

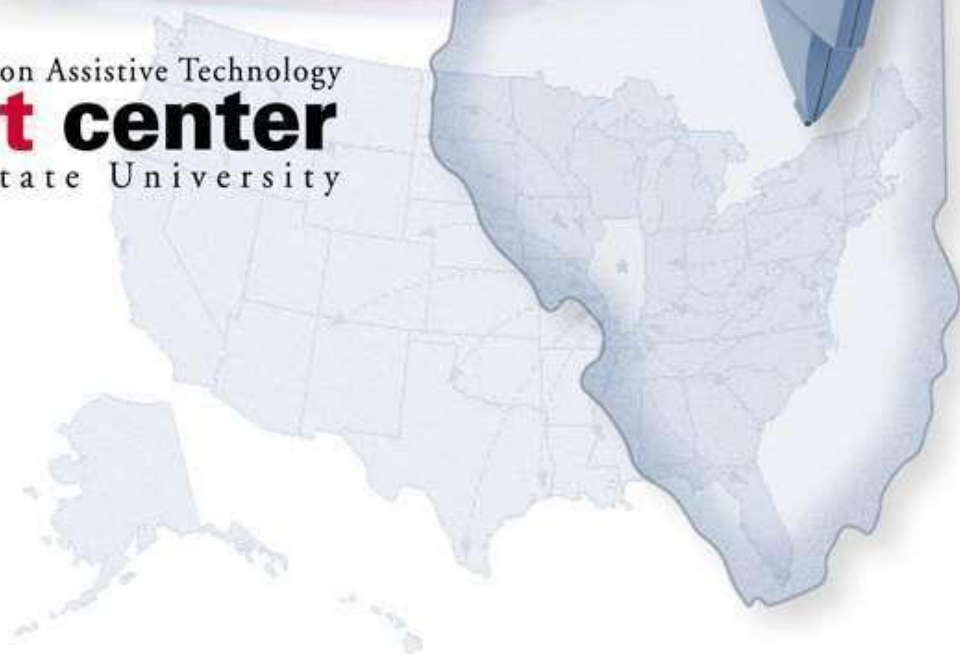
# 2007 Annual Report

## Special Education Assistive Technology (SEAT) Center

February 26, 2008



Special Education Assistive Technology  
**s e a t center**  
Illinois State University



## VISION

The scope of the SEAT Center is noted in its vision statement:

The SEAT Center will be a national and international center of excellence where partnerships advance the knowledge and practice of assistive technology, enhancing teaching, learning, and living.

## MISSION

The vision statement of the SEAT Center is further clarified in its mission statement that includes five facets:

To be a:

- *Center of innovation* where knowledge and practices regarding technology are created, integrated, and disseminated to present and future primary, secondary and higher education professionals and people with disabilities and their families.
- *Center of access* to those teaching, developing and using the tools of technology.
- *Center of instructional excellence* where students, practicing teachers, and educational professionals can learn and practice technology solutions available for use in school, work, and community.
- *Center of accessible technology solutions* needed by Illinois State University students with disabilities to be successful in their university experience.
- *State, national, and international partner with education and industry* in creating and sharing instructional, training, and support resources for educational professionals who are preparing students to be world citizens.

## ACCOMPLISHMENTS IN 2007

This Executive Summary is organized to summarize accomplishments of the SEAT Center during 2007. Activities and achievements are organized around each of the five Vision Statements.

### *Vision 1: Center of Innovation*



#### Key Accomplishments:

- Scholarly works
- Professional development activities

The first vision of the SEAT Center's mission is to be a *Center of Innovation*, or vehicle through which AT knowledge and practices are created, integrated, and

disseminated. Mechanisms through which innovation has been demonstrated include (a) scholarly works, and (b) professional development activities.

