

Linking school professionals who support student achievement



## Connections Winter 2008

### PAGE

2	Research Tools
3	Assistive Technology and Evidence Based Practice
5	Social Work
6	Social Work
7	Evidence Based Practice and School Nursing
8	Evidence Based Practice and Audiology
9	Evidence Based Practice and Educational Interpreting
11	OT/PT
12	Orientation/Mobility
13	MAAIRE Framework for Research
14	Tools toward EBP Implementation
15	Upcoming Events
16	Upcoming Events
17	CDE Connections Consultants

Change, though predictable, is frequently accompanied by a sense of confusion or chaos. The chaotic quality of change can be effectively diminished upon establishing the rationale of the change. Let's talk about change. The acronym of the day, and of innumerable days to come, is RtI: Response to Intervention. As discussed in the last Connections newsletter, Colorado's philosophy of RtI is predicated on 10 core principles. This issue of Connections discusses evidence based practice as one of the core RtI principles:

### **Use research-based, scientifically validated interventions/instruction to the extent available.**

- NCLB and IDEA 2004 both require use of scientifically-based curricula and interventions.
- Similar to medical models of practice the decision to use a specific intervention should be based upon empirical data, not just subjective opinion.

Research-based, scientifically validated interventions/instruction is commonly known as evidence based practice (EBP). Within the medical community EBP emerged from the growing trend toward accountability in modalities of intervention. Insurance providers became increasingly hesitant to reimburse for services sans data establishing the effectiveness of such interventions. Similarly our public education system is requiring that curriculum and instruction, as well as interventions, be scientifically validated, to the extent practicable.

***Robert Drake, M.D., PhD of the Dartmouth medical school defines EBP as, "interventions for which there is consistent scientific evidence showing that they improve client outcomes"***

As school based practitioners it is now our role to review and consider evidence in our interventions. Best practice has always dictated the use of data and research towards informed decision making. Standard practice now requires it.

This edition of Connections has been designed to support the related service provider in finding evidence, implementing evidence based practices, and ultimately supporting RtI as a general education initiative benefiting ALL students.

*Sandra S. Meagher*

*Time to access research literature and isolate specific topics from a database can be a significant barrier to evidence based practice. The following tips will serve to improve your efficiency with database searches:*

#### **Search Tips**

The most basic way to improve the searching of research data bases is through the use of Boolean Operators.

Boolean Operators include the all capitalized words: **OR, AND, NOT**. These words are used between search terms to combine concepts in a more specific way than is possible through a keyword search.

#### **OR**

The **OR** operator will broaden a search. It allows you to retrieve records that contain either search term. It can be used to combine synonyms or related concepts.

Example: sensory integration **OR** self regulation

In this example the search will include either search term. This does not imply that both search terms will be included in the records retrieved. The **OR** command indicates that either term should be present. In that sense it **broadens** your search to include synonymous words or concepts.

#### **AND**

The **AND** operator **narrows** your search by retrieving only those records that include both of your search terms.

Example: weight bearing **AND** bone density

In this example your search has become more specific since both of these terms must be present in order for a record to be retrieved from the database.

#### **NOT**

The **NOT** operator narrows a search by removing all records that contain a particular word or phrase.

Example: handwriting **AND** autism **NOT** aspergers

In this example we have narrowed the handwriting search to only those documents that contain the word autism, through the **AND** command. It was further narrowed by eliminating, through the **NOT** command, any documents that include aspergers.

#### **Additional Search Tips**

##### **\* Truncation**

The symbol above the number 8 on your keyboard will serve to find all the terms that begin with a specific word root.

Example: strength\*

In this example the truncation symbol after the word "strength" will result in a search that will include any word that incorporates strength as an individual word or word root, such as: strength, strengthening, strengthen...

##### **() Nesting**

These symbols, found above numbers 9 and 0 on your keyboard will serve to put terms together to be processed as a unit and then processed as an overall category.

Example: Handwriting **AND** (Therapy Ball)

In this example, therapy ball will be searched as a unified term rather than as two independent words, and then processed along with handwriting.

##### **“” Quotes**

When searching for an exact phrase, use the quotation marks in front and behind your search words. The data retrieved will contain the search words exactly as outlined between the quotation marks.

## Assistive Technology and Evidence Based Practice

- Christina Perkins, Maureen Melonis



The field of educational assistive technology is a relatively young profession. The knowledge base from which to extract robust scientific evidence remains small when compared to more established disciplines such as psychology or the other social sciences. While the research base grows we need to remember Evidence Based Practice (EPB) is not just about the research (external evidence). It relies equally on internal evidence (your data), clinical expertise and the interests and values of the stakeholders (students, families, service providers).

