RESOURCE MATRIX
Educational Technology

Articles, Manuals, and Other Reports	
Citation	Frauenberger, C., Good, J., and Keay-Bright, W. (2011) Designing technology for children with special needs - Bridging perspectives through participatory design. *CoDesign*, *7*(1), 1-28. ISSN 1571-0882
Description	This article presents and discusses co-creation techniques for involving children in the design of a technologically enhanced learning environment. The ECHOES project, which involves both typically developing children and children with autism spectrum conditions, aims to create an environment that scaffolds the development of children's social skills. The authors draw attention to the constraints and limitations of co-designing new technologies, which are by necessity interdisciplinary, and describe experiments with sensory interest and storytelling to bridge tensions between system design and the imaginary worlds of young children.
Application	Information from this article will enrich content on the role of technologies in Early Childhood Education presented in this course.
Outcome	Use of this video will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children birth to 5 with exceptional needs. [3.2]
Additional Information	Additional information on the ECHOES project: Echoes Website with video: http://echoes2.org/ Article and videos: *Using Innovative Technologies in the Classroom-The Echoes Project*: http://senclassroom.wordpress.com/2012/11/19/using-innovative-technologies-in-the-classroom-the-echoes-project/
CEC Paraeducator Standards/ NAEYC Core Standards	Learning environments and social interaction/Knowing and understanding effective strategies and tools for early education.

Articles, Manuals, and Other Reports	
Citation	Parette, H.P., Hourcade, J.J., Boeckmann, M.M., Blum, C. (2008). Using Microsoft PowerPointTM to Support Emergent Literacy Skill Development for Young Children At-Risk or Who Have Disabilities. *Early Childhood Education Journal*, *36*, 233-239. DOI 10.1007/s10643-008-0275-y
Description	This article provides suggestions that target fundamental elements of emergent literacy using relevant features of PowerPointTM, based heavily on experiences of classroom teachers working with young children who are at-risk or who have disabilities.
Application	Information from this article will enrich course content on planning lessons with technology.
Outcome	As a result of viewing this presentation, students will gain knowledge that will help them participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children birth to 5 with exceptional needs. [3.2]
Additional Information	A summary of this article may be retrieved from elisebblog: http://elisebblog.wordpress.com/2011/04/17/the-power-of-powerpoint/ Another blog written by a science teacher worth an interest in incorporating Power Point into classrooms with students with disabilities or special needs may be retrieved from http://fiendishlyclever.com/2010/02/using-powerpoint-with-students-who-have-special-needs-powerpoint-is-not-just-for-presentations.html
CEC Paraeducator Standards/NAEYC Core Standards	Individual learning differences/Knowing and understanding effective strategies and tools for early education

Field Trips, Service Sites, and Other Instructional Activities	
Citation	CONNECT Activity 5.3a: Apply the research to practice: http://community.fpg.unc.edu/connect-modules/resources/activities/CONNECT-Activity-5-3a.pdf/view
Description	This purpose of this activity is to help students identify appropriate assistive technology equipment.
Application	This activity supports content on teaching children to use assistive technology.
Outcome	As a result of watching this video, student will learn skills to promote child development and learning through varied delivery of instruction (i.e., teach individual students or small groups of students to reinforce learning and skills introduced by the teacher). [4.2]
Additional Information	The video accompanying this activity is *Dr. Phillipa Campbell-Research on Assistive Technology* http://community.fpg.unc.edu/connect-modules/learners/module-5/step-3/a-research Another CONNECT resource to accompany this activity is Handout 5.1: *Research Summary on Assistive Technology Interventions* http://community.fpg.unc.edu/connect-modules/resources/handouts/CONNECT-Handout-5-1.pdf/view
CEC Paraeducator Standards/NAEYC Core Standards	Learning environments and social interaction/Using a broad repertoire of developmentally appropriate teaching/learning approaches.

Field Trips, Service Sites, and Other Instructional Activities

Citation	CONNECT Activity 5.5a: *Create a squishy book*: http://community.fpg.unc.edu/connect-modules/resources/activities/CONNECT-Activity-5-5a.pdf/view
Description	In this activity, learners create their own adaptation that can be used with children with language or physical delays.
Application	This purpose of this activity is to help students learn more about assistive technology adaptations.
Outcome	As a result of engaging in this activity, gain knowledge that will help them participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children birth to 5 with exceptional needs. [3.2]
Additional Information	The handout accompanying this activity is *5.3: Examples of Assistive Technology Adaptations:* http://community.fpg.unc.edu/connect-modules/resources/handouts/CONNECT-Handout-5-3.pdf/view Another source for information and resources about adaptations, including assistive technology, to use for infants and toddlers is: Tots n' Tech: http://tnt.asu.edu/
CEC Paraeducator Standards/NAEYC Core Standards	Individual learning differences/Knowing and understanding effective strategies and tools for early education