### ***Scholarly Works***

One mechanism through which the Center successfully addressed this facet was through the scholarly productivity of the Director, Coordinator, SEAT Associates, and collaborations with other ISU faculty members. During 2007, faculty generated a substantive number of scholarly works related to AT including 15 peer-reviewed journal articles, 6 textbook chapters, 2 books, 1 special report, and 11 presentations at professional meetings (see Appendix A). Of particular importance has been the involvement of numerous faculty members in research studies at Sarah Raymond Preschool (District 87) as a component of the Making A Difference Using Assistive Technology (MDAT) Project.

### ***NCTI Writing Matrix***

The SEAT Center developed writing content for a Reading, Writing, and Math Matrix archived at the National Center for Technology Innovation (NCTI) website at <http://www.techmatrix.org/>. The writing matrix synthesizes 23 years of writing research conducted as a part of two grants previously received by the SEAT Center. The content is being accessed by thousands of education professionals nationally.

### ***Research-Based Practices in Developmental Disabilities Textbook***

The SEAT Center completed work on a textbook, *Research-Based Practices in Developmental Disabilities*, and supporting teacher's manual, in collaboration with the Council for Exceptional Children, Division on Developmental Disabilities. This three-year project culminated in a text and CD published by PRO-ED.

### ***Guest Workshop***

In February, the SEAT Center conducted a preconference workshop, *Facilitating Student Achievement Using Assistive Technology*, at the 10<sup>th</sup> International Conference on Cognitive Disabilities/Mental Retardation, Autism, & Other Developmental Disabilities, in Kona, Hawai'i. The content of this presentation subsequently was expanded and published in *Education and Training in Developmental Disabilities*.

## *Vision 2: Center of Access*



### Key Accomplishments:

- Professional activities
- External department presentations

The second vision of the SEAT Center's mission is to be a *Center of Access* to various constituencies involved in teaching, developing, and using the tools of technology. This vision has been addressed through (a) a range of professional activities, (b) delivery of external department presentations, and (c) maintenance of a resource database.

### *Professional Activities*

The SEAT Center conducted a wide range of professional activities in response to requests from schools, and professional and student organizations ( $n=124$ ). This number included school consultations ( $n=27$ ), professional development activities ( $n=43$ ), AT demonstrations ( $n=17$ ), preservice or student organization presentations ( $n=15$ ), and professional organization activities ( $n=22$ ).

### *External Department Presentations*

One mechanism through which the Center afforded access to others was through the successful delivery of presentations for instructors and 50 students across five different courses during 2007. These presentations included a number of AT topics that addressed the facilitation of access to the general education curriculum.

## *Vision 3: Center of Instructional Excellence*



### Key Accomplishments:

- Course support
- Field-based, pre-student teaching support
- Expansion and maintenance of open computer labs
- Supervision of Illinois State University Instructional Technology Passport System-Competency H (ITPS-H) implementation

The third vision of the SEAT Center's mission is to be a *Center of Instructional Excellence*. The SEAT Center is the nation's *only* higher education technology facility that is linked to an undergraduate course of study. It is the *only* U.S. higher education technology center that provides *all* education majors at a university with a minimum level of AT competency to work with students with disabilities who attend public schools. The Center serves approximately 5,000 education majors—or one-fourth of the student population—at Illinois State University.

More specifically, these accomplishments were addressed through (a) special education course technical support; (b) field-based, pre-student teaching support; (c) expansion and maintenance of open computer labs; and (d) supervision of ITPS-H implementation in the College of Education.

### *Course Support*

The SEAT Center provides technical support for a number of classes in the Department of Special Education and one course in the Department of Speech Pathology and Audiology (PAS 360). Courses and number of students served in 2007 include SED 356 ( $n=12$ ); SED 377 ( $n=219$ ); SED 379 ( $n=282$ ); SED 479 ( $n=11$ ); SED 593.03 ( $n=17$ ); and PAS 360 ( $n=75$ ). A total of 616 students were served across courses.