"Evidence-based practice is defined by Schlosser & Raghavendra (2003) as the integration of the best and current research evidence with clinical/educational expertise and relevant stakeholder perspectives to facilitate decisions for assessment and intervention that are deemed effective and efficient for a given direct stakeholder"

One of the greatest challenges to EBP is finding the time to locate and analyze the external evidence. Once you have that evidence, do you have the knowledge and skills to effectively analyze and identify high quality research? Experimental versus quasi-experimental versus correlation design, reliability, validity; what does it all mean? Translating complex research results from multiple sources into effective intervention strategies can be challenging.

Research on assistive technology can be found in a number of peer-reviewed journals specific to most special education disciplines. The use of search engines and the availability of online resources, such as electronic journals and journal archives, make the job of gathering evidence somewhat easier. Fortunately, there are also a number of national resources to reduce the complexity of the task. Several organizations work to categorize assistive technology research studies and organize them in a searchable database.

The NARIC (National Rehabilitation Information Center) offers an on-line email subscription that sends journal article abstracts (and links to available full text documents) for newly published, peer reviewed assistive technology research. See [http://www.naric.com/services/rehab\\_connect.cfm](http://www.naric.com/services/rehab_connect.cfm) for more information or to subscribe. This resource can also provide a limited number of full text articles as well as photocopies of some journal articles for a nominal fee.

Assistive Technology author, Dave Edyburn annually reviews and analyzes the external research of the field and attempts to summarize for quick reference current educational assistive technology findings published in 31 different peer reviewed journal titles. This review of the literature includes over 225 individual articles. 85 of those articles are organized and summarized in his publication: *2006 year in review: What have we learned lately?* A PDF version of that paper can be found at: <http://www.uwm.edu/~edyburn/what.html>.

The educational knowledge base is emerging as a resource to readily influence and benefit practical field applications. One of the largest manufacturers of assistive technology hardware, software and curriculum materials, AbleNet Inc. has recognized the lack of and necessity for scientifically based evidence to support the implementation of their products. As a result, they have developed a research consortium to produce and review independent research. The consortium works closely to fund Ph. D. and Masters level students as well as individual researchers to support research grants/stipends, curriculum and assistive technology for groups collecting evidence on AbleNet products. More information on this program can be found at the following link: <http://www.ablenetinc.com/arc/>

Finally, as a component of the Department of Physical Medicine and Rehabilitation at the University of Colorado Denver, the central SWAAC office works closely with researchers on a number of assistive technology research studies. Results of these studies are published in national peer reviewed journals.

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No Child Left Behind and Individuals with Disabilities Education Act require the shift towards EBP...it's the law. Informed decision making is essential and must be contingent on the internal and external evidence as well as consumer preferences and professional experience and expertise. Long term successful application of EBP will come from due diligence finding and collecting the evidence, developing skills to evaluate the evidence, sharing what you know, and continued development of a national knowledge base.

### **Assistive Technology Partners Spring Learning Lab Schedule**

Space is limited, please register to attend: 303-315-1280

Denver Thursday, February 14<sup>th</sup>, 2:30-4:30 pm  
WesTAC Wednesday, February 20<sup>th</sup>, 2:30-4:30 pm

#### **Wheelchair Transportation Safety**

Denver Thursday, March 13<sup>th</sup>, 2:30-4:30 pm  
WesTAC Wednesday, March 19<sup>th</sup>, 2:30-4:30 pm

#### **Our Favorite Notech to Lowtech Solutions**

Denver Thursday, April 10<sup>th</sup>, 2:30-4:30 pm  
WesTAC Wednesday, April 16<sup>th</sup>, 2:30-4:30 pm

#### **Making Play Accessible**

Denver Thursday, May 8<sup>th</sup>, 2:30-4:30 pm  
WesTAC Wednesday May 14<sup>th</sup>, 2:30-4:30 pm