Field Trips, Service Sites, and Other Instructional Activities	
Citation	CONNECT Activity 5.6a: *Describe Strategies to help children use assistive technology*: http://community.fpg.unc.edu/sites/community.fpg.unc.edu/files/resources/Activity/CONNECT-Activity-5-6a.pdf
Description	In this activity, learners watch two videos and describe what the adult does to help the child use assistive technology.
Application	This purpose of this activity is to help students learn more about assistive technology adaptations.
Outcome	As a result of engaging in this activity, gain knowledge that will help them participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children birth to 5 with exceptional needs. [3.2]
Additional Information	The videos accompanying this activity are 5.8: *Communicating at breakfast* and 5.9: *Morning sign-in with Ethan and Amanda*: http://community.fpg.unc.edu/connect-modules/instructor-community/dashboards/module-5 Activity Guides for this activity are available for Beginner, Intermediate, and Advanced levels: http://community.fpg.unc.edu/connect-modules/instructor-community/dashboards/module-5
CEC Paraeducator Standards/NAEYC Core Standards	Individual learning differences/Knowing and understanding effective strategies and tools for early education

Textbooks, Workbooks, and Other Instructional Materials	
Citation	*AT Information for Families*: http://www.fctd.info/powerpoints
Description	The presentation begins with an introduction to AT, offering examples of different devices that can be used to address discrete areas of weakness. You will also find information about AT in schools, including information about IDEA, IEPs, and mediation. There is a brief overview of AT funding as well. Finally, the presentation provides tips from other parents and additional annotated resources.
Application	Students will review this video to enrich course content on communicating and networking with families and children.
Outcome	After viewing this video students be able to provide accurate and timely information about children birth to 5 with exceptional needs to individuals who have the need and right to know under the guidance of the lead teacher. [7.2]
Additional Information	Websites with information on assistive technology for parents of children with disabilities are: National Parent Technical Assistance Center Network: http://www.parentcenternetwork.org/national/aboutus.html Alliance for Technical Access: http://ataccess.org/ Assistivetech.net: http://www.assistivetech.net AT Online Training Project: http://www.atto.buffalo.edu Infinitec: http://www.infinitec.org
CEC Paraeducator Standards/NAECY Core Standards	Collaboration/Involving families and communities in their children's development and learning

Textbooks, Workbooks, and Other Instructional Materials	
Citation	*Assistive Technology in the Classroom*: *http://www.fctd.info/powerpoints*
Description	AT can help students with disabilities be fully included in the general education classroom. This power point presentation looks at how teachers can effectively incorporate AT into the classroom. It identifies a range of AT devices that teachers may find valuable. The presentation also looks at how technology can help all students, not just those who use it as a result of an IEP.
Application	Students will review this video to enrich course content on communicating and networking with families and children.
Outcome	After viewing this video students will be better prepared to participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children birth to 5 with exceptional needs. [3.2]
Additional Information	Two additional power point presentations on this webpage are: Assistive Technology Laws: http://www.fctd.info/powerpoints Early Childhood and AT: http://www.fctd.info/powerpoints
CEC Paraeducator Standards/NAECY Core Standards	Collaboration/Involving families and communities in their children's development and learning

Textbooks, Workbooks, and Other Instructional Materials	
Citation	CONNECT: The Center to Mobilize Early Childhood Knowledge. (2011). *Policy advisory: The law concerning assistive technology.* Chapel Hill: The University of North Carolina, FPG Child Development Institute, Author.
Description	This policy advisory provides information on how the law defines assistive technology for young children with disabilities and how children, their families, and professionals access the technology.
Application	Students will use this presentation to gain information to support text content on safe, legal, and ethical uses of technology.
Outcome	As a result of viewing this presentation, student will gain knowledge that will help them participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children birth to 5 with exceptional needs. [3.2]
Additional Information	Individuals with Disabilities Education Act of 2004 (IDEA), Pub. L. No. 108-446. For complete source of information, go to http://idea.ed.gov/ For further information on the law concerning assistive technology, go to Wrightslaw at http://www.wrightslaw.com/info/atech.index.htm
CEC Paraeducator Standards/NAECY Core Standards	Instructional planning/Knowing and understanding effective strategies and tools for early education