Courses delivered in the Center are supported with (a) specialized equipment and materials purchased via a previous federal grant federal grant, donations from vendors, and private gifts; (b) 'open lab hours'; and (c) instruction consultation/collaboration with SEAT Center staff.

### *Field-Based, Pre-Student Teaching Support*

The SEAT Center also provided support to 159 students in field-based sites, including Peoria, McLean, and Chicago. AT presentations are typically made on a targeted inservice day for students participating in field-based settings.

### *Open Computer Lab*

An open computer laboratory is maintained by the SEAT Center using two classroom computer laboratories (Fairchild Hall 323 and 324). Both labs support curricula offerings across departments, and are sites through which *all education majors* develop mandated technology competencies by the College See Table 1 and Figure 1). An increasing trend in lab usage by students is noted in the data maintained since 2002.

Table 1  
*Total Open Lab Hours of Operation and Student Usage by Semester*

	<i>N</i> <u>2006</u>				<i>N</i> <u>2007</u>			
	Sp	Sum	Fall	Total	Sp	Sum	Fall	Total
Wkly Hrs. Open <sup>2,3</sup>	66	108.2	70.5	<b>3482.4</b>	78	108.2	70.5	<b>3674.4</b>
N Students Served <sup>1</sup>	1722	384	2014	<b>4120</b>	1802	346	2109	<b>4257</b>

<sup>1</sup> Includes ITPS-H students

<sup>2</sup> Open lab availability; not always staffed by SEAT personnel

<sup>3</sup> Combined open lab hours for Fairchild Rooms 323 and 324

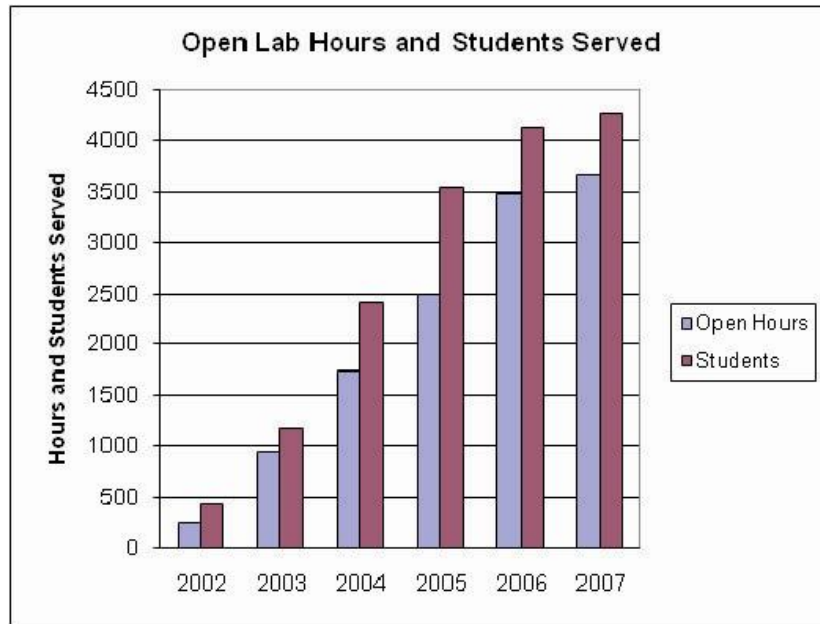


Figure 1. Open lab hours and students served, 2002-2007.

### *ITPS-H Implementation*

The SEAT Center also coordinated delivery of instruction for all Illinois State University teacher candidates participating in the Illinois Technology Passport System *Competency H9: Assistive Technology* (ITPS-H). Implemented in Fall '03 semester, ITPS-H is required for all teacher education candidates. The SEAT Center assumes responsibility for providing on-line and hands-on training to all Illinois State University students pursuing a teaching degree.