#### **Wheelchair Seating and Power Mobility**

### **Tango Training**

#### **Early Literacy and Curriculum Integration**

*with* Pati King-DeBaun, M.S. CCC-SLP

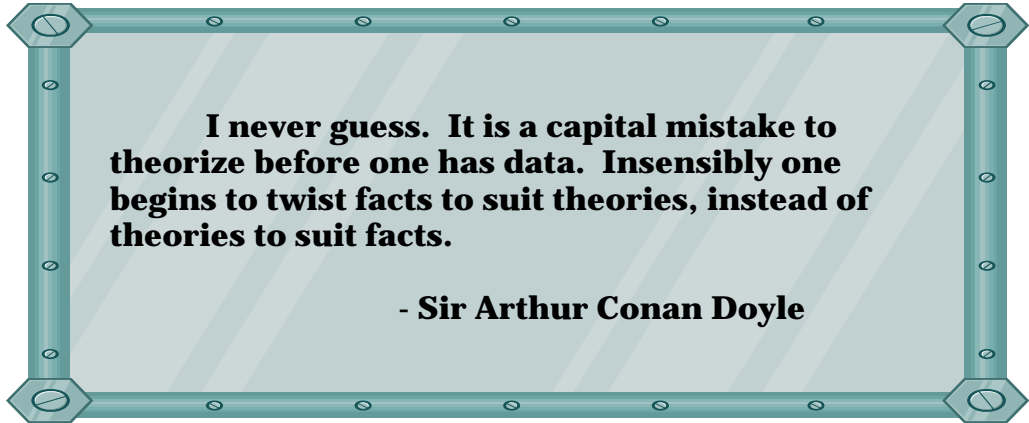
February 12, 2008, 9:00-3:00 pm

Assistive Technology Partners

601 E. 18<sup>th</sup> Ave, Suite 130

Denver, CO 80203

To register contact: Jackie Nadel at 646-474-0807, [jnadel@blink-twice.com](mailto:jnadel@blink-twice.com)



**I never guess. It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts.**

**- Sir Arthur Conan Doyle**

## **SOCIAL WORK NEWS...**

*Although there are a number of research-based programs currently being used in school districts throughout Colorado in the area of affective and behavior intervention, we will highlight only two programs in this article.*

*The first program, Say it Straight is currently being used in the Douglas County School District while the second intervention program, Why Try, can be found in the Denver Public School District.*

*Each of these programs has been implemented in schools throughout the country over the past ten years. Both interventions have been successfully implemented in elementary through secondary schools with students of diverse ethnic and cultural backgrounds in urban and rural settings. These strategies can be used in classrooms along with smaller special needs groups. In addition, Say it Straight and Why Try programs have a strong parent and community component.*

### **SAY IT STRAIGHT**

Author: Paula Englander-Golden, PhD founded 1982

Website: [www.sayitstraight.org](http://www.sayitstraight.org) Tel. (760)-431-1147

It has been designated by US Department of Education, Center for Substance Abuse Prevention and Office of Juvenile Justice and Delinquency Prevention as an Evidence-Based Program for Prevention of High-Risk Behaviors and Promotion of Wellness.

Program Description: (Excerpt from SAMHSA's Model Program website, <http://modelprograms.samhsa.gov> with edits by **Say It Straight** developers in August, 2004)

The goals of **Say it Straight** (SIS) training are the prevention of risky or destructive behaviors, such as alcohol/tobacco/other drug (ATOD) use, violence, precocious sexual behavior, teen pregnancy, behavior leading to HIV/AIDS, and promotion of wellness, self-awareness, personal and social responsibility, good communication skills, positive self-esteem, and positive relationships. SIS creates opportunities for people to discover their internal resources, their natural resiliency, connect to their deepest wishes, and develop the skills needed to express and implement them in appropriate ways. Because the training is co-created by participants, it gives them a sense of ownership, and transcends culture, age and gender. It has been successfully implemented in schools, with parents and community, as well as in probation, detention and treatment settings. Addressing individual, family and community risk and protective factors, SIS aims for the development of self-sustaining prevention communities.

The program website states that **Say It Straight** is a strength-based program using a curriculum that is action oriented and integrates cognitive, affective and psychomotor modalities to maximize learning. The training is co-created by participants. They choose situations important in their lives that are played out as "movies" in which they play and experience all the roles. The training allows students to experience and practice real life situations in training group, receiving feedback, and discover the effect their behavior has on others.

Julie Pata, MSW, School Social Worker for Douglas County School District currently is using the **Say It Straight** curriculum with middle school students in classroom groups. These groups are comprised of special education students with learning disabilities as well as some students with emotional disabilities. Julie says it generally takes a bit longer, (9-12 weeks) to get through the material with this population. She says the kids love the opportunity to "make movies" (role play) about real life situations that happen at school or home. It also gives them confidence in identifying situations that don't "feel right" as well as finding their voice to stand up for themselves.

If you would like to contact Julie Pata or her colleague, Dr. Colette Hohnbaum, Douglas County School Psychologist and trainer for **Say It Straight** and learn more about this exciting program they can be reached at the following numbers:

Julie Pata 303-387-2369

Dr. Colette Hohnbaum ph. 303-387-2032

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## **WHY TRY PROGRAM**

Author: Christian Moore, MSW founded 1996

Website: [www.whytry.org](http://www.whytry.org) Tel: 866-949-8791

Presently the **Why Try** Program is in 350 school districts, mental health, and correctional facilities in 36 states, Canada and Australia working with students from kindergarten through 12<sup>th</sup> grade.