Websites and Other Electronic Media	
Citation	AbleData: http://www.abledata.com/abledata.cfm
Description	AbleData provides objective information about assistive technology products and rehabilitation equipment.
Application	Information from this website supports course content on the role of technologies in early childhood education.
Outcome	Information on this website will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children birth to 5 with exceptional needs. [3.2]
Additional Information	Information also retrieved at this site: New Products: http://www.abledata.com/abledata.cfm?pageid=113709&ksectionid=19327 Products [classified by function and special features]: http://www.abledata.com/abledata.cfm?pageid=19327&ksectionid=19327 Resources: http://www.abledata.com/abledata.cfm?pageid=19326&ksectionid=19326 Library [of publications, literature, and news]: http://www.abledata.com/abledata.cfm?pageid=160164&ksectionid=160164
CEC Paraeducator Standards/NAEYC Core Standards	Individual learning differences/Knowing and understanding effective strategies and tools for early education

Websites and Other Electronic Media	
Citation	AccessIT: The National Center on Accessible Information Technology in Education http://www.washington.edu/accessit/
Description	AccessIT promotes the use of electronic and information technology (E&IT) for students and employees with disabilities in educational institutions at all academic levels. This Web site features the AccessIT Knowledge Base, a searchable database of questions and answers regarding accessible E&IT. It is designed for educators, policy makers, librarians, technical support staff, and students and employees with disabilities and their advocates.
Application	Information from this website supports course content on the role of technologies in early childhood education.
Outcome	Information on this website will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children birth to 5 with exceptional needs. [3.2]
Additional Information	Related websites are: Alliance for Technology Access: http://www.ataccess.org/ Assistive Technology Industry Association: http://www.atia.org/i4a/pages/index.cfm?pageid=1 [see AT resource Links retrieved from: http://www.atia.org/i4a/links/?pageid=3412&showTitle=1] Assistive Technology Training Online Project (ATTO): Provides information on AT applications that help students with disabilities learn in elementary classrooms: http://atto.buffalo.edu/
CEC Paraeducator Standards/NAEYC Core Standards	Individual learning differences/Knowing and understanding effective strategies and tools for early education

Websites and Other Electronic Media	
Citation	*Assistive Technology-Let that Voice Be Heard:* http://www.youtube.com/watch?v=IXnqToAwqiE
Description	This video was created by Anita Paratore in 2011. In her fourth year of university studying primary education, she is researching how applications on the iPad and iPod Touch can assist children in the classroom.
Application	This video will help students gain more information about using assistive technology with young children.
Outcome	As a result of engaging in this activity, gain knowledge that will help them participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children birth to 5 with exceptional needs. [3.2]
Additional Information	Another video on using assistive technology with children and youth with disabilities, titled *Assistive Technology Enabling Dreams* may be retrieved from http://www.youtube.com/watch?v=zZ5CkpgVQJ4 Any resource or activity in CONNECT Module 5 would provide more information on the use of assistive technology as this module introduces students to Ms. Mary, a family child care provider, who cares for Sophie, a 2-year old girl with language and physical delays. It describes how Ms. Mary is working with Sophie's mother, Holly, and her speech therapist, Karen, to learn how to use assistive technology to help Sophie increase her access and participation in everyday activities. The assistive technology interventions in the module are also applicable for home visiting, center-based care and education, early intervention, and other 0-5 settings. http://community.fpg.unc.edu/sites/community.fpg.unc.edu/files/instructors/Module-5-TOC_0.pdf
CEC Paraeducator Standards/NAECY Core Standards	Individual learning differences/Knowing and understanding effective strategies and tools for early education

Websites and Other Electronic Media	
Citation	*Communicating with Partner Assisted Scanning*: http://www.youtube.com/watch?v=nGpSXQKrmR4
Description	This video offers information partner assisted scanning, a communication technique that can be used with children who are nonverbal. It is a useful strategy to let your child make choices and to express his or her wants and needs. It can be a useful tool for building skills that will allow a child to use a more sophisticated communication system. Video by Cincinnati Children's Hospital Medical Center.
Application	Students will review this video to enrich course content on communicating and networking with families and children.
Outcome	After viewing this video students will be better prepared to participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children birth to 5 with exceptional needs. [3.2]
Additional Information	More information about partner assisted scanning may be retrieved from UNC School of Medicine, Center for Literacy and Disability Studies: http://www.med.unc.edu/ahs/clds/resources/deaf-blind-model-classroom-resources/partner-assisted-scanning and Simplified Technology at http://www.lburkhart.com/.
CEC Paraeducator Standards/NAECY Core Standards	Instructional planning/Knowing and understanding effective strategies and tools for early education