In order to meet ITPS-H, all students enrolled in special education (except Deaf and Hard of Hearing) and all early childhood majors are required to take SED 379, *Introduction to Assistive Technology*. All teacher education students not taking SED 379 must complete a two-stage process: (a) Stage 1 requires completion of an online module of instruction and assessment requirement; and (b) Stage 2 requires a hands-on performance experience and assessment (see Figure 2). Completion of these two stages requires students to be physically present in the SEAT Center lab.

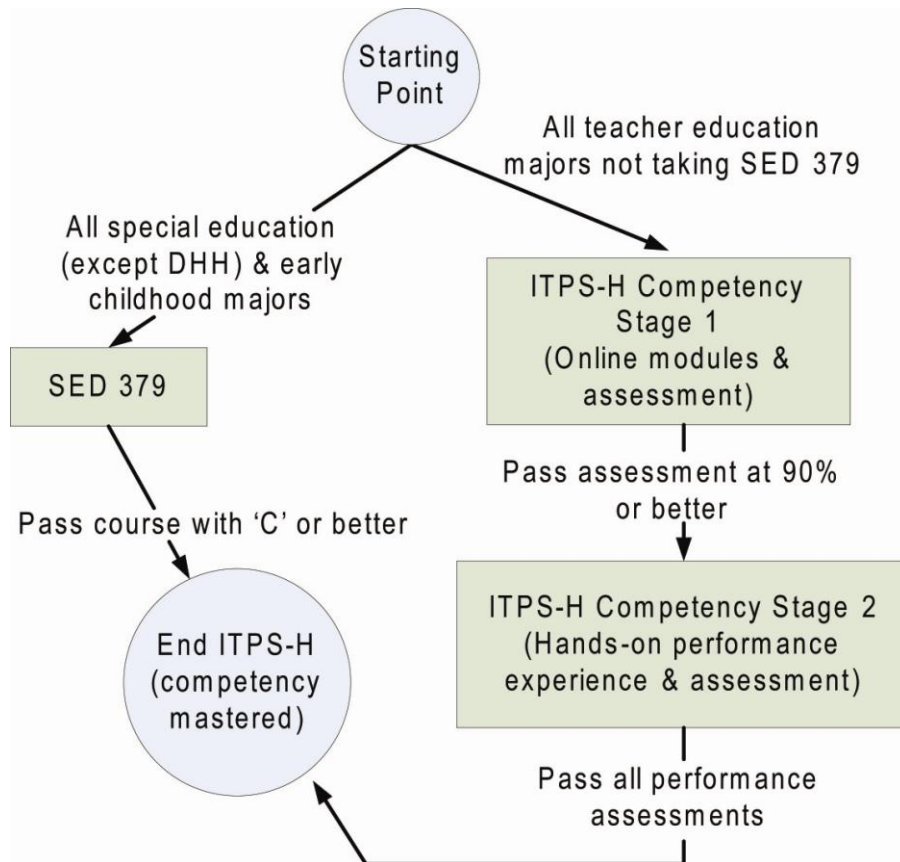


Figure 2. ITPS flowchart.

### *Mini-Courses*

As a component of an earlier National AT Coalition grant, the SEAT Center contracted services with a school partner employed by Unit 5 Schools to develop a series of 10 Web-based mini-courses focusing on five commonly used AT tools and their integration into curricula. Planning for Web delivery of these courses is underway.

### ***Vision 4: Center of Accessible Technology Solutions***



#### **Key Accomplishments:**

- Inventory expansion
- Universal Design for Learning (UDL) initiative with Secondary Education faculty
- E-commerce development

The fourth vision of the SEAT Center's mission is to be a *Center of Accessible Technology Solutions*. In 2007, this component was addressed by increasing equipment holdings in the equipment inventory of the SEAT Center, initiating a UDL collaboration with the Department of Curriculum and Instruction, and

development of e-commerce capability.

### *Inventory Expansion*

Current SEAT inventory approximates a market value of more than \$800,000. Relationships with manufacturers continue to be developed to secure products for archival at the Center.