The program utilizes a strength-based approach to counseling that is infused with empirically sound theories in Reality Therapy, Solution-Focused Brief Therapy, and Multiple Intelligence Theory. **Why Try** has demonstrated in a variety of settings to reduce truancy, improve academic success, and increase graduation rates.

The **Why Try** curriculum consists of ten visual analogies (pictures) that relate to specific problems and special challenges that at risk students face in their every day lives. Each picture includes various solutions and questions, to help the student gain insight in dealing with their own challenges. The program teaches self esteem and stresses that although making good decisions can be difficult; doing so will help give the student more opportunity, freedom and self-respect. The **Why Try** program teaches students how to focus on solutions to their problems and convert challenges and anger into positive motivation.

Dr. Erika Joy is a Denver Public School Psychologist and Why Try Coach who has implemented the curriculum in various Denver schools. Her thoughts and experiences are as follows: **Why Try** is a social emotional intervention that is used with all ages. We have used it in DPS from kindergarten through 12<sup>th</sup> grade. It is also used with adults in addiction treatment, detention facilities and in prisons. The curriculum is flexible and may be modified for use with an individual, small group, classroom, and/or whole school intervention. In DPS, I personally have worked individually with students, in small groups and in classrooms. I am currently working with an elementary school to support school-wide implementation. **Why Try** teaches kids decision making, resisting peer pressure, anger management, tearing off negative labels, problem-solving strategies, goal-setting, and relationship building. It delivers this message through multisensory learning using visual analogies, music, discussion, and kinesthetic activities. William Glaser, the “father of Reality Therapy”, said that **Why Try** was Reality Therapy for the MTV generation. This program meets the kids where they are and provides them with a message on their level. I have had so many incredible experiences with this program and it continues to amaze me. Students remember the material that they are taught and can recall it years later. For example, I was teaching **Why Try** in a 3<sup>rd</sup> grade classroom at an elementary school last year. I went in this classroom once a week for 30 minutes. This year I was visiting at a different elementary school and saw one of the students that was in that classroom last year. He had transferred to this school. That day he was in the office for getting in trouble in the classroom. I had the picture of the “Reality Ride”, a visual analogy from **Why Try**, and he was able to show me where he was on the ride that day and how he was going to get on the better ride and stop crashing. I was amazed! He had heard this once a year before and he could recall the message and apply it to his current situation. A teacher reported to me that the students use the **Why Try** language with each other in the classroom. She overheard a 4<sup>th</sup> grade girl say to another, “You should just come over here and play with me. Don’t let those guys pull you down in the crab pot. The “Crab Pot” is another visual analogy that teaches students to resist peer pressure.

I believe that the keys to this program are:

1. Relationship building between the adults in the school and the students
2. Multimodal learning.

If you would like to learn more about the **Why Try** program please contact Erika Joye, PhD at  
ph: 303-489-0647 mobile  
Email: [Erik\\_joye@dpsk12.org](mailto:Erik_joye@dpsk12.org)



## Evidence-Based Practice and School Nursing

Most nurses work in a health care setting with their peers but school nurses are often the only health care professional in an education setting. School nurses are responsible for meeting the increasingly complex health needs of children and their families. To do this, we need to examine our practice to be sure that we are effective in delivering health care to our students.

No Child Left Behind Act of 2001 emphasizes the use of teaching methods based on evidence. As school nurses we need to hold ourselves to the same standards as our colleagues in education by basing our nursing practice on the best evidence available. The American Nurses Association (ANA) published in 2004 its revised standards of practice which emphasizes evidence-based practice. The National Association of School Nurses (NASN) reviewed the ANA document and updated the practice standards for school nurses. Current school nursing practice is often based on tradition, trial and error, and experience. Now school nurses need to show that our practice is based on research and has a positive impact on health and, ultimately, the academic achievement of children.

In nursing, evidence-based practice (EBP) should define best practice. EBP is a process beginning with knowing what clinical questions to ask, how to find the best practice, how to critique the evidence for validity and applicability to a particular situation. Patient and family preferences should be considered when determining optimal care. The final aspect of this process should be to evaluate the effectiveness of care and continual improvement.

There is currently no central information source of EBP guidelines for school nurses. There have been reviews and guidelines established in other nursing and health specialties that would be relevant for school nurses, such as childhood immunizations and medication administration. For the topics relevant to school nursing, this evidence can be used to guide your practice. For example, there is evidence that a no-nit policy for head lice is no longer recommended but many school nurses have not changed their practice. School nurses need to be involved in identifying topics that need to develop EBP guidelines and participate in the development of these guidelines using published research.

