Kansas.
Schumaker, et.al. (2002). Fundamentals in sentence writing: Student lessons. Lawrence, KS: University of Kansas.

ADDITIONAL RESOURCES:

Bender, W.N (2001). Learning disabilities: *Characteristics, identification, and teaching strategies* (4th ed.). Boston, MA: Allyn and Bacon.
Bos, C.S. & Vaughn, S. (2002). *Strategies for teaching students with learning and behavior problems*. Boston, MA: Allyn and Bacon.
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COURSE REQUIREMENTS:

Exam

A final exam of the readings and class activities will be given during exam week. A variety of formats might be used, but essay will dominate.

Unit Plan:
Students will write a one week unit of instruction on study skills or an academic area for students with learning disabilities. Unit will contain instructional objectives, standards, concept map outlining activities and material, lesson plans of activities, assessments, and adaptations for students with disabilities who need it. Lesson will also include use of technology. For students who are enrolled in an MA or BA program, this unit must be posted to Taskstream with a hard copy to the instructor. Approval students will turn in a hard copy.

Graduate Students: One research paper of 10 pages or more.

Select a topic dealing with characteristics or instruction of students with learning disorders. Format must be in APA style. Font must be 12 and double-spaced; font should be either Times or Times Roman. Citations must be included Clear the topic with the instructor of this course. At least 7 resources need to be included with 4 being peer-reviewed resources.

Modeling of UK Strategy:
Each student must model a UK strategy in class, with other class members acting as your students.

Grading: Late assignments will lose 20 points the first week, 50 the second; not accepted after that

Test	**100 points**
Unit Plan	**200 points**
Research paper	**100 points (50 each) (Grads only)**
Lesson Plans	**50 points**
Instructional Strategy Modeling	**100 points**
Participation	**100 points**
Total	**500 points Grads – 600 points**

Scale:
90 – 100% A 80-89% B 70-79% C 60-69% D

Please note: if you have certified disabilities, accommodations will be made.

Also note: if plagiarism is proven, the assignment will be awarded 0 points.

Schedule:

Date	Topic	Assignment	Activity
Week 1 Jan 22	Introduction History of Learning Disabilities	**In class assignment:** Read history handout, definition handout, make timeline **Assignment:** Read Chapters 1, 5	Simulation, Explanation, , group activity (laptop timeline) Use Timeliner http://www.audiblox2000.com/book2.htm,
Week 2 Jan 29	Theories and Service Defining Learning Disabilities Characteristics of Young Children, Adolescents, and Adults with Learning Disabilities Train to use Classroom Suite	**Assignment:** Read Chapter 6, 7. 8 (ADHD), http://www.nimh.nih.gov/publicat/autism.cfm (Autism)Work on projects http://www.tbiguide.com/ Traumatic Brain Injury (read the characteristics information, including the coping section and seizures	Small group activity – make definition of LD with Intellitalk; Videotapes of young child, Studioslideshow of characteristics, create case study, role play this child as a young child; videotape of adolescent, Co-Writer case study with characteristics, create case study of same child as adolescent; role play the child; videotape of adult, Powerpoint slideshow of characteristics, create case study, role play this person as adult.
Week 3 Feb 5	ADHD, Autism, and TBI Show Draftbuilder	**Assignment:** Chapters 2, 9	Draftbuilder case study – ADHD, Videotape of ADHD students,

			Powerpoint of Autism, video, Powerpoint of TBI, Billy Broke his Head, create case study and describe using Powerpoint
Week 4 Feb 12	Assessment and IEPs	**Assignment:** Chapters 3, 4	Illinois standards, formal and informal assessments Powerpoint, assess reading and writing samples. Writing outcomes for IEPs, choose one case study and create mini-IEP
Week 5 Feb 19	Learning Environments Delivery Systems in Learning Disabilities	**Assignment:** Handouts on cooperative learning, multiple intelligences, differentiated instruction	Setting up the classroom- design your classroom on software (Windows art) including equipment, Scheduling – set up sample schedule of case load using Excel, if time, demo of software
Week 6 Feb 26	Teaching Practices, Overview of Strategic Tutoring	**Assignment:** Chapter 10	Systematic teaching, jigsaw cooperative learning and cooperative learning activity, multiple intelligences and developing MI lesson, plan for case study student using Tutoring strategy
Week 7 Mar 5	Oral language, overview of DISSECT	**Assignment:** Chapter 11	Ppt on oral language assessment and instruction, Make DISSECT Intellitalk activity
Week 8 Mar 19	Reading, Overview of Paraphrasing, Visual Imagery, Self Questioning	**Assignment:** Chapters 12	Assessment and instruction in reading Powerpoint; teach Intellipix Studio Deluxe and develop visual imagery activity, teaching reading jigsaw and create case study of student who would benefit from the technique, original groups share techniques and case studies. Accommodation techniques for content materials, UK strategies in reading content materials: Paraphrasing, Visual Imagery, Self-Questioning, Start to Finish books
Mar 26 – No class			
Week 9	Written Language,	**Assignment:**	Written language instruction

Apr 2	Overview of Sentence-Writing,	Chapter 13	Powerpoint, UK Strategies for writing, learn to use Co-Writer and Write OutLoud
Week 10 Apr 9	Continuation of Writing,	**Lesson Plans Due**	Written Language, UK Strategies, demonstrate TextHelp and Kurzweil
Week 11 Apr 16	Mathematics, Overview of Strategic Math series	**Assignment:** Chapter 14	Assessing math Powerpoint, Case study for error pattern analysis, teaching math powerpoint, design lesson, Intellmathics program, MathPad, UK Math Strategy
Week 12 Apr 23	Social/Emotional Behaviors	**Assignment:** Handout on work experience	Powerpoint, Videotapes of behavior students, Case studies, Bibliotherapy activity
Week 13 Apr 30	Transitioning	**Assignment: Research Paper Due (grad); Unit Plan due** Test	Transition Planning Powerpoint, Work experience activity (make game) Create transition plan, case study
Week 14 May 7	Modeling presentations	**Modeling presentations**	
Week 15 May 14	Test	Have a great break!	Test

Appendix B

Case Study

Ralph is a high school sophomore who is interested in becoming an architect. He has been placed into your district by the state correctional facilities that maintain a residential home within your school district. He had one slip with the law and was placed in the facility, a violation that was neither violent nor involved theft. He has not been an overt behavior problem in his past school districts, but because he does not complete assignments, he fails several classes.

Ralph's diagnosis is learning disabilities. He has perceptual motor difficulties accompanied by reading and writing difficulties that affect his success in the classroom. Ralph's motor problems affect his ability to walk. He walks with a very stiff gate. His handwriting is very labored and slow, with frequent tears in the paper from pressing too hard on the pencil.

Ralph has a recorded reading level that is 2 grade levels below his current class standing, with writing skills tentatively identified as 3 grade levels below where expected placement would be. When writing assignments are given, he might begin them, but he rarely completes more than one or two sentences, in part because of his fine motor difficulties, and in part, because his writing skills include problems with spelling, writing grammatically correct sentences.