### *UDL Initiative*

The SEAT Center is collaborating with the Secondary Education faculty in the Department of Curriculum and Instruction to develop a model for UDL implementation in coursework within the College. The Center will work with faculty to explore readily available technologies and collaborate in development of the model which holds potential to impact curricula nationwide.

### *E-Commerce Development*

The Center is currently developing multiple infrastructure components to enable the efficient delivery of professional development products. A system architecture plan for an e-commerce component of the Center's Web site was developed in Fall, 2007, under contract with a faculty member of the School of Information Technology. Phase 2 of this project—development and implementation of the site—is contingent upon fiscal resources currently unavailable to the Center. A distributed content management system for the Web site, coupled with a customer relations management system is also being examined.

## ***Vision 5: State, National, and International Partner with Education and Industry.***



### **Key Accomplishments:**

#### ***Partnership activities with:***

- NCTI
- ATIA
- DDD
- Software vendors
- ICHF and District 87
- HILIA
- NASP

The fifth vision of the SEAT Center's mission is to be a *state, national, and international partner with education and industry*. This component is addressed through collaborative activities including (a) National Center for Technology Innovation (NCTI); (b) Assistive Technology Industry Association (ATIA); (c) Division on Developmental Disabilities (DDD); (d) software vendors; (e) Illinois

Children's Healthcare Foundation (ICHF); (f) Heart of Illinois Low Incidence Association (HILIA); and (g) National Association of School Psychologists (NASP).

### ***National Center for Technology Innovation (NCTI)***

The SEAT Center co-sponsored a Vendors Pre-Conference: *Strategies for Smart Marketing*, in partnership with NCTI at the Assistive Technology Industry Association Annual Meeting in Orlando. This preconference was designed to engage industry leaders with the process of research collaborations with schools and institutions of higher learning. The Center also collaborated with NCTI by developing the writing content for a Reading, Writing, and Math Matrix hosted at <http://www.techmatrix.org/>. In October, the Center was represented at the NCTI Technology Innovator's Conference held in Washington, DC.

### ***Assistive Technology Industry Association (ATIA)***

In collaboration with ATIA, the SEAT Center published the fourth volume of *Assistive Technology Outcomes and Benefits* (see <http://www.atia.org/atob/ATOBWeb/index.htm>), a cross-disability and transdisciplinary journal averaging more than 4,000 downloads monthly. Hardcopy versions of the journal are now available through LuLu.com at the journal Web site ([atobjournal.org](http://atobjournal.org)). A series of companion publications for the journal have been identified for future release. The SEAT Director serves as Editor, and the SEAT Coordinator serves as Production Manager.

### ***Division on Developmental Disabilities (DDD)***

The Center provided editorial service to the DDD of the Council for Exceptional Children by publishing a textbook, *Research-Based Practices in Developmental Disabilities*. The Director has served as Past-President of this international organization in 2007, and has worked to ensure that AT is included in publications and conferences planned by the Division. The SEAT Center delivered a pre-conference workshop titled, "Facilitating Student Achievement Using Assistive Technology," at the 10th International Conference on Cognitive Disabilities/Mental Retardation, Autism, and Other Developmental Disabilities held in Kona, Hawaii in January.

### ***Software Vendors***

The SEAT Center served as a professional development training site for six software vendors in '06, including Intellitools, Inc.; Kurzweil Educational Systems; Mayer-Johnson, Crick Software, Applied Human Factors, and Don Johnston, Inc. The Center has entered into a partnership with Ideal Technology Solutions, Inc. to integrate an array of open source technology applications in the curriculum at ISU.