School nurses should examine their practice and determine what information they are using when making practice decisions. We should not fall into the habit of continuing a practice just because it has always been done that way. We need to be open to changing practice so we can provide optimal care for children. Try making one practice change, based on evidence, and then evaluating the results of that change.

I have included a few websites that you can search for more information on evidence-based practice.

### Evidence-Based Practice Web Resources

National Guideline Clearinghouse (for best results, type “school-based” in the search box)

(<http://www.guideline.gov/>)

U.S. Preventive Services Task Force systematic reviews (<http://www.ahrq.gov/clinic/uspstfix.htm> )

University of Minnesota Evidence-Based Practice Nursing (<http://evidence.ahc.umn.edu/ebn.htm>)

University of Iowa Research Translation and Dissemination Core

(<http://www.nursing.uiowa.edu/sites/users/Gardery/EBP/> )

Evidence Based Practice Resource Center (<http://onsopcontent.ons.org/toolkits/evidence/index.shtml> )

**EBP & Audiology**  
**Lisa Cannon, Audiology Coordinator**

When it comes to evidence-based practice, educational audiologists in Colorado have an advantage over many of their colleagues around the country. The “Standards of Practice for Audiology in the Schools” is a CDE-adopted set of guidelines outlining best practices for school-based audiologists in Colorado. (Available on the CDE website at: [http://www.cde.state.co.us/cdesped/download/pdf/Stndrs\\_Practice\\_Audiology\\_Svcs.pdf](http://www.cde.state.co.us/cdesped/download/pdf/Stndrs_Practice_Audiology_Svcs.pdf).) These standards were originally developed in 1998 and revised in 2004, and Colorado is one of only a few states to have implemented such a guiding document.

Nationally, audiologists look to several professional associations for similar guidelines covering a range of practice areas and settings. Two of these associations – the American Academy of Audiology (AAA) and the American Speech-Language-Hearing Association (ASHA) – have spoken in favor of adopting evidence-based practice (EBP), which has its roots in medicine. The audiology professional community, through these organizations, has been diligent in examining the issues related to systematic review of available research to ensure that it is of the highest quality.

EBP takes into account the current best evidence from quality research, the clinical expertise and experience of the practitioner, and the appreciation of the needs of the patient or individual receiving the treatment. Decision-making that integrates these three points will result in better outcomes for kids and better accountability for service providers. The audiologist providing evidence-based practice will integrate well-accepted practice methods (research) with sound professional judgment given each individual student's needs and circumstances. Evidence-based practice ensures that at the end of the day we can answer positively with confidence the question “Do we know that the methods we use each day with our students and on behalf of our students are the most effective for reducing barriers to learning?”

***Upcoming Colorado Educational Audiology Dates to Remember:***

- Colorado Educational Audiology Group Monthly Meetings: 2/12/08, 4/9/08, 5/13/08



## Evidence-Based Practice and Educational Interpreting

Sheryl G. Muir, Ed.D., CDE Principal Consultant



As the relatively new field of educational interpreting presses on toward realizing its place in the educational realm, there are a number of researchers and interpreter trainers who have been leading the way by proposing standards of practice and conducting studies. Interestingly, a few researchers are questioning whether or not a “mediated” education, such as provided by an educational interpreter, is even a viable option. Certainly most experts would agree that interpreting by itself does not provide full access for students who are deaf or hard of hearing. Other adjustments and accommodations must also be made in order for students to enjoy access to the level of hearing students. Based on responses from users of interpreting, we know that an interpreted education can provide more information to certain students than not having the interpreting. Common sense tells us that interpreting must be performed in as full and accurate way as possible in order to be effective at all. Over time, we hope that research will inform the field more specifically of what those effective practices are.

So far in the field of educational interpreting, interpreters have had relatively little guidance into the science of an interpreted education but there are a number of studies planned and some currently being conducted that will add to the evidence needed. For now, we do have some preliminary studies and feedback from student and adult users of interpreting to provide some direction. The best current thinking of veteran interpreters and trainers and researchers has been collected.

Three books provide much information to interpreters, teachers who work with them, and supervisors. One book, a popular classic with a practical approach, is *Best Practices in Educational Interpreting* by Brenda Chafin Seal (1998). Each chapter focuses on the distinct needs and challenges in each level of schools, and includes case studies to provide real-life application. The final chapter summarizes some educational interpreting research.

The second book is *Educational Interpreting: How It Can Succeed* edited by Elizabeth A. Winston (2004). There is a chapter “Developing Standards of Practice” that includes many useful topics and suggested practices.

The third book is *Sign Language Interpreting and Interpreter Education: Directions in Research and Practice* edited by Marc Marschark, Rico Preston, and Elizabeth Winston (2005). This book includes chapters by prominent trainers and researchers and some controversial questions about the field.