Websites and Other Electronic Media	
Citation	Georgia Tech: Tools for Life: *Our Favorite Apps*: http://www.gatfl.org/favorite-search.php
Description	This database is a unique tool that will allow you to search for apps by disability or multiple disabilities as well as by price ranges and device types.
Application	Information from this database supports course content on technology supporting the education of students with disabilities.
Outcome	Information on this website will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children birth to 5 with exceptional needs. [3.2]
Additional Information	Information on iPad Apps for students with learning disabilities may be retrieved from 40 Amazing iPad Apps for the Learning Disabled http://www.matchacollege.com/blog/2011/40-amazing-ipad-apps-for-the-learning-disabled/ *Apple in Education*: http://www.apple.com/education/special-education/
CEC Paraeducator Standards/NAEYC Core Standards	Individual learning differences/Knowing and understanding effective strategies and tools for early education

Websites and Other Electronic Media	
Citation	National Dissemination Center for Children with Disabilities: http://nichcy.org/laws
Description	NICHCY is a central source of information on disabilities in infants, toddlers, children, and youth.
Application	Information from this website supports course content on rights and responsibilities of children with exceptional needs to be provided with assistive technology.
Outcome	Information on this website will help students share with others the rights and responsibilities of children birth to 5 with exceptional needs, their families and other stakeholders. [1.1]
Additional Information	Information also retrieved at this site: Disability & Education Laws: http://nichcy.org/laws Assistive Technology Act: http://nichcy.org/laws/ata
CEC Paraeducator Standards/NAEYC Core Standards	Professional and ethical practice/Engaging in informed advocacy for children

Websites and Other Electronic Media	
Citation	*Tell Me a* Story: Wonders of Technology Help Siblings with Spinal Muscular Atrophy: http://www.youtube.com/watch?v=GSvhavnE_Fk
Description	Like most kids their age, siblings Emma and Nick Lockwood, ages 10 and 8, have taken to technology. They love computer games and chatting with their friends. The difference is Emma and Nick get around on motorized wheelchairs and hook up to technology through their chairs, where the controls are close to their fingertips. The siblings have Spinal Muscular Atrophy, an inherited disease that causes loss of motor function. Their family helps run a foundation to find a cure, and they come to The Perlman Center at Cincinnati Children's for therapy that helps them beat the odds.
Application	This video will help students gain more information about the role of technologies in Early Childhood Education.
Outcome	As a result of viewing this presentation, students will be able to implement strategies that promote the self-awareness, self-regulation, self control, self-reliance, self-esteem and independence in children birth to 5 under the guidance of the lead teacher. [2.1]
Additional Information	Information on adaptations for individuals with disabilities to make technology more accessible: *A Better Computer Mouse Cursor for the Disabled*: http://www.youtube.com/watch?v=1Ny6hcvwwb0 *Equal Access in the Classroom*: http://www.youtube.com/watch?v=GZ4OeOJ10W4
CEC Paraeducator Standards/NAECY Core Standards	Instructional planning/Knowing and understanding effective strategies and tools for early education

Websites and Other Electronic Media	
Citation	The Center for Best Practices in Early Childhood: http://www.wiu.edu/thecenter/
Description	The mission of the center is to develop and promote practices designed to improve educational opportunities for all young children. The Center, part of the College of Education and Human Services at Western Illinois University, was established in August of 1999. The Center provides products, training materials, conferences and workshops on topics relating to technology, early childhood, children with disabilities, and more.
Application	Information from this website supports course content on promoting assistive technology and facilitating its use.
Outcome	Information on this website will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children birth to 5 with exceptional needs. [3.2]
Additional Information	On the center website, checklists that could be used to document paraprofessionals' knowledge, attitude and skills for adaptations in areas such as computer environment; curriculum integration; emergent literacy; math science, and social studies; software evaluation; and technology assessment can be found starting on page 33 of the *Early Childhood Technology Integrated Instructional System (EC-TIIS) Phase 3: Final Report (2009)* http://www.wiu.edu/thecenter/pdf/ECTIIS3Final.pdf

Articles on the use of assistive technology for students with disabilities may be retrieved from Family Village School: Special Education and Early Intervention Resources http://www.familyvillage.wisc.edu/education/At.html |
| CEC Paraeducator Standards/NAEYC Core Standards | Individual learning differences/Knowing and understanding effective strategies and tools for early education |