### ***Illinois Children's Healthcare Foundation (ICHF) and District 87***

In partnership with District 87, Sara Raymond Early Childhood Education Center, and through funding from the ICHF, the *Making A Difference Using Assistive Technology* (MDAT) served more than 300 preschoolers in 10 classrooms in 2007. An assistive technology toolkit was used by teachers in classrooms to help children develop emergent writing skills. Project accomplishments include (a) compilation and scoring of monthly child writing samples; (b) completion of assessments of all children using standardized literacy assessments; (c) collaboration with the Illinois State University Department of Speech and Audiology who provided graduate students for classroom language activities and data gathering; (d) intensive professional development activities for teachers including two training sessions and eight 3-hour user group sessions; and (e) initiation of a series of research studies to examine the effectiveness of specific AT tools with this population. Although funding for the project has expired, SEAT faculty members are continuing research investigations at the preschool.

### ***Heart of Illinois Low Incidence Association (HILIA)***

The SEAT Center collaborated with HILIA in delivering a series of professional development workshops in 2007. Topics for workshops included (a) Intellitools Classroom Suite 3 and Intellipics Training (Leader and User Groups); (b) Kurzweil 3000 Training (Novice, Intermediate, Using Kurzweil 3000 for Test Taking); and (c) Freeware and Readily Accessible Materials.

### ***National Association of School Psychologists (NASP)***

In collaboration with NASP, the Center conducted a survey of 1,000 practicing school psychologists in Spring, 2007, to develop an understanding of the role of these practitioners during AT decision making in public school settings. Content is being developed for a professional development module that will be distributed to NASP members nationally. Funding to support this project has been requested from the NEC Foundation of America which is currently under review.

## **CHALLENGES IN 2008**

Infrastructure needs remain a challenge in 2008. Aging hardware resources requiring replacement and upgrades may require the bulk of technology tuition dollars generated by the increasing number of students using the laboratories in Fairchild Hall 323 and 324. Additional personnel are needed to facilitate product development and distribution to targeted audiences. While progress has been made toward planning for an e-commerce system for product distribution, the next phase of developing the e-commerce system will require an infusion of capital currently unavailable. Donors who could provide 'venture capital' to support personnel expansion and product development activities are priorities.

Special Education Assistive Technology  
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**APPENDIX A**  
**Scholarly Productivity**

**Presentations (State, National, International Peer-Reviewed)**

Beck, A. (2007, February). *Roundtable: New to Evidence-Based Practice*. Paper presented at Division for Augmentative and Alternative Communication Conference. Atlanta, GA.

Beck, A., Stoner, J., & Dennis, M. (2007, September). *Investigation of the use of ALS with adults with developmental disabilities*. Clinical Augmentative and Alternative Communication Conference, Lexington, KY.

Hourcade, J. J., Peterson-Karlan, G. R., & Parette, H. P. (2007, April). *Assistive technology and writing skills for students with mild developmental disabilities*. Paper presented at the Council for Exceptional Children Annual Convention and Expo, Louisville, KY.

Parette, H. P., & Watts, E. H. (2007, November). *Assistive technology user group outcomes in early childhood settings*. Paper presented to the Council for Exceptional Children Teacher Education Division National Conference, Milwaukee, WI.

Parette, H. P., Stoner, J. B., & Watts, E. H. (2007, April). *I know what I need! Preschool teacher perceptions of AT*. Poster presentation to the Council for Exceptional Children Annual Convention and Expo, Louisville, KY.

Parette, H. P., Wojcik, B. W., Stoner, J. B., & Watts, E. H. (2007, January). *Emergent writing literacy outcomes in preschool settings using AT toolkits*. Paper presented at the Assistive Technology Industry Association (ATIA) Annual Meeting, Orlando, FL.

Parette, P., & Peterson-Karlan, G. (2007, January). *Setting parameters for collaboration*. Paper presented at the National Center for Technology Innovation Pre-Conference at the Assistive Technology Industry Association (ATIA) Annual Meeting, Orlando, FL.

Parette, P., & Peterson-Karlan, G. (2007, January). *Strategies for smart marketing*. Paper presented at the National Center for Technology Innovation-SEAT Center Networking Event at the Assistive Technology Industry Association (ATIA) Annual Meeting, Orlando, FL.