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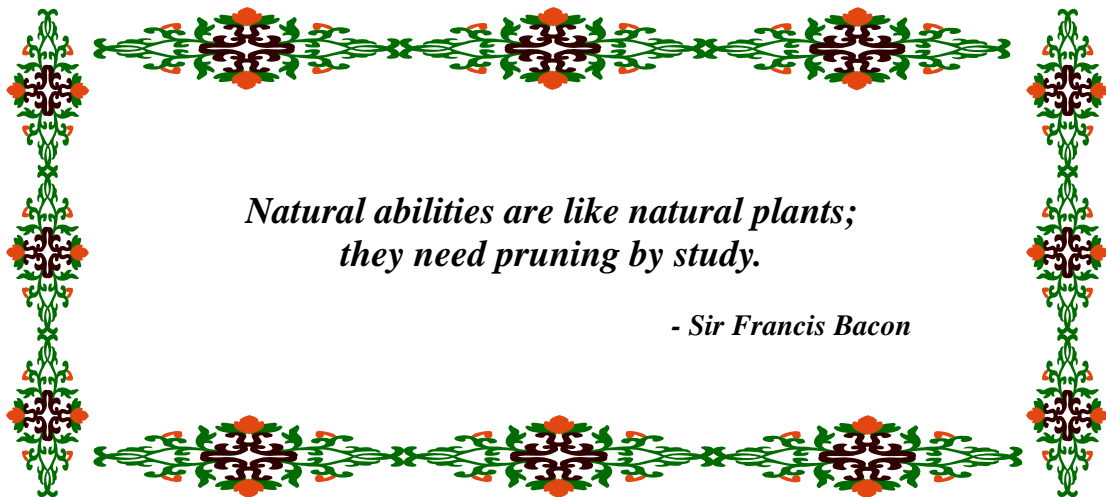
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In order to remain up to date in evidence-based practices, it will be important for interpreters and those who work with them to read the books and articles that will be published.

In Colorado, we have an *Educational Interpreter Handbook* (3<sup>rd</sup> Ed. 2007) that includes the Colorado standards for interpreters in schools and guidance. The *Handbook* is located on the CDE website at <http://www.cde.state.co.us/cdesped/SD-hearing.asp>. As the field develops, this Handbook will be updated to incorporate new evidence-based practices.

As with any profession, one crucial way for people to continue to improve their skills and increase their knowledge is to be involved in their professional organizations. Interpreters need to consider which organizations fit their needs best, but it is essential for them to be involved in at least one interpreting organization, such as the Registry of Interpreters for the Deaf.

Because educational interpreting is a new field and because there are relatively few interpreters, it will be important for interpreters to gather their own evidence through progress monitoring and the development of new tools that will show whether or not certain practices are effective or not. This can be accomplished by connecting with others in the field and researchers. The field, and the students it serves, deserves these practices and the accompanying commitment to excellence.



## **Colorado Study Validates the Effectiveness of OT-SI in Treating Sensory Difficulties**

*By Lucy Jane Miller, PhD, OTR  
Executive Director  
SPD Foundation*

When a child's ability to succeed in school is thwarted by sensory challenges, everyone involved – parents, teachers, and therapists – urgently want to know *How do we help this child succeed?*

Sensory integration-based interventions have long been supported by clinical observation, but rigorous empirical research to validate the effectiveness of occupational therapy with a sensory integration approach (OT-SI) intervention has been lacking.

Until now.

In 2007, the Colorado-based SPD Foundation (SPDF) published the results of the first effectiveness study ever to meet all four of the primary criteria for a randomized controlled trial. The question posed by the trial was: Is OT-SI effective in ameliorating the difficulties of children with Sensory Over-Responsivity compared to a placebo treatment and no treatment (a comparison of three groups).

Children in the OT-SI group received OT with a sensory integration approach twice a week for 10 weeks. The treatment was “manualized” (based on a written manual) using principles proposed by Dr. A. Jean Ayres, who first identified sensory integration dysfunction (now called SPD).

Therapists and children in the study interacted in a large occupational therapy room where children were challenged but scaffolded to ensure success in their activities. Typically, parent priorities were to normalize self-regulation, increase social participation, and improve self-confidence/self-esteem. Therapy was guided by clinical reasoning rather than prescribed activities with therapists acting as coach, educator, and role model for parents, who participated actively in the sessions.

The results: Compared with children who received an alternative treatment or no treatment at all, children with Sensory Over-Responsivity who received OT-SI made statistically significant improvements on several key measures including cognitive and social measures and parent priorities for changes.