Websites and Other Electronic Media

Citation	The Family Center on Technology and Disability: http://www.fctd.info/
Description	Funded by the U.S. Department of Education's Office of Special Education Programs, the Family Center on Technology and Disability provides a wide range of resources on assistive technology, from introductory fact sheets and training materials to in-depth discussion of best practices and emerging research.
Application	Information from this website supports course content on communicating and networking with families and children.
Outcome	Information on this website will help students provide accurate and timely information about children birth to 5 with exceptional needs to individuals who have the need and right to know under the guidance of the lead teacher.
Additional Information	Videos found on this website are: *Assistive Technology in Action-Meet Sam*: http://www.youtube.com/watch?v=YayaN9vwipU&feature=plcp *Assistive Technology in Action-Meet Elle:* http://www.youtube.com/watch?v=R8VuA8yVBv8&feature=plcp *Assistive Technology in Action-Meet Mason: http://www.youtube.com/user/fctdvideo?feature=results_main*
CEC Paraeducator Standards/NAEYC Core Standards	Collaboration/Involving families and communities in their children's development and learning

Websites and Other Electronic Media	
Citation	University of Buffalo: Introduction to AT:http://atto.buffalo.edu/registered/ATBasics/Foundation/intro/introdefine.php
Description	Click on "turn things on," "get dressed eat, or bathe," "read," "write," "see," "get around or move," "communicate," "play," and the picture will change to show an example.
Application	Information from this website supports course content on new ways to "assist" interactions and learning.
Outcome	Information on this website will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children birth to 5 with exceptional needs. [3.2]
Additional Information	Additional Information also retrieved at this site: Basic Technologies: http://atto.buffalo.edu/registered/ATBasics/Foundation/intro/introbasic.php AT & IDEA http://atto.buffalo.edu/registered/ATBasics/Foundation/intro/introATidea.php Primary Usage: http://atto.buffalo.edu/registered/ATBasics/Foundation/intro/introprimaryusage.php Device Selection: http://atto.buffalo.edu/registered/ATBasics/Foundation/intro/introselection.php
CEC Paraeducator Standards/NAEYC Core Standards	Individual learning differences/Knowing and understanding effective strategies and tools for early education

Websites and Other Electronic Media	
Citation	*What is AAC? Augmentative and Alternative Communication*: http://www.youtube.com/watch?v=r3m8_YmTDDM
Description	This video offers information about augmentative and alternative communication, a way for individuals to communicate when they do not have the physical ability to use verbal speech or writing. AAC systems are designed to help people express their thoughts, needs and ideas. AAC is used by those with a wide range of speech and language impairments due to conditions such cerebral palsy, autism, spinal muscular atrophy and head injuries. AAC can range from a simple set of picture symbols on a communication board to a computer system that is programmed to speak with words or messages.
Application	Students will review this video to enrich course content on communicating and networking with families and children.
Outcome	After viewing this video students will be better prepared to participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children birth to 5 with exceptional needs. [3.2]
Additional Information	More information about using technology to communicate may be found at Cincinnati Children's Aaron W. Perlman Center http://www.cincinnatichildrens.org/service/a/aaron-perlman-center/assistive-technology/communication/default/ An article on the use of a core vocabulary to support nonverbal students who are using augmentative and alternative communication (AAC) may be retrieved from http://www.asha.org/Publications/leader/2009/090414/f090414c.htm
CEC Paraeducator Standards/NAECY Core Standards	Instructional planning/Knowing and understanding effective strategies and tools for early education

Websites and Other Electronic Media	
Citation	*Windows 8 Accessibility Tutorials*: http://attraining.org/atdaily/2013/02/08/windows-8-accessibility-tutorials/
Description	*Ease of Access* tutorials include topics such as making the text on your screen larger or smaller, using speech recognition, and using a magnifier to see items on the screen.
Application	These webinars will enrich course content related to making the most of technology.
Outcome	After viewing this guide students will be better prepared to collaborate with the lead teacher and early intervention team to select, adapt, modify and use classroom instruction, curricula, materials, activities and the physical environment for children birth to 5 with exceptional needs. (e.g., use and maintain assistive technology for children birth to 5 under the guidance of the lead teacher.)[5.1]
Additional Information	Additional Information on making technology accessible: *AccessWorld*: http://www.afb.org/aw/main.asp *American Federation for the Blind*: http://www.afb.org/section.aspx?FolderID=3&SectionID=44&TopicID=473
CEC Paraeducator Standards/NAECY Core Standards	Individual learning differences/Knowing and understanding young children's characteristics and needs