Peterson-Karlan, G. R., Parette, P., & Wojcik, B. W. (2007, January). *Assessing the improvement of writing skills by students with disabilities using assistive technology*. Paper presented at the 10<sup>th</sup> International Conference on Cognitive Disabilities/Mental Retardation, Autism, & Other Developmental Disabilities, Kona, HI.

Peterson-Karlan, G., & Parette, H. P. (2007, November). *The SEAT Center: Innovative professional development, personnel preparation, and research*. Presentation to the National Center for Technology Innovation Technology Expo, Washington, DC.

Wojcik, B. W., Peterson-Karlan, G. R., & Parette, H. P. (2007, January). *Mini courses: Professional development on-demand*. Paper presented to the Assistive Technology Industry Association (ATIA) Annual Meeting, Orlando, FL.

Wojcik, B. W., & Parette, P. (2007, January). *Mini courses: Professional development on-demand*. Paper presented at the Assistive Technology Industry Association (ATIA) Annual Meeting, Orlando, FL.

## Publications

### Articles

Beck, A. (2007). Discussion for those new to evidence-based practice. *Perspectives on augmentative and alternative communication*, 16(3), 11-12.

Beck, A. (2007). Training in assistive technology relates to early intervention practice. [Abstract]. *Evidence Based Communication Assessment and Intervention*, 1, 35-36. Abstract of Wilcox, M. J., Guimond, A., Campbell, P. H., Moore, H. W. (2006). Provider perspectives on the use of assistive technology for infants and toddlers with disabilities. *Topics in Early Childhood Special Education*, 26, 33-49.

Beck, A. (2007). Whether SentenceShaper®, a computerized communication system, supports verbal production in individuals with aphasia remains to be seen [Abstract], *Evidence-Based Communication Assessment and Intervention*, 1(3), 124 - 126. Abstract of Lunebarger, M., McCall, D., Virata, T., & Berndt, R. S. (2007). Widening the temporal window: Processing support in the treatment of aphasic language production. *Brain and Language*, 100, 53-68.

Beck, A., Stoner, J., Bock, S., & Parton, T. (in press). Comparison of PECS and the use of a VOCA: A replication. *Education and Training in Developmental Disabilities*.

Parette, H. P., & Peterson-Karlan, G. R. (2007). Facilitating student achievement with assistive technology. *Education and Training in Developmental Disabilities*, 42, 387-397.

Parette, H. P., & Stoner, J. B. (in press). Benefits of assistive technology user groups for early childhood education professionals. *Early Childhood Education Journal*.

Parette, H. P., Crowley, E. P., & Wojcik, B. W. (2007). Reducing overload in students with learning and behavioral disorders: The role of assistive technology. *Teaching Exceptional Children Plus*, 4(1) Article 4. Retrieved September 20, 2007, from <http://escholarship.bc.edu/education/tecplus/vol4/iss1/art4>

Parette, H. P., Peterson-Karlan, G. R., Wojcik, B. W., & Bardi, N. (2007). Monitor that progress! Interpreting data trends for AT decision-making. *Teaching Exceptional Children*, 39(7), 22-29.

Parette, H. P., Peterson-Karlan, G. R., Wojcik, B. W., Watts, E. H., & Stoner, J. B. (2007). Developing competence in assistive technology implementation through user groups. *Teaching Exceptional Children*, 40(2), 28-34.

Parette, P., & Dikter, D. (2007). Outcomes and benefits in assistive technology service delivery. *Assistive Technology Outcomes and Benefits*, 4, 8-9.

Peterson-Karlan, G. R., & Parette, H. P. (2007). Evidence-based practice and consideration of assistive technology effectiveness and outcomes. *Assistive Technology Outcomes and Benefits*, 4, 130-139.