“As with any condition that is not universally familiar, SPD has had naysayers who want to know where the research is to support its diagnosis and treatment,” says Sarah A. Schoen, director of applied research for the SPD Foundation. “This study is a significant cornerstone for the body of knowledge that will put such questions to rest.”

The study group was small – 24 children – so caution is required in interpreting the results. Even so, the research represents a landmark – the first scientifically rigorous study of the effectiveness of OT-SI, and the results are promising for OTs who use an OT-SI approach to help children with sensory challenges.

A complete report on the study protocols and findings was published in the March-April 2007 issue of the *American Journal of Occupational Therapy* and is summarized in the Fall 2007 SPD Foundation newsletter, *Sensations*, which may be viewed at <http://www.spdnetwork.org/aboutspd/sensations.html>.

## ***ORIENTATION & MOBILITY***

This report was released by the National Center for Special Education Research (NCSER) on January 23, 2008. Orientation refers to one's ability to determine his/her location and relationship with other objects in the environment. Mobility refers to one's ability to move about in the environment. Orientation and mobility training may be provided to students with visual impairments as part of their individual programs of special education and related services. This report presents information on the percentages of students with visual impairments who receive orientation and mobility services, including percentages for different segments of the population (blind vs. partially sighted, regular vs. special school placement, and demographic groups). It also discusses the levels of orientation and mobility skills in this population, and factors associated with their skill levels. Data are from The National Longitudinal Transition Study-2 (NLTS2), funded by the National Center for Special Education Research at the Institute of Education Sciences, U. S. Department of Education. NLTS2 was initiated in 2001 and has a nationally-representative sample of more than 11,000 students with disabilities.

For further information please contact David Malouf at 202-219-1309 or [david.malouf@ed.gov](mailto:david.malouf@ed.gov)

To read, download, and print the report, go to:  
<http://ies.ed.gov/ncser/pubs/index.asp#20083007>

***To become an able and successful man***

***in any profession, three things are necessary:***

***nature, study and practice.***

***- Henry Ward Beecher***



## ***The MAARIE Framework for Reading and Critiquing Research*** (Riegelman, 2005)

Evidence Based Practice and Scientifically Based Methodologies are terms now appropriately applied to the educational setting. IDEA 2004 and NCLB both emphasize the need to implement educational strategies based upon evidence supporting the effectiveness of the strategy on the population being served. However, prior to being able to implement evidence based strategies one must first learn to access and appropriately critique the evidence. The MAARIE Framework, developed by Riegelman (2005) offers a structured approach towards becoming a critical consumer of research. This approach recommends analyzing the following features of research:

### **M – Method**

Method involved identifying and evaluating key issues about the study, including:

- hypothesis
- population
- sample size

### **A - Assignment**

Assignment – refers to how the study participants were assigned to the groups (treatment or control)

### **A - Assessment**

Assessment – the reader should critique the outcome measure used in the study. How well does the measurement tool chosen address the study question?

### **R – Results**

Results report the comparison between the treatment and control groups.

What were the statistically significant differences between the groups?

Were there adjustments to account for confounding variables?

What was the effect size (the magnitude of difference between the control and treatments groups)?

### **I – Interpretation**

Given the results, how should the relationship between the independent and dependent variable be understood? The independent variable is your intervention. The dependent variable is the outcome of the intervention – the thing you are measuring, such as: hand strength, mobility, dexterity, level of independence, self-care skill...

The ultimate question is: Does the independent variable cause a change in the dependent variable, and, if so, for whom and under what circumstances?

### **E – Extrapolation**

Extrapolation refers to speculation as to what the study find means to individuals or situations not directly involved in the study. How can the study results be extrapolated beyond the study population, setting, or parameters?

- Riegelman, R.K. (2005). *Studying a study and testing a test*. Philadelphia: Lippincott Williams & Wilkins.

## Tools toward EBP Implementation

Access to research literature and time to access research literature can be significant barriers to evidence based practice. Keep in mind, within any given caseload one will encounter a recurrence of either presentation or anticipated intervention approach. An OT/PT department within a district might easily work together and develop references and literature reviews on recurring topics. A few of the internet resources listed below compile research data and offer a literature review format, thereby decreasing the amount of time needed on your end.

Do remember, evidence based practice incorporates **3** components: **Client values, Empirical Evidence, and Clinical Expertise** in the form of data guided decision making.