Peterson-Karlan, G. R., & Parette, H. P. (2007). *Supporting struggling writers using technology: Evidence-based instruction and decision-making*. Washington, DC: National Center for Technology Innovation. Retrieved November 19, 2007, from the National Center for Technology Innovation Web site at: <http://www.techmatrix.org/resources/Technology%20to%20Support%20Writing.pdf>

Peterson-Karlan, G. R., Hourcade, J. J., Parette, H. P. (in press). Assistive technology and writing skills for students with disabilities. *Physical Disabilities: Education and Related Services*.

Peterson-Karlan, G. R., Hourcade, J. J., Parette, H. P., & Wojcik, B. W. (2007). Special education professionals and assistive technology: Requirements for preparation in a Digital Age. *Journal of the American Academy of Special Education Professionals*, 5, 68-82.

Stoner, J. B., Parette, H. P., Watts, E. H., & Wojcik, B. W., & Fogal, T. (2008). Preschool teacher perceptions of assistive technology and professional development responses. *Education and Training in Developmental Disabilities*, 43, 77-91.

## Chapters

Beck, A. (2008). Using technology to enhance and augment communication of persons with developmental disabilities. In P. Parette, G. Peterson-Karlan, & R. Ringlaben (Eds.). *Research-based and emerging practices in developmental disabilities* (2<sup>nd</sup> ed., pp. 331-348). Austin, TX: Pro-Ed.

Parette, H. P., & Peterson-Karlan, G. R. (2008). Introduction and scope of textbook. In H. P. Parette & G. R. Peterson-Karlan (Eds.), *Research-based practices in developmental disabilities* (2<sup>nd</sup> ed., pp. 1-10). Austin, TX: Pro-Ed.

Peterson-Karlan, G. R., & Parette, H. P. (2008). Integration of technology into the curriculum. In H. P. Parette & G. R. Peterson-Karlan (Eds.), *Research-based practices in developmental disabilities* (2<sup>nd</sup> ed., pp. 183-214). Austin, TX: Pro-Ed.

Parette, H. P., Huer, M. B., & Peterson-Karlan, G. R. (2008). Working with persons with developmental disabilities across cultures. In H. P. Parette & G. R. Peterson-Karlan (Eds.), *Research-based practices in developmental disabilities* (2<sup>nd</sup> ed., pp. 143-167). Austin, TX: Pro-Ed.

Scherer, M., & Parette, P. (2009). Assessment and match for effective assistive technology. In S. A. Sisto, E. Druin & M. M. Sliwinski (Eds.), *Therapeutic interventions for patients with spinal cord injuries* (pp. 296-309). St. Louis, MO: Elsevier Mosby.

Stoner, J. B. (2008). Language and ASD: The impact on the classroom. In H. P. Parette & G. R. Peterson-Karlan (Eds.), *Research-based practices in developmental disabilities* (2<sup>nd</sup> ed., pp. 349-369). Austin, TX: Pro-Ed.

## Books

Parette, H. P., & Peterson-Karlan, G. R.. (Eds.). (2008). *Research-based practices in developmental disabilities* (2<sup>nd</sup> ed.). Austin, TX: Pro-Ed.

Parette, H. P., & Peterson-Karlan, G. R. (Eds.). (2008). *Research-based practices in developmental disabilities* (2<sup>nd</sup> ed.). *Instructor's manual*. Austin, TX: Pro-Ed. (Parette, H. P., & Peterson-Karlan, G. R. (Eds.). (in press). *Research-based practices in developmental disabilities* (2<sup>nd</sup> ed.). Austin, TX: Pro-Ed.

Zucker, S. H., Perras, C., Parette, H. P., & Perner, D. E. (2007). Research to practice in cognitive disabilities/mental retardation, autism, and related disabilities. *Education and Training in Developmental Disabilities*, 42(4), 383-386.

## External Funding Proposals

Parette, H. P., Stoner, J., & Watts, E. (2007). *Making a difference using assistive technology*. (2007). Grant funded by the Illinois Children's Healthcare Foundation.

Mihajlovich, M. (2007). *National assistive technology training for school psychologists*. Proposal under review by the NEC Foundation of America.