### The following are internet resources on evidence based practice:

Center for Evidence-Based Medicine	<a href="http://www.cebm.net">www.cebm.net</a>
Freemedicaljournals.com	<a href="http://www.freemedicaljournals.com">www.freemedicaljournals.com</a>
National Guideline Clearinghouse	<a href="http://www.guideline.gov">www.guideline.gov</a>
OTseeker	<a href="http://www.otseeker.com">www.otseeker.com</a>
PEDro-Physiotherapy Evidence Database	<a href="http://www.pedro.fhs.usyd.edu.au/index.html">www.pedro.fhs.usyd.edu.au/index.html</a>
Promising Practices Network	<a href="http://www.promisingpractices.net">www.promisingpractices.net</a>
PubMed/MEDLINE	<a href="http://www.ncbi.nlm.nih.gov">www.ncbi.nlm.nih.gov</a>
Social Programs That Work	<a href="http://www.evidencebasedprograms.org">www.evidencebasedprograms.org</a>
University of Puget Sound	
OT Dept. Evidence Symposium	<a href="http://www.ups.edu/x3676.xml">www.ups.edu/x3676.xml</a>
What Works Briefs	<a href="http://www.csefel.uiuc.edu/whatworks.html">www.csefel.uiuc.edu/whatworks.html</a>
What Works Clearinghouse	<a href="http://www.w-w-c.org">www.w-w-c.org</a>
National Information Center for Children and Youth with Disabilities	
Research Center	<a href="http://research.nichcy.org">http://research.nichcy.org</a>
Kids OT – Mary Muhlenhaupt	<a href="http://www.kidsot.com">www.kidsot.com</a>

In addition to the above listed resources, google offers a valuable tool towards locating journal articles. When at [www.google.com](http://www.google.com) you are offered the following search options: images, maps, news, shopping, gmail, and “more” with a downward pointing arrow. Click on the downward pointing arrow next to “more”. One of your options is “scholar.” Google scholar will search journal databases for your topic of interest. It’s a very convenient and powerful tool, accessible from your home computer. Couple google scholar with the Boolean search tips and you are already on your way towards efficiently accessing evidence.

I find that a great part of the information I have was acquired by looking up something and finding something else on the way.

- Franklin P. Adams



# Upcoming Events

**Celebrate School Social Work Week March 2 – 8, 2008**

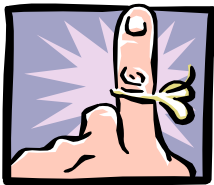
**"School Social Workers-- Leave a Lasting Impression!"**

Social workers in schools have a history of recognizing and advocating for the rights of individuals with disabilities; family changes; and the effects of increasing social, economic and academic pressures on children. The value of school social work interventions have been increasingly recognized through federal and state legislative initiatives.



School social workers are specifically trained to address the personal and social problems that potentially inhibit a student's ability to learn. There are nearly 10,000 school social workers in the United States today, approximately 400 of them being in Colorado. Emotional, social, and behavioral problems can be serious impediments to learning and can have a deleterious effect not just on the individual student, but on others in the school setting. School social workers provide a critical link between the school, family and community working to bring all of the strengths and resources of these systems to help make these environments beneficial to all students.

Take this opportunity to help advocate for your profession visit [www.SSWAA.org](http://www.SSWAA.org) for ideas. You can support your profession by joining the Colorado School Social Work Association and attend monthly meetings every second Wednesday at DU, Craig Hall, China Room. For more information about how you can be involved, contact Bethany Robinson [brobinso@jeffco.k12.co.us](mailto:brobinso@jeffco.k12.co.us) or Joy Hanson [joy\\_hanson@dpsk12.org](mailto:joy_hanson@dpsk12.org)



**Don't forget! Join SSWAA in Denver April 3-5, 2008! Join over 700 school social workers, educators and other professionals for the only National conference devoted exclusively to the School Social Work profession!!**

**Please go to <http://www.npteam.org/sswaa/conference/index.asp> to view the conference website and register online now!**

# Upcoming Events

## **2008 Regional School Nurse Workshops**

Plan on attending this all day workshop on topics important to school nursing. For further information and registration form, go to the CDE school nurse website at <http://www.cde.state.co.us/cdesped/RSS-Nurse.asp>.

### **February**

12 – Alamosa  
13 – La Junta  
14 – Pueblo  
28 – Ft Morgan

### **March**

7 – Ft Collins  
13 – Durango  
14 – South Denver  
19 – Colorado Springs

### **April**

2 – North Denver  
8 – Montrose  
9 – Grand Junction  
10 - Glenwood Springs  
11 - Frisco

## **The Collaborative Assistive Technology Conference of the Rockies 2008**

**Friday, June 13 and Saturday, June 14, 2008**  
**Pre-conference sessions Thursday, June 12**

### **Conference includes:**

**Exhibit Hall**  
**Over 70 breakout sessions**  
**Hands-On Lab sessions**  
**Adapted Home**  
**Adapted Classroom**

**Hyatt Regency, Denver Tech Center**  
**For more information visit [www.AssistiveTechnologyPartners.org](http://www.AssistiveTechnologyPartners.org)